PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3750580

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TIOPTICS, INC.	02/22/2016

RECEIVING PARTY DATA

Name:	INTEGRA RESEARCH AND DEVELOPMENT, LLC	
Street Address:	15373 INNOVATION DRIVE	
City:	SAN DIEGO	
State/Country:	CALIFORNIA	
Postal Code:	92128	

PROPERTY NUMBERS Total: 6

Property Type	Number
Patent Number:	8483566
Patent Number:	8909057
Patent Number:	8909046
Application Number:	14200592
Patent Number:	9231713
Application Number:	14548836

CORRESPONDENCE DATA

Fax Number: (518)487-7777

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 5184877643 Email: cbartini@woh.com

COLLEEN A. BARTINI, PARALEGAL Correspondent Name:

Address Line 1: ONE COMMERCE PLAZA

Address Line 2: WHITEMAN OSTERMAN & HANNA LLP

Address Line 4: ALBANY, NEW YORK 12260

NAME OF SUBMITTER:	COLLEEN BARTINI	
SIGNATURE:	/Colleen Bartini/	
DATE SIGNED:	02/23/2016	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 6

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PATENT ASSIGNMENT

THIS PATENT ASSIGNMENT (the "<u>Assignment Agreement</u>") is made and entered into as of this 22nd day of February, 2016, (the "<u>Effective Date</u>"), by and between TiOptics, Inc., a California corporation ("<u>Assignor</u>") and Integra Research and Development, LLC, a Delaware limited liability company ("<u>Assignee</u>").

WHEREAS, Assignor and Assignee are parties to that certain Master Joint Venture Agreement dated as of this 22nd day of February, 2016 (the "Agreement"), pursuant to which Assignor has agreed to assign certain intellectual property to Assignee as set forth in the Agreement;

WHEREAS, Assignor is the owner of those United States patents and patent applications identified as filed or in progress and set forth on <u>Schedule A</u> ("<u>Patents</u>"); and

WHEREAS, Assignor wishes to assign all its right, title and interest in and to, and Assignee wish to receive the entire right, title and interest in and to, the Patents.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee agree as follows:

- 1. Assignor does hereby sell, assign, transfer and set over to Assignee, its entire right, title and interest in and to the Patents, including the right to claim priority thereto, and including any continuations, divisions, continuations-in-part, reissues, reexaminations, extensions or foreign equivalents thereof, and including the subject matter of all claims which may be obtained therefrom for its own use and enjoyment, and for the use and enjoyment of its successors, assigns or other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor if this Assignment Agreement had not been made, together with all income, royalties, damages or payments due or payable as of the Effective Date or thereafter, including, without limitation, all claims for damages by reason of past, present or future infringement or other unauthorized use of the Patents, with the right to sue for, and collect the same for its own use and enjoyment, and for the use and enjoyment of its successors, assigns, or other legal representatives.
- 2. Assignor authorizes and requests the Commissioner of Patents and Trademarks (and the foreign counterparts thereof) to record Assignee as owner of the Patents, including any continuations, divisions, continuations-in-part, reissues, reexaminations or extensions thereof, and to issue any and all letters patent of the United States (or such other country) thereon to Assignee, as assignee of the entire right, title and interest in, to and under the same, for the sole use and enjoyment of Assignee, its successors, assigns or other legal representatives.
- 3. Assignor hereby represents and warrants that his right, title and interest as owner in and to the Patents set forth on <u>Schedule A</u>, are free and clear of any liens and encumbrances, that it has full right to assign all of its ownership interests therein, and that it has not executed and will not execute any agreement or other instrument in conflict herewith.

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- 4. Assignor shall provide Assignee, its successors, assigns or other legal representatives, cooperation and assistance at Assignee's request and expense (including the execution and delivery of any and all affidavits, declarations, oaths, exhibits, assignments, powers of attorney or other documentation as may be reasonably required): (1) the prosecution or defense of any interference, opposition, reexamination, reissue, infringement or other proceedings that may arise in connection with any of the patent rights assigned herein, including, but not limited to, testifying as to any facts relating to the patent rights assigned herein and this Assignment Agreement; (2) in obtaining any additional patent protection that Assignee may deem appropriate which may be secured under the laws now or hereafter in effect in the United States or any other country; and (3) in the implementation or perfection of this Assignment Agreement throughout the world.
- 5. Assignor shall take at Assignee's cost and expense all further actions, and provide Assignee, Assignee's successors, assigns or other legal representatives, all such cooperation and assistance (including, without limitation, the execution and delivery of any and all affidavits, declarations, oaths, exhibits, assignments, powers of attorney or other documentation), reasonably requested by Assignee to more fully and effectively effectuate the purposes of this Assignment.
- 6. Where Assignee is unable because of Assignor's unavailability or for any other reason, to secure Assignor's signature to apply for or to pursue any application for, or recordal of assignment of, any United States or foreign patents or patent applications, then Assignor hereby irrevocably designates and appoints Assignee and its duly authorized officers and agents as Assignor's agent and attorney in fact, to act for and in Assignor's behalf and stead to execute and file and pursue any such applications and to do all other lawfully permitted acts to further the prosecution and issuance of patents and the recordal of assignment thereof with the same legal force and effect as if executed by Assignor.
- 7. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original for all purposes and all of which shall be deemed, collectively, as one agreement.
- 8. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware without regard to the principles of conflicts of laws thereunder.

[Signature Page Follows]

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IN TESTIMONY WHEREOF, the Assignor and Assignee have caused this Assignment to be signed and executed by the undersigned officers thereunto duly authorized on the date specified below with each of the parties intended to be legally bound hereby.

ASSIGNOR:	ASSIGNEE:
ΓiOptics, Inc.	Integra Research and Development, LLC
Byron	<u></u>
Name: Charlie Chen	Name: David Prescott
Title: President	Title: Chief Executive Officer
Con A min Can	교회 : 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
STATE OF) SS.	
COUNTY OF	
personally known to me, who	ruary, 2016, there appeared before me, acknowledged that he signed the foregoing Assignment deed on behalf and with full authority of TiOptics, Inc.
	SEE ATTACHED NOTARY CERTIFIC
	Notary Public
STATE OF)	일다 당시 전 경험과학과 보기를 살고 보는 하나 있다.
) ss.	
COUNTY OF)	
	2016 Ham annound backup ma
On this day of rec	oruary, 2016, there appeared before me
personally known to me, who	acknowledged that he signed the foregoing Assignment d deed on behalf and with full authority of Integra Research
Agreement as his voluntary act all and Development, LLC.	a accur on ochait and with run admostry or media recovered
and Development, LLO.	
	Notary Public

[Signature Page to Patent Assignment]

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	A STATE OF THE STA
A notary public or other officer completing this certificate is attached, and no	ficate verifies only the identity of the individual who signed the the truthfulness, accuracy, or validity of that document.
State of California	
County of SANTA CLARA	
	No.
On <u>para para</u> before me, <u>a r</u>	IAS MEMON, NOTARY PUBLIC, Here Insert Name and Title of the Officer
personally appeared	
	Name(s) of Signer(s)
subscribed to the within instrument and acknow	ry evidence to be the person(s) whose name(s) is/arg wiedged to me that he/she/they executed the same in his/ner/their signature(s) on the instrument the person(s); acted, executed the instrument.
	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
	WITNESS my hand and official seal.
ELIAS MEMOR Commission # 2033758	Signature Elin Mena
Sente Clara County My Comm. Expires Aug 12, 2017	Signature of Notary Public
Place Notary Seal Above	
Though this section is optional, completing this	PTIONAL is information can deter alteration of the document or is form to an unintended document.
Description of Attached Document	
Title or Type of Document:	Document Date:
Number of Pages: Signer(s) Other Th	an Named Above:
Capacity(ies) Claimed by Signer(s) Signer's Name:	Signer's Name:
☐ Corporate Officer — Title(s):	Signer's Name:
☐ Partner — ☐ Limited ☐ General	☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact ☐ Guardian or Conservator	☐ Individual☐ Attorney in Fact☐ Trustee☐ Guardian or Conservator
	Other:
Signer Is Representing:	Signer Is Representing:
	tary org • 1-800-HS NOTARY (1-900-876-8927) - tram #5007

IN TESTIMONY WHEREOF, the Assignor and Assignee have caused this Assignment to be signed and executed by the undersigned officers thereunto duly authorized on the date specified below with each of the parties intended to be legally bound hereby.

ASSIGNOR: TiOptics, Inc.	ASSIGNEE: Integra Research and Development, LLC
By: Name: Charlie Chen Title: President	By: Name: David Prescott Title: Chief Executive Officer
STATE OF New York) COUNTY OF A AAAY) On this day of February, 2016, personally known to me, who acknowledged Agreement as his voluntary act and deed on beha	If and with full authority of Tioptics, Inc.
STATE OF) SS. COUNTY OF)	Notary Public
On this day of February, 2016, personally known to me, who acknowledged Agreement as his voluntary act and deed on behand Development, LLC.	that he signed the foregoing Assignment
	Notary Public

[Signature Page to Patent Assignment]

SCHEDULE A

Issued Patents:

U.S. Patent Application Serial No.	Date Filed:	Issued Patent No.:
13/045,250	3/10/2011	8,483,566
13/585,653	8/14/2012	8,909,057
13/645,292	10/4/2012	8,909,046

Pending/Filed Patent Applications in Progress:

Patent Application Serial No.	Date Filed:	Country:
201280012677.6	9/10/2013	China
14/200,592	03/07/2014	United States
14/270,663, now U.S. Patent	05/06/2014	United States
9,231,713		
14/548,836	11/20/2014	United States

Patent Applications in Progress:

Title of Invention:	Inventors:	Country:
System and Method for	Sun, Huntley	United States
Telecommunication Signal		
Transmissions Over a		
Relatively Short Fiber Optic		

- 1. An invention title "Adaptive Equalization for Vestigial Sideband (VSB) Transmissions"
- 2. An invention title "System and Method for the Control and Adaption of a Driver Chip for a High Speed Transmission System"

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PATENT
RECORDED: 02/23/2016

REEL: 037792 FRAME: 0454