TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM340870

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	Security Agreement

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
ADVANCED PHOTONIX, INC.		05/08/2015	CORPORATION: DELAWARE
PICOMETRIX, LLC		05/08/2015	LIMITED LIABILITY COMPANY: DELAWARE

RECEIVING PARTY DATA

Name:	SILICON VALLEY BANK
Street Address:	8020 TOWERS CRESCENT DR., SUITE 475
City:	VIENNA
State/Country:	VIRGINIA
Postal Code:	22182
Entity Type:	CORPORATION: CALIFORNIA

PROPERTY NUMBERS Total: 8

Property Type	Number	Word Mark
Registration Number:	3788301	API
Registration Number:	1963580	PICOMETRIX
Serial Number:	85600183	SAF-T-CHEK ADS
Registration Number:	4218098	T-GAUGE
Registration Number:	3561696	T-RAY
Registration Number:	3561697	T-RAY 2000
Registration Number:	3561698	T-RAY 4000
Serial Number:	86313249	T-RAY IMAGE

OP $215.00 3788301

CORRESPONDENCE DATA

Fax Number: 8004947512

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: 202-370-4750
Email: ipteam@nationalcorp.com
Correspondent Name: Brandie Sullivan
Address Line 1: 1025 Vermont Ave NW, Suite 1130
Address Line 2: National Corporate Research, Ltd.
Address Line 4: Washington, D.C. 20005

ATTORNEY DOCKET NUMBER:	F155676
NAME OF SUBMITTER:	Monica Courtade
SIGNATURE:	/Monica Courtade/
DATE SIGNED:	05/11/2015

Total Attachments: 10
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INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement (this "Agreement") is entered into as of May 8, 2015, by and between (i) **SILICON VALLEY BANK**, a California corporation, with a loan production office located at 8020 Towers Crescent Drive, Suite 475, Vienna, Virginia 22182 ("Bank") and (ii) (a) **ADVANCED PHOTONIX, INC.**, a Delaware corporation ("**API**"), and (b) **PICOMETRIX, LLC**, a Delaware limited liability company ("**Picometrix**"; API and Picometrix are referred to herein, each and together, jointly and severally, as "Grantor"), with offices located at 2925 Board Walk Drive, Ann Arbor, Michigan 48104.

RECITALS

A. Bank has agreed to make certain advances of money and to extend certain financial accommodations to Grantor, Luna Innovations Incorporated, a Delaware corporation, and Luna Technologies, Inc., a Delaware corporation (the "Loans") in the amounts and manner set forth in that certain Loan and Security Agreement by and between Bank and Grantor dated as of February 18, 2010 (as the same may be amended, restated, amended and restated, modified or supplemented from time to time, the "Loan Agreement"; capitalized terms used herein are used as defined in the Loan Agreement). Bank is willing to make the Loans to Grantor, but only upon the condition, among others, that Grantor shall grant to Bank a security interest in its Copyrights, Trademarks, Patents, and Mask Works (as each term is described below) to secure the obligations of Grantor to Bank.

B. Pursuant to the terms of the Loan Agreement, Grantor has granted to Bank a security interest in all of Grantor's right, title and interest, whether presently existing or hereafter acquired, in, to and under all of the Collateral.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound, as collateral security for the prompt and complete payment when due of Grantor's obligations to Bank, Grantor hereby represents, warrants, covenants and agrees as follows:

AGREEMENT

1. Grant of Security Interest. To secure Grantor's obligations to Bank, Grantor grants and pledges to Bank a security interest in all of Grantor's right, title and interest in, to and under its intellectual property (all of which shall collectively be called the "Intellectual Property Collateral"), including, without limitation, the following:

(a) Any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held, including without limitation those set forth on Exhibit A attached hereto (collectively, the "Copyrights");

(b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(c) Any and all design rights that may be available to Grantor now or hereafter existing, created, acquired or held;

(d) All patents, patent applications and like protections including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same, including without limitation the patents and patent applications set forth on Exhibit B attached hereto (collectively, the "Patents");

(e) Any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Grantor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto (collectively, the "Trademarks");

(f) All mask works or similar rights available for the protection of semiconductor chips, now owned or hereafter acquired, including, without limitation those set forth on Exhibit D attached hereto (collectively, the "Mask Works");

(g) Any and all claims for damages by way of past, present and future infringements of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(h) All licenses or other rights to use any of the Copyrights, Patents, Trademarks, or Mask Works and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(i) All amendments, extensions, renewals and extensions of any of the Copyrights, Trademarks, Patents, or Mask Works; and

(j) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

2. Recordation. Upon the occurrence and during the continuance of an Event of Default, Grantor authorizes the Commissioner for Patents, the Commissioner for Trademarks and the Register of Copyrights, the equivalents of each of the foregoing in any foreign jurisdictions and any other government officials in any jurisdictions to record and register this Agreement upon request by Bank.

3. Loan Documents. This Agreement has been entered into pursuant to and in conjunction with the Loan Agreement, which is hereby incorporated by reference. The provisions of the Loan Agreement shall supersede and control over any conflicting or inconsistent provision herein. The rights and remedies of Bank with respect to the Intellectual Property Collateral are as provided by the Loan Agreement and related documents, and nothing in this Agreement shall be deemed to limit such rights and remedies.

4. Execution in Counterparts. This Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page to this Agreement by facsimile or in electronic (i.e., "pdf" or "tif" format) shall be effective as delivery of a manually executed counterpart of this Agreement.

5. Successors and Assigns. This Agreement will be binding on and shall inure to the benefit of the parties hereto and their respective successors and assigns.

6. Governing Law. This Agreement and any claim, controversy, dispute or cause of action (whether in contract or tort or otherwise) based upon, arising out of or relating to this Agreement and the transactions contemplated hereby and thereby shall be governed by, and construed in accordance with, the

laws of the United States and the State of New York, without giving effect to any choice or conflict of law provision or rule (whether of the State of New York or any other jurisdiction).

[Signature page follows.]

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

GRANTOR:

ADVANCED PHOTONIX, INC.

By: _____
Name: Dale Messick
Title: _____

PICOMETRIX, LLC

By: _____
Name: Dale Messick
Title: _____

BANK:

SILICON VALLEY BANK

By: _____
Name: _____
Title: _____

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

GRANTOR:

ADVANCED PHOTONIX, INC.

By_____
Name:_____
Title:_____

PICOMETRIX, LLC

By_____
Name:_____
Title:_____

BANK:

SILICON VALLEY BANK

By: [signature]
Name: Michael Coady
Title: Vice President

[Signature Page to Intellectual Property Security Agreement]

EXHIBIT A

Copyrights

Description	Registration/ Application Number	Registration/ Application Date
None		

EXHIBIT B

Patents

Description	Registration/ Application Number	Registration/ Application Date
System and method to measure the transit time position(s) of pulses in time domain data	US8457915B2	6/4/2013
System and method reducing fiber stretch induced timing errors in fiber optic coupled time domain terahertz systems	US8436310B2	5/7/2013
Optical delay	US8390910B2	3/5/2013
Pin photodetector with mini-mesa contact layer	US7468503B2	12/23/2008
Terahertz imaging system for examining articles	US7449695B2	11/11/2008
Planar avalanche photodiode	US7348608B2	3/25/2008
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Precision fiber attachment	US7263266B2	8/28/2007
Enhanced photodetector	US7078741B2	7/18/2006
Focusing fiber optic	US7039275B2	5/2/2006
Amplified photoconductive gate	US6936821B2	8/30/2005
System and method for monitoring changes in state of matter with terahertz radiation	US6849852B2	2/1/2005
Compact fiber pigtailed terahertz modules	US6816647B1	11/9/2004
Dispersive precompensator for use in an electromagnetic radiation generation and detection system	US6320191B1	11/20/2001
Highly-doped P-type contact for high-speed, front-side illuminated photodiode	US6262465B1	7/17/2001
PLANAR AVALANCHE PHOTODIODE	US20150115319A1	4/30/2015
SYSTEM AND METHOD TO DETECT ANOMALIES	US20150060673A1	3/5/2015
SYSTEM AND METHOD FOR DETECTION AND MEASUREMENT OF INTERFACIAL PROPERTIES IN SINGLE AND MULTILAYER OBJECTS	US20120304756A1	12/6/2012
SYSTEM AND METHOD REDUCING FIBER STRETCH INDUCED TIMING ERRORS IN FIBER OPTIC COUPLED TIME DOMAIN TERAHERTZ SYSTEMS	US20120175520A1	7/12/2012
SYSTEM AND METHOD TO MEASURE THE TRANSIT TIME POSITION(S) OF PULSES IN TIME DOMAIN DATA	US20100280779A1	11/4/2010
DISPERSION AND NONLINEAR COMPENSATOR FOR OPTICAL DELIVERY FIBER	US20090190933A1	7/30/2009
Optical Delay	US20080259428A1	10/23/2008
Photoconductive Device	US20080093625A1	4/24/2008
Terahertz imaging system for examining articles	US20070235658A1	10/11/2007
Pin photodetector	US20060226343A1	10/12/2006
Precision fiber attachment	US20060056788A1	3/16/2006

Planar avalanche photodiode	US20050156192A1	7/21/2005
Enhanced photodetector	US20050056861A1	3/17/2005
Charge controlled avalanche photodiode and method of making the same	US20050029541A1	2/10/2005
Planar avalanche photodiode	US20040251483A1	12/16/2004
System and method for monitoring changes in state of matter with terahertz radiation	US20030226969A1	12/11/2003
Amplified photoconductive gate	US20030127673A1	7/10/2003
focusing fiber optic	US20030095746A1	5/22/2003
System and method to measure the transit time position(s) of pulses in time domain data	US8457915B2	6/4/2013
Active large area avalanche photodiode array	US6111299A	8/29/2000
Solid state photodetector with light-responsive rear face	US6005276A	12/21/1999
Active large area avalanche photodiode array	US5831322A	11/3/1998
Solid state photodetector with light-responsive rear face	US5801430A	9/1/1998
Large area avalanche photodiode array	US5757057A	5/26/1998
Solid state photodetector with light-responsive rear face	US5477075A	12/19/1995
Avalanche photomultiplier tube	US5311044A	5/10/1994
Dot matrix pattern on photosensitive semi-conductor surface	US5276348A	1/4/1994
Devices for detecting and/or imaging single photoelectron	US5146296A	9/8/1992
Light responsive avalanche diode	US5057892A	10/15/1991
High quantum efficiency photodiode device	US4782382A	11/1/1988
Thin line junction photodiode	US4717946A	1/5/1988
Charge controlled avalanche photodiode and method of making the same	US20050029541A1	2/10/2005
Ball connecting body for a rolling motion apparatus	US20040202390A1	10/14/2004

EXHIBIT C

Trademarks

Description	Registration/ Application Number	Registration/ Application Date
API	3788301	May 11, 2010
PICOMETRIX	1963580	March 19, 1996
SAF-T-CHEK ADS	85-600183	April 17, 2012
T-GAUGE	4218098	October 2, 2012
T-RAY	3561696	January 13, 2009
T-RAY IMAGE	86-313249	June 18, 2014
T-RAY 2000	3561697	January 13, 2009
T-RAY 4000	3561698	January 13, 2009

EXHIBIT D

Mask Works

Description	Registration/ Application Number	Registration/ Application Date
None		