

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT2819440

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	SECURITY AGREEMENT

**CONVEYING PARTY DATA**

Name	Execution Date
PINEBROOK IMAGING, INC.	04/02/2014

**RECEIVING PARTY DATA**

<b>Name:</b>	APPLIED VENTURES, LLC
<b>Street Address:</b>	3050 BOWERS AVENUE
<b>Internal Address:</b>	M/S 0105
<b>City:</b>	SANTA CLARA
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95052-8039

**PROPERTY NUMBERS Total: 42**

Property Type	Number
Application Number:	61099495
Application Number:	12337504
PCT Number:	US2009056740
Patent Number:	8253923
Application Number:	13587773
Application Number:	61162286
Application Number:	12475114
PCT Number:	US2010027550
Patent Number:	8670106
Application Number:	14203168
Application Number:	14203371
Application Number:	61249936
Application Number:	12897726
PCT Number:	US2010051823
Patent Number:	8390786
Application Number:	61286342
Application Number:	12960533
PCT Number:	US2010059667
Patent Number:	8395752
Application Number:	61330244

PATENT

Property Type	Number
Application Number:	13098296
Application Number:	61346436
Application Number:	13109563
PCT Number:	US2011037026
Patent Number:	8669989
Application Number:	14203174
Application Number:	61379732
Application Number:	13225404
PCT Number:	US2011050459
Application Number:	61379734
Application Number:	13225405
Application Number:	61379735
Application Number:	13225406
Application Number:	12960535
PCT Number:	US2010059677
Patent Number:	8390781
Application Number:	61541484
Application Number:	13629382
PCT Number:	US2012057941
Application Number:	61655475
Application Number:	13909076
PCT Number:	US2013044145

**CORRESPONDENCE DATA**

**Fax Number:** (713)623-4846

*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.*

**Email:** psdocketing@pattersonsheridan.com,  
jmatthews@pattersonsheridan.com

**Correspondent Name:** PATTERSON & SHERIDAN, LLP

**Address Line 1:** 24 GREENWAY PLAZA

**Address Line 2:** SUITE 1600

**Address Line 4:** HOUSTON, TEXAS 77046

<b>ATTORNEY DOCKET NUMBER:</b>	APPM/PINEBROOK
<b>NAME OF SUBMITTER:</b>	JULIE MATTHEWS
<b>SIGNATURE:</b>	/Julie Matthews/
<b>DATE SIGNED:</b>	04/17/2014

**Total Attachments: 12**

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## INTELLECTUAL PROPERTY SECURITY AGREEMENT

This INTELLECTUAL PROPERTY SECURITY AGREEMENT (as amended, amended and restated, supplemented or otherwise modified from time to time, the "IP Security Agreement") dated April 2, 2014, is among PineBrook Imaging, Inc., a Delaware corporation (the "Grantor"), whose address is 3511 Thomas Rd., STE 1, Santa Clara, CA 95054, and Applied Ventures, LLC, as Holder (the "Secured Party"), whose address is 3050 Bowers Avenue, M/S 0105, PO Box 58039, Santa Clara, CA 95052-8039 for the Secured Party (as defined in the Senior Convertible Promissory Note referred to below). Capitalized terms used but not defined herein shall have the meanings set forth in the Note.

Reference is made to that certain Senior Convertible Promissory Note, dated as of the date hereof (as it may hereafter be amended, amended and restated, supplemented, replaced, refinanced or otherwise modified from time to time (including any increases of the principal amount outstanding thereunder), the "Note"), among the Grantor and the Secured Party.

WHEREAS, under the terms of the Note, the Grantor has granted to the Secured Party a security interest in, among other property, certain intellectual property of the Grantor, and has agreed thereunder to execute this IP Security Agreement for recording with the U.S. Patent and Trademark Office, the United States Copyright Office and any other appropriate domestic federal governmental authorities.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantor agrees as follows:

SECTION 1. Grant of Security. Grantor hereby grants to the Secured Party a security interest in all of such Grantor's right, title and interest in and to its Intellectual Property, including, without limitation, the following, whether now owned or hereafter acquired by the undersigned (the "IP Collateral"):

- (i) the patents and patent applications set forth in Schedule A hereto (the "Patents");
- (ii) the trademark and service mark registrations and applications set forth in Schedule B hereto (provided that no security interest shall be granted in United States intent-to-use trademark applications to the extent that, and so long as creation of a security interest therein or the assignment thereof would result in the loss of any material rights therein), together with the goodwill symbolized thereby (the "Trademarks");
- (iii) all copyrights, whether registered or unregistered, including, without limitation, the copyright registrations and applications and exclusive copyright licenses set forth in Schedule C hereto (the "Copyrights");
- (iv) all reissues, divisions, continuations, continuations-in-part, extensions, renewals and reexaminations of any of the foregoing, all rights in the foregoing provided by international treaties or conventions, all rights corresponding thereto throughout the world and all other rights of any kind whatsoever of such Grantor accruing thereunder or pertaining thereto;
- (v) any and all claims for damages and injunctive relief for past, present and future infringement, dilution, misappropriation, violation, misuse or breach with respect to any of the foregoing, with the right, but not the obligation, to sue for and collect, or otherwise recover, such damages; and

(vi) any and all proceeds of, collateral for, income, royalties and other payments now or hereafter due and payable with respect to, and supporting obligations relating to, any and all of the IP Collateral of or arising from any of the foregoing;

SECTION 2. Security for Obligations. The grant of a security interest in the IP Collateral by the Grantor under this IP Security Agreement secures the payment of all Obligations of the Grantor now or hereafter existing under or in respect of the Loan Documents (as such Loan Documents may be amended, amended and restated, supplemented, replaced, refinanced or otherwise modified from time to time), whether direct or indirect, absolute or contingent, and whether for principal, reimbursement obligations, interest, premiums, penalties, fees, indemnifications, contract causes of action, costs, expenses or otherwise. Without limiting the generality of the foregoing, this IP Security Agreement secures, as to the Grantor, the payment of all amounts that constitute part of the Obligations that would be owed by such Grantor to the Secured Party under the Loan Documents but for the fact that they are unenforceable or not allowable due to the existence of a bankruptcy, or reorganization or similar proceeding involving the Grantor.

SECTION 3. Recordation. Grantor authorizes and requests that the Register of Copyrights, the Commissioner for Patents and the Commissioner for Trademarks and any other applicable domestic federal government officer record this IP Security Agreement.

SECTION 4. Execution in Counterparts. This IP Security Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

SECTION 5. Grants, Rights and Remedies. This IP Security Agreement has been entered into in conjunction with the provisions of the Note. The Grantor does hereby acknowledge and confirm that the grant of the security interest hereunder to, and the rights and remedies of, the Secured Party with respect to the IP Collateral are more fully set forth in the Note, the terms and provisions of which are incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this IP Security Agreement and the terms of the Note, the terms of the Note shall govern.

SECTION 6. Governing Law; Jurisdiction; Etc. (a) THIS IP SECURITY AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK.

(b) EACH PARTY HERETO IRREVOCABLY AND UNCONDITIONALLY SUBMITS, FOR ITSELF AND ITS PROPERTY, TO THE EXCLUSIVE JURISDICTION OF THE COURTS OF THE STATE OF NEW YORK SITTING IN THE STATE, COUNTY AND CITY OF NEW YORK AND OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK, AND ANY APPELLATE COURT FROM ANY THEREOF, IN ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS IP SECURITY AGREEMENT, AND EACH OF THE PARTIES HERETO IRREVOCABLY AND UNCONDITIONALLY AGREES THAT ALL CLAIMS IN RESPECT OF ANY SUCH ACTION OR PROCEEDING MAY BE HEARD AND DETERMINED IN SUCH NEW YORK STATE COURT OR, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, IN SUCH FEDERAL COURT. EACH OF THE PARTIES HERETO AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING SHALL BE CONCLUSIVE AND MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY LAW. NOTHING IN THIS IP SECURITY AGREEMENT SHALL AFFECT ANY RIGHT THAT THE SECURED PARTY MAY

OTHERWISE HAVE TO BRING ANY ACTION OR PROCEEDING RELATING TO THIS IP SECURITY AGREEMENT AGAINST THE GRANTOR OR ITS PROPERTIES IN THE COURTS OF ANY JURISDICTION.

(c) EACH PARTY HERETO IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY OBJECTION THAT IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF VENUE OF ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS IP SECURITY AGREEMENT IN ANY COURT REFERRED TO IN PARAGRAPH (b) OF THIS SECTION. EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, THE DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION OR PROCEEDING IN ANY SUCH COURT.


(d) EACH PARTY HERETO IRREVOCABLY CONSENTS TO SERVICE OF PROCESS IN THE MANNER PROVIDED FOR NOTICES IN SECTION 13.3 OF THE NOTE. NOTHING IN THIS IP SECURITY AGREEMENT WILL AFFECT THE RIGHT OF ANY PARTY HERETO TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY APPLICABLE LAW.

(e) EACH PARTY TO THIS IP SECURITY AGREEMENT HEREBY EXPRESSLY WAIVES ANY RIGHT TO TRIAL BY JURY OF ANY CLAIM, DEMAND, ACTION OR CAUSE OF ACTION ARISING UNDER THIS IP SECURITY AGREEMENT OR IN ANY WAY CONNECTED WITH OR RELATED OR INCIDENTAL TO THE DEALINGS OF THE PARTIES HERETO OR ANY OF THEM WITH RESPECT TO THIS IP SECURITY AGREEMENT, OR THE TRANSACTIONS RELATED THERETO, IN EACH CASE WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER FOUNDED IN CONTRACT OR TORT OR OTHERWISE; AND EACH PARTY HEREBY AGREES AND CONSENTS THAT ANY SUCH CLAIM, DEMAND, ACTION OR CAUSE OF ACTION SHALL BE DECIDED BY COURT TRIAL WITHOUT A JURY, AND THAT ANY PARTY TO THIS AGREEMENT MAY FILE AN ORIGINAL COUNTERPART OR A COPY OF THIS SECTION 6(e) WITH ANY COURT AS WRITTEN EVIDENCE OF THE CONSENT OF THE SIGNATORIES HERETO TO THE WAIVER OF THEIR RIGHT TO TRIAL BY JURY.

*[Remainder of page intentionally left blank.]*

IN WITNESS WHEREOF, the Grantor and the Secured Party have caused this IP Security Agreement to be duly executed and delivered by its officer thereunto duly authorized as of the date first written above.

**PINEBROOK IMAGING, INC.**  
as Grantor

By:   
Name: Jang Fung Chen  
Title: President

APPLIED VENTURES, LLC,  
as Secured Party

By: *Eileen M. Tarryl*  
Name: *Eileen Tarryl*  
Title: *Managing Director and General Mng.*



Schedule A

Patents

Family	Publ. No.	Publ. Date	App./Patent No.	App./Filing Date	Status*	Title
1	US 61099495 US 12337504			2008-09-23 2008-12-17	Provisional Non-provisional	Optical Imaging Writer System Optical Imaging Writer System
1	PCT/US09/056740			2009-09-11	Filed	An Optical Imaging Writer System
1	Taiwan 099134071			2010-10-06	Non-provisional; under examination; Filing combined with US Family 1, 2, 3	An Optical Image Writer System
1	China(PCT/US09/056740)			2011-03-23	Issued 2013-06-19	An Optical Image Writer System
1	US 8253923			2008-12-17	Issued 2012-08-28	Optical Imaging Writer System
1	US 13587773			2012-08-16	Dispatched from Pre-Exam	Optical Imaging Writer System
2	US61162286 US12475114			2009-03-21 2009-05-29	Provisional Non-provisional (Issue Fee Notification)	Optical Imaging Writer System Optical Imaging Writer System
2	PCT/US10/27550			2010-03-16	Filed	An Optical Imaging Writer System
2	Taiwan 099134071			2010-10-06	Non-provisional; under examination; filing combined with US family 1, 2, 3	An Optical Image Writer System
2	China(PCT/US10/27550)			2011-09-20	Filed	An Optical Image Writer System
2	US 8670106			2009-05-29	Allowed (Issue date 2014-03-11)	Optical Imaging Writer System
2	US 14203168			2014-03-10	Filed (divisional)	An Optical Imaging Writer System

Family	Publ. No.	Publ. Date	App./Patent No.	Appl./Filing Date	Status*	Title
2			US 14203371	2014-03-10	Filed (continuation-in-part)	Pixel Blending For Multiple Charged-Particle Beam Lithography
3			US 61249936	2009-10-08	Provisional -	Optical Imaging Writer System
3			US 12897726	2010-10-04	Non-provisional Filed	Optical Imaging Writer System
3			PCT/US10/51823	2009-10-07	Filed	An Optical Imaging Writer System
3			Taiwan 099134071	2010-10-06	Filed; combined with US family 1, 2, 3	An Optical Image Writer System
3			China(PCT/US10/51823)	2012-05-30	Filed	An Optical Image Writer System
3			US 8390786	2010-10-04	Issued 2013-03-05	Optical Imaging Writer System
4			US 61286342	2009-12-14	Provisional -	Optical Image Writer System
4			US 12960533	2010-12-05	Non-provisional Filing	Optical Imaging Writer System
4			PCT/US10/59667	2010-12-9	PCT Filing Filed	An Optical Imaging Writer System
4			Taiwan 099143776	2011-05-24	Request for Examination filed 2014-02-07	An Optical Image Writer System
4			China (PCT/US10/59667)	2012-06-13	Filed	An Optical Image Writer System
4			US 8395752	2010-12-05	Issued 2013-03-12	Optical Imaging Writer System
5			US 61330244	2010-04-30	Provisional	Method and System for Handling Substrates
5			US 13098296	2011-04-29	Non-provisional Filing	Method and System for Handling Substrates
5			PCT		Not filed	
5			Taiwan		Not filed	
5			China		Not filed	

Family	Publ. No.	Publ. Date	App./Patent No.	Appl./Filing Date	Status*	Title
6			US 61346436 US 13109563	2010-05-19 2011-05-17	Provisional Non-provisional	Parallel Image Processing System Parallel Image Processing System
6			PCT/US11/37026	2011-05-18	Filed	A Parallel Image Processing System
6			Taiwan 100117437	2011-05-18	Filed	A Parallel Image Processing System
6			China (PCT/US11/37026)	2012-11-16	Filed	A Parallel Image Processing System
6			US 8669989	2011-05-17	Allowed (Issue date 2014-03-11)	Parallel Image Processing System
6			US 14203174	2014-03-10	Filed (divisional)	A Parallel Imaging Processing System
7			US 61379732	2010-09-03	Provisional	System and Method for Manufacturing 3-D Integrated Circuits
7			US 13225404	2011-09-02	Non-provisional Filing	System and Method for Manufacturing Three Dimensional Integrated Circuits
7			PCT/US11/50459	2011-09-03	PCT Filing combined US family 7, 8, 9	System and Method for Manufacturing Three Dimensional Integrated Circuits
7			Taiwan 100131842	2011-09-03	Filing combined US family 7, 8, 9; Request for Examination filed 2014-02-07	System and Method for Manufacturing 3-D Integrated Circuits
7			China (PCT/US2011/050459)	2013-03-04	PCT Filing combined US family 7, 8, 9	System and Method for Manufacturing 3-D Integrated Circuits
8			US 61379734	2010-09-03	Provisional	System and Method for Manufacturing Multiple Light Emitting Diodes in Parallel

Family	Publ. No.	Publ. Date	App./Patent No.	Appl./Filing Date	Status*	Title
8			US 13225405	2011-09-02	Non-provisional Filing	System and Method for Manufacturing Multiple Light Emitting Diodes in Parallel
8			PCT/US11/50459	2011-09-03	PCT Filing combined US family 7, 8, 9	System and Method for Manufacturing Three Dimensional Integrated Circuits
8			Taiwan 100131842	2011-09-03	Filing combined US family 7, 8, 9; Request for Examination filed on 2014-02-07	System and Method for Manufacturing Multiple Light Emitting Diodes in Parallel
8			China (PCT/US2011/050459)	2013-03-04	PCT Filing combined US family 7, 8, 9	System and Method for Manufacturing Multiple Light Emitting Diodes in Parallel
9			US 61379735	2010-09-03	Provisional	System and Method for Performing Automatic Optical Inspection of Integrated Circuits
9			US 13225406	2011-09-02	Non-provisional Filing	System and Method for Performing Automatic Optical Inspection of Integrated Circuits
9			PCT/US11/50459	2011-09-03	PCT Filing combined US family 7, 8, 9	System and Method for Manufacturing Three Dimensional Integrated Circuits
9			Taiwan 100131842	2011-09-03	Filing combined US family 7, 8, 9; Request for Examination filed on 2014-02-07	System and Method for Performing Automatic Optical Inspection of Integrated Circuits
9			China (PCT/US2011/050459)	2013-03-04	PCT Filing combined US family 7, 8, 9	System and Method for Performing Automatic Optical Inspection of Integrated Circuits

Family	Publ. No.	Publ. Date	App./Patent No.	Appl./Filing Date	Status*	Title
10			US 61286342	2009-12-14	Provisional	Optical Image Writer System
10			US 12960535	2010-12-05	Non-provisional	Optical Imaging Writer System
10			PCT/US10/59677	2010-12-09	PCT Filed	An Optical Image Writer System
10			Taiwan 099143774	2011-5-24	Filed; Request for Examination filed 2014-02-07	An Optical Image Writer System
10			China(PCT/US10/59677)	2012-06-13	Filed	An Optical Image Writer System
10			US 8390781	2010-12-05	Issued 2013-03-05	Optical Imaging Writer System
11			US 61541484	2011-09-30	Provisional	Illumination System
11			US 13629382	2012-09-27	Non-provisional	Illumination System
11			PCT/US12/57941	2012-09-28	PCT Filed	An Illumination System
11			Taiwan 101135869	2011-09-28	Filed	An Illumination System
11			China			
12			US 61655475	2012-06-04	Provisional	Optical Projection Array Exposure System
12			US 13909076	2013-06-04	Non-provisional	Optical Projection Array Exposure System
12			PCT/US13/44145	2013-06-4	PCT Filed	An Optical Projection Array Exposure System
12			Taiwan 102119784	2013-06-04	Filed	An Optical Projection Array Exposure System
12			China			

**Schedule B**  
**Trademarks**

None

**Schedule C**

**Copyrights**

None