PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3776039

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------|----------------|
| TIOPTICS, INC. | 02/08/2016 |

RECEIVING PARTY DATA

| Name: | INTEGRA RESEARCH AND DEVELOPMENT, LLC | |
|-----------------|---------------------------------------|--|
| Street Address: | 10200 WILLOW CREEK ROAD, SUITE 150 | |
| City: | SAN DIEGO | |
| State/Country: | CALIFORNIA | |
| Postal Code: | 92131 | |

PROPERTY NUMBERS Total: 6

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

CORRESPONDENCE DATA

Fax Number: (619)688-1322

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: 619-688-1300

Email: email@nydegger.com

Correspondent Name: NYDEGGER & ASSOCIATES

Address Line 1: 5120 SHOREHAM PLACE, SUITE 275

Address Line 4: SAN DIEGO, CALIFORNIA 92122

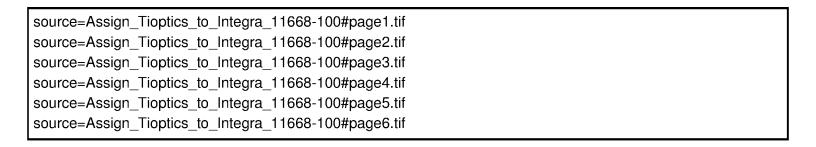
ATTORNEY DOCKET NUMBER: 11668.100 **NEIL K. NYDEGGER** NAME OF SUBMITTER: SIGNATURE: /Neil K. Nydegger/

DATE SIGNED: 03/09/2016

Total Attachments: 6

PATENT REEL: 037935 FRAME: 0420

503729396



PATENT ASSIGNMENT

THIS PATENT ASSIGNMENT (the "Assignment Agreement") is made and entered into as of this ____ 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 _____ 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 Schedule A ("Patents"); 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.

- 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]

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) | | |
| COUNTY OF) SS. | | |
| On this day of February, 2016, personally known to me, who acknowledge Agreement as his voluntary act and deed on behavior | ed that he signed the foregoing Assignment alf and with full authority of TiOptics. Inc. | |
| , | SEE ATTACHED NOTARY CERTIFICATE) Notary Public | |
| STATE OF) | rotary r done | |
| COUNTY OF) SS. | | |
| | there appeared before me, ed that he signed the foregoing Assignment whalf and with full authority of Integra Research | |
| | Notary Public | |

[Signature Page to Patent Assignment]

4815-0271-6971, v.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

| 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 |) |
| on 02/08/2016 hours El | Here Insert Name and Title of the Officer |
| On before me, | Horo locat Name and Title of the Office |
| personally appearedCHARLIE | Here insert Name and Title of the Oπicer |
| personally appearedCHARLIE | CHEが Name(s) of Signer(s) |
| | ivame(s) or Signer(s) |
| subscribed to the within instrument and acknow | ry evidence to be the person(s) whose name(s) is/arwiedged to me that he/she/they executed the same in his/her/their signature(s) on the instrument the person(sacted, executed the instrument. |
| | I certify under PENALTY OF PERJURY under the law of the State of California that the foregoing paragrap is true and correct. |
| ¥ | WITNESS my hand and official seal. |
| ELIAS MEMON Commission # 2033758 Notary Public - California | Signature Signature of Notary Public |
| Santa Clara County My Comm. Expires Aug 12, 2017 | Signature of Notary Public |
| Place Notary Seal Above | |
| | PTIONAL |
| fraudulent reattachment of thi | s information can deter alteration of the document or is form to an unintended document. |
| escription of Attached Document | o voim to an animadrada abbamoni. |
| | Document Date: |
| | an Named Above: |
| apacity(ies) Claimed by Signer(s) | |
| gner's Name: Corporate Officer — Title(s): | Signer's Name: |
| Corporate Officer — Title(s): | _ Signer's Name: ☐ Corporate Officer — Title(s): |
| Partner — ☐ Limited ☐ General Individual ☐ Attorney in Fact | ☐ Partner — ☐ Limited ☐ General☐ Individual ☐ Attorney in Fact |
| Trustee Guardian or Conservator | |
| Other: | ☐ Other: |
| gner Is Representing: | Signer Is Representing: |
| | |

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 |
| perşonany known to me, wi | NICHOLAS S ABDO Notary Public, State of New York No. 02AB6332729 Qualified in Albany County Commission Expires November 09, 20 19 SS. February, 2016, there appeared before me Dand Present the signed the foregoing Assignment and deed on behalf and with full authority of Tioptics, Inc. |
| STATE OF) COUNTY OF) | Notary Public |
| personally known to me, wh | February, 2016, there appeared before me, no acknowledged that he signed the foregoing Assignment and deed on behalf and with full authority of Integra Research |
| | 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"

4815-0271-6971, v. 6 **RECORDED:** 03/09/2016