

## TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

ETAS ID: TM648786

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT		
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST		
<b>CONVEYING PARTY DATA</b>			
<b>Name</b>	<b>Formerly</b>	<b>Execution Date</b>	<b>Entity Type</b>
HI LLC		12/21/2020	Limited Liability Company: DELAWARE
<b>RECEIVING PARTY DATA</b>			
<b>Name:</b>	TRIPLEPOINT PRIVATE VENTURE CREDIT INC.		
<b>Street Address:</b>	2755 Sand Hill Road		
<b>City:</b>	Menlo Park		
<b>State/Country:</b>	CALIFORNIA		
<b>Postal Code:</b>	94025		
<b>Entity Type:</b>	Corporation: MARYLAND		
<b>PROPERTY NUMBERS Total: 12</b>			
<b>Property Type</b>	<b>Number</b>	<b>Word Mark</b>	
<b>Serial Number:</b>	87527613	KERNEL	
<b>Registration Number:</b>	6091561	KERNEL	
<b>Serial Number:</b>	88472864	KERNEL	
<b>Serial Number:</b>	88472862	KERNEL	
<b>Serial Number:</b>	88472866	KERNEL	
<b>Serial Number:</b>	88472868	KERNEL	
<b>Serial Number:</b>	88472870	KERNEL	
<b>Serial Number:</b>	88569817	WHAT ELSE ARE YOU CAPABLE OF?	
<b>Serial Number:</b>	88569820	WHAT ELSE ARE YOU CAPABLE OF?	
<b>Serial Number:</b>	88569829	WHAT ELSE ARE YOU CAPABLE OF?	
<b>Serial Number:</b>	88569833	WHAT ELSE ARE YOU CAPABLE OF?	
<b>Serial Number:</b>	88569835	WHAT ELSE ARE YOU CAPABLE OF?	
<b>CORRESPONDENCE DATA</b>			
<b>Fax Number:</b>			
<i>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.</i>			
<b>Phone:</b>	6508157636		
<b>Email:</b>	aalwine@mwe.com		
<b>Correspondent Name:</b>	Judy M. Mohr / MCDERMOTT WILL & EMERY		

CH \$315.00 87527613

**Address Line 1:** 415 Mission Street, Suite 5600  
**Address Line 4:** San Francisco, CALIFORNIA 94105

**ATTORNEY DOCKET NUMBER:** 082853-0010-HI LLC

**NAME OF SUBMITTER:** Judy M. Mohr

**SIGNATURE:** /Judy M. Mohr/

**DATE SIGNED:** 05/21/2021

**Total Attachments: 30**

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## PLAIN ENGLISH INTELLECTUAL PROPERTY SECURITY AGREEMENT

This is a Plain English Intellectual Property Security Agreement dated as of December 21, 2020 by and between TRIPLEPOINT PRIVATE VENTURE CREDIT INC., a Maryland corporation, in its capacity as collateral agent for itself and Lenders (as defined below) and HI LLC, a Delaware limited liability company (the "Agreement").

The words "We", "Us", or "Our", refer to the grantee, which is TRIPLEPOINT PRIVATE VENTURE CREDIT INC. The words "You" or "Your" refers to the grantor, which is HI LLC and not any individual. The words "the Parties" refers to both TRIPLEPOINT PRIVATE VENTURE CREDIT INC. and HI LLC.

Reference is made to the Plain English Growth Capital Loan and Security Agreement (as the same may be amended, restated, supplemented or otherwise modified from time to time, the "Loan Agreement"), dated as of December 21, 2020 by and among, You, KRNL, INC., a Delaware corporation, Collateral Agent and TRIPLEPOINT PRIVATE VENTURE CREDIT INC., a Maryland corporation in its capacity as lender ("TPVC") and TRIPLEPOINT CAPITAL LLC, a Delaware limited liability company, in its capacity as a lender (in such capacity, "TPC"; TPVC and TPC, in their respective capacities as lenders, each a "Lender" and collectively the "Lenders"). Pursuant to the Loan Agreement, You have granted to Us a lien on and a security interest in all the present and future rights, title, and interest that You may now have or hereafter acquire in all Patents, Trademarks, Copyrights, and applications for Patents, Trademarks and Copyrights.

In consideration for the mutual covenants and agreements contained in the Loan Agreement and this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties agree as follows:

### I. GRANT OF SECURITY INTEREST

You grant to Us a lien upon and continuing security interest in all of Your right, title, and interest in, to and under all of the following (all of the following items of property collectively will be referred to as the "Intellectual Property Collateral"), whether now existing or hereafter arising or acquired:

- ⇒ all Patents, Patent Licenses, and Patent applications, including specifically those listed on the attached **Schedule A**, together with any reissues, divisions, continuations, renewals, extensions and continuations thereof;
- ⇒ all Trademarks, Trademark Licenses, and trademark applications, including specifically those listed on the attached **Schedule B** together with any renewals thereof;
- ⇒ all Copyrights, Copyright Licenses, and applications for Copyrights, including specifically those listed on the attached **Schedule C**;
- ⇒ the right to sue for past, present and future infringements of the foregoing and all rights corresponding thereto throughout the world and all re-issues, divisions continuations, renewals, extensions and continuations-in-part thereof; and
- ⇒ all Proceeds.

You represent and warrant to Us that Schedules A, B, and C attached hereto set forth any and all intellectual property rights in connection to which You have registered or filed an application with either the United States Patent and Trademark Office or the United States Copyright Office, as applicable.

### 2. LOAN AGREEMENT

This security interest is granted to secure the Secured Obligations, under the Loan Agreement. All the capitalized terms used but not otherwise defined are used in this Agreement with the same meaning as defined in the Loan Agreement.

IP Security Agreement (HI LLC)

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**3. OUR RIGHT TO SUE**

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From and after an Event of Default, subject to the terms of the Loan Agreement, We shall have the right, but shall in no way be obligated, to bring suit in Our own name to enforce Your rights in the Intellectual Property Collateral. If We commence any such suit, You shall, at Our request, do all lawful acts and execute and deliver all proper documents or information that may be necessary or desirable to aid Us in such enforcement. You shall promptly, upon demand, reimburse and indemnify Us for all of Our costs and expenses, including reasonable attorney's fees, related to Our exercise of the above mentioned rights.

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**4. FURTHER ASSURANCES**

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You will from time to time execute, deliver and file, alone or with Us, any security agreements, or other documents to perfect and give priority to Our lien on the Intellectual Property Collateral. You will from time to time obtain any instruments or documents as We may request, and take all further action that may be reasonably necessary or desirable, or that We may reasonably request, to carry out more effectively the provisions and purposes of this Agreement or any other related agreements or to confirm, perfect, preserve and protect the liens granted to Us.

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**5. MODIFICATION**

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This Agreement can only be altered, amended or modified in a writing signed by the Parties. Notwithstanding the foregoing however, You hereby irrevocably appoint Us (and any of Our designated officers, agents or employees) as Your true and lawful attorney to modify, in Our sole discretion, this Agreement without first obtaining Your approval of or signature to such modification by amending Schedules A, B, and C to this Agreement, as appropriate, to include reference to any right, title or interest in any Intellectual Property Collateral acquired by You before or after the execution hereof or to delete any reference to any right, title or interest in any Intellectual Property Collateral in which You no longer have or claim to have any right, title or interest. The appointment of Us as Your attorney in fact, and each and every one of Our rights and powers, being coupled with an interest, is irrevocable until all of the Secured Obligations have been fully repaid and performed and Our obligation to provide credit extensions to You is terminated.

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**6. BINDING EFFECT; REMEDIES NOT EXCLUSIVE**

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This Agreement shall be binding upon You and Your respective successors and assigns, and shall inure to the benefit of Us, and Our nominees and assigns.

Our rights and remedies with respect to the security interest granted hereby are in addition to those set forth in the Loan Agreement and the other Loan Documents, and those which are now or hereafter available to Us as a matter of law or equity. Each of Our rights, powers and remedies provided for herein or in the Loan Agreement or any of the Loan Documents, or now or hereafter existing at law or in equity shall be cumulative and concurrent and shall be in addition to every right, power or remedy provided for herein and the exercise by Us of any one or more of the rights, powers or remedies provided for in this Agreement, the Loan Agreement or any of the other Loan Documents, or now or hereafter existing at law or in equity, shall not preclude the simultaneous or later exercise by any person, including Us, of any or all other rights, powers or remedies.

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**7. GOVERNING LAW; COUNTERPARTS**

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This Agreement shall be deemed made and accepted in and shall be governed by and construed in accordance with the laws of the State of California, and (where applicable) the laws of the United States of America.

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute the same instrument.

*(Signature Page to Follow)*

IN WITNESS WHEREOF, You have duly executed this Agreement as of the date first set forth above.

You: HI LLC  
Signature: Bryan R. Johnson  
Print Name: Bryan Johnson  
Title: CEO and President

[SIGNATURE PAGE TO PLAIN ENGLISH INTELLECTUAL PROPERTY SECURITY AGREEMENT]

**SCHEDULE A**

**To Plain English Intellectual Property Security Agreement  
Between HI LLC, as You (Grantor)  
and TRIPLEPOINT PRIVATE VENTURE CREDIT INC., as Us (Grantee)**

**PATENTS AND PATENT APPLICATIONS**

(See Attached)

Invention #	Inventors	Technology Class	Title of Invention	Type of Filing	Filing Date	Serial Number	Publication Date	Publication Number	Issue Date	Patent Number	General Technology & Business Applications	Strategic Patent Abstract - General Technology & System Applications
KEPN-01010001	Yang, Changhui; Marabestene, Adam; Alford, James; Sobek, James; Wentz, Thomas	68999 OTHER TECHNOLOGY: ASIC; ASIC	SYSTEM AND METHOD FOR QUASISIMULTANEOUSLY EFFECTING PHASE MODULATED OPTICAL SIGNALS	Non-Provisional (Track-One)	22-Dec-2011	13,982,208			10-Jul-2015	US 10,616,179 (B1)		
KEPN-01010002	Do Valle, Bruno; He, Peng; Danko, Kenneth; Katsuni, Hiroshi	OPTICAL; SPAD Architecture	FAST-GATED PHOTODIODE ARCHITECTURE COMPENSATING DUAL VOLTAGE SOURCES WITH A SWITCH CONFIGURATION	Non-Provisional (Track-One)	31-Jul-2010	16,051,462			18-Dec-2015	US 10,150,038 (B1)	YES	An exemplary photodiode includes a SPAD and a capacitor. The capacitor is configured to be charged while the SPAD is in a blinded state, with a bias voltage by a voltage source. The capacitor is further configured to supply bias voltage to an output node of the SPAD such that a voltage across the SPAD is greater than a breakdown voltage of the SPAD.
KEPN-01010003	Yang, Changhui; Marabestene, Adam; Alford, James	OTHER TECHNOLOGY: DIET; SHAPE DETECTION	SYSTEMS AND METHODS FOR QUASISIMULTANEOUSLY EFFECTING PHASE MODULATED OPTICAL SIGNALS	Non-Provisional (Track-One)	17-Dec-2011	13,982,208			5-May-2015	US 10,219,706 (B1)		
KEPN-01010004	Jiang, Anqian; Sankar, Roman; Robinson, Brian; Anderson, Christopher; Goetz, Benjamin; Stanton, John; Peterson, Erik	OTHER TECHNOLOGY: Image; Image processing	RECONFIGURABLE BIOSIGNAL PROCESSING ARCHITECTURE	Non-Provisional (Track-One)	26-Nov-2013	16,921,164	3-Jun-2015	US 2015/0061121 A1	23-Apr-2015	US 10,265,517 (B1)		
KEPN-01010005	Yang, Changhui; Marabestene, Adam; Alford, James; Sobek, James	OTHER TECHNOLOGY: ASIC; ASIC	QUANTUM TRANSDUCER FOR QUASISIMULTANEOUSLY EFFECTING PHASE MODULATED OPTICAL SIGNALS	Non-Provisional	15-Dec-2012	15,844,368	13-May-2015	US 2015/0130944 A1	28-May-2015	AE 10,283,682 (B1)		
KEPN-01010006	Yang, Changhui; Marabestene, Adam; Alford, James; Sobek, James	OTHER TECHNOLOGY: ASIC; ASIC	QUANTUM TRANSDUCER FOR QUASISIMULTANEOUSLY EFFECTING PHASE MODULATED OPTICAL SIGNALS	Non-Provisional (Track-One)	15-Dec-2012	15,844,370	29-May-2015	US 2015/0130945 A1	2-Jul-2015	US 10,930,918 (B1)	YES	An exemplary non-invasive wearable brain interface system includes a headgear configured to be worn on a head of the user and a plurality of self-contained photodiode units configured to removably attach to the headgear. The photodiode units each include a plurality of photodiodes configured to detect photons of light after the photons reflect from a target within a brain of the user. The brain interface system further includes a master control unit communicatively coupled to each of the photodiode units by way of a plurality of wires and configured to control the photodiode units. The master control unit comprises an input processor configured to connect to a power cable that provides power from a power source for the master control unit and the photodiode units.
KEPN-01010007	Alford, James; Marabestene, Adam	OTHER TECHNOLOGY: ASIC; ASIC	SYSTEM AND METHOD TO CORRECT COMPENSATED IMAGES INTO LOCK-IN IMAGES	Non-Provisional (Track-One)	14-May-2010	13,982,799			6-Aug-2015	US 10,667,261 (B1)		
KEPN-01010008	Yang, Changhui; Marabestene, Adam; Alford, James; Sobek, James	OTHER TECHNOLOGY: ASIC; ASIC	OPTICAL DETECTION SYSTEM FOR DETERMINING REMOVAL ACTIVITY IN BRAIN TISSUE DURING WATER CONCENTRATION	Non-Provisional (Track-One)	15-Dec-2012	15,844,411	23-May-2015	US 2015/0130946 A1	24-May-2015	US 10,426,646 (B1)		
KEPN-01010009	Wentz, Thomas; Zhou, Ruijiong; Shen, Yuesheng; Rasi, Heesert	OTHER TECHNOLOGY: ASIC; ASIC; 2D image; 3D image; spatial; temporal; speckle; correlation	SPATIAL AND TEMPORAL-BASED DIFFERENCE CORRELATION ELECTROSCOPY SYSTEMS AND METHODS	Non-Provisional (Track-One)	18-Dec-2010	16,026,605			24-Sep-2015	US 10,426,648 (B1)		

<p>KEPN-0100-0001</p> <p>Do Valle, Bruno, JR. Rene, Dabir, Jacob, Yamani, Musam</p>	<p>OPTICAL SPAD ARCHITECTURE</p>	<p>PHOTO DETECTOR COMPARING A SINGLE PHOTON AVAILABLE GROUND AND A CAPACITOR</p>	<p>Non-Provisional Continuation</p>	<p>23-Dec-2019 US 16,717,553</p>	<p>24-Sep-2020 US 10,674,689(B1)</p>	<p>YES</p>	<p>An optical SPAD is configured to be charged, while the SPAD is in a standby state, with a bias voltage by a voltage source. The capacitor is further configured to supply bias voltage to an output node of the SPAD such that a voltage across the SPAD is greater than a breakdown voltage of the SPAD.</p>
<p>KEPN-0100-0002</p> <p>Field, Ryan, Barakat, Musam, Do Valle, Rene, Dabir, Jacob, Yamani, Musam</p>	<p>OPTICAL SPAD 3D stacking for memory effect reduction, fast gating</p>	<p>STACKED PHOTO DETECTOR ASSEMBLIES</p>	<p>Non-Provisional (Track One)</p>	<p>22-Feb-2019 US 2019/0385377(A1)</p>	<p>14-Oct-2020 US 10,675,968(B2)</p>	<p>YES</p>	<p>An exemplary stacked photo detector assembly includes a first wafer and a second wafer bonded to the first wafer. The first wafer includes a SPAD and has a thickness T1. The second wafer includes a photo detector. The photo detector is configured to receive absorption by the first wafer of photons incident in light incident upon the first wafer while the SPAD is in a standby state. The second wafer has a thickness T2 configured to provide structural support for the first wafer. The stacked photo detector assembly includes a biasing circuit electrically coupled to the SPAD and configured to charge the SPAD.</p>
<p>KEPN-0100-0003</p> <p>Anderson, Kristopher, Lara, Antonio, Sartore, John, Konec, Fernde</p>	<p>CHIP TECHNOLOGY Sense, Weighted linear determination of signal strength</p>	<p>SYSTEMS AND METHODS TO REDUCE DATA AND COMPLEXITY IN NEURAL NETWORK PROCESSING DATA</p>	<p>Non-Provisional (Track One)</p>	<p>15-Jan-2018 US 16,724,557</p>	<p>31-Jan-2020 US 10,674,848(B1)</p>	<p>YES</p>	<p>A magnetic field measurement system that includes at least one magnetometer; at least one magnetic field generator; a processor coupled to the at least one magnetometer and the at least one magnetic field generator and configured to measure an ambient background magnetic field using at least one of the at least one magnetometer in a first mode selected from a vector mode or a vector mode. In response to the measurement of the ambient background magnetic field, a magnetometer field using the at least one magnetic field generator; and measure a target magnetic field using at least one of the at least one magnetometer in a spin exchange configuration mode (SEEF) mode which is different from the first mode.</p>
<p>KEPN-0100-0004</p> <p>Alford, James, Jimenez, Martinez, Ricardo</p>	<p>WIG, scan and SERF modes</p>	<p>SYSTEMS AND METHODS INCLUDING WRITE MODE OPERATION OF OPTICALLY PUMPED MAGNETOMETERS</p>	<p>Non-Provisional (Track One)</p>	<p>7-Dec-2018 US 2018/027413(A1)</p>	<p>21-Apr-2020 US 10,674,669(B2)</p>	<p>YES</p>	<p>A magnetic field measurement system that includes at least one magnetometer; at least one magnetic field generator; a processor coupled to the at least one magnetometer and the at least one magnetic field generator and configured to measure an ambient background magnetic field using at least one of the at least one magnetometer in a first mode selected from a vector mode or a vector mode. In response to the measurement of the ambient background magnetic field, a magnetometer field using the at least one magnetic field generator; and measure a target magnetic field using at least one of the at least one magnetometer in a spin exchange configuration mode (SEEF) mode which is different from the first mode.</p>
<p>KEPN-0100-0005</p> <p>Barakat, Musam, Do Valle, Bruno, Rene, Dabir, Jacob, Yamani, Musam</p>	<p>OPTICAL SPAD ARCHITECTURE</p>	<p>NON-INVASIVE REVERSIBLE BIASING SYSTEMS AND METHODS FOR PHOTO DETECTOR ARCHITECTURES A REVERSIBLE ADD &amp; SUBTRACT OF SELF- CONTAINED PHOTO DETECTOR UNITS</p>	<p>Non-Provisional Continuation</p>	<p>20-Mar-2019 US 2019/0525861(A1)</p>	<p>24-Jun-2020 US 10,674,642(B2)</p>	<p>YES</p>	<p>An exemplary non-invasive reversible biasing interface system includes a magnetometer configured to be worn on a head of a user, a plurality of self-contained photo detector units configured to reversibly attach to the magnetometer, the photo detector units each comprising a plurality of photo detectors configured to detect photons of light after the photons reflect from a target within a beam of the user, and a master control unit coupled to each of the photo detector units and configured to control the photo detector units.</p>
<p>KEPN-0100-0006</p> <p>Do Valle, Bruno, JR. Rene, Dabir, Jacob, Yamani, Musam</p>	<p>OPTICAL SPAD ARCHITECTURE</p>	<p>REVERSIBLE SYSTEMS WITH FAST-GATED PHOTO DETECTOR ARCHITECTURES USING A SINGLE PHOTON AVAILABLE GROUND AND CAPACITOR</p>	<p>Non-Provisional Continuation</p>	<p>9-Aug-2019 US 2019/0385377(A1)</p>	<p>23-Jun-2020 US 10,675,969(B2)</p>	<p>YES</p>	<p>A reversible system for use by a user includes a photo detector configured to detect a photon of a light pulse from the photo detector from a target intended to be used. The photo detector includes a single photon avalanche diode (SPAD) and a capacitor configured to be charged, while the SPAD is in a standby state, with a bias voltage by a voltage source, and such that a voltage across the SPAD is greater than a breakdown voltage of the SPAD.</p>



REF ID	Applicant	Inventor	IPC Class	Abstract	Pub No	Pub Date	Pub Status	Pub Date	Pub Status	Pub Date	Pub Status
REF-01-01-0001	Anderson, Kenneth; Soto, Antonio; Yasuno, John; Kwon, Seung; Weisberg, Ronald	SYSTEMS AND METHODS TO REDUCE DATA AND COMPLEXITY IN NEURAL SIGNAL PROCESSING CHAIN	PCT	15-467-2018; PCT/US18/16313	13-Feb-2020; US 2019/0136982 A1						
REF-01-01-0002	Wang, Changhui; Akopyants, Adam; Jaffer, Dennis; Sobik, David	SYSTEM AND METHOD FOR SIMULTANEOUSLY DETECTING PHASE MODULATED OPTICAL SIGNALS	Non-Provisional Continuation	25-Mar-2018; US 9,939,653	23-May-2018; US 2019/0136951 A1						
REF-01-01-0003	Yang, Zhongqiang; Maitav, Adam; Wang, Jun	SYSTEMS AND METHODS FOR QUANTUM PHOTON OPTICAL COHERENCE TOMOGRAPHY IN DIFFUSIVE SCATTERING MEDIA USING A LOCK-IN CAMERA DETECTOR	Non-Provisional Continuation	11-Nov-2019; US 10,738,228	20-Jun-2020; US 2019/0181483 A1						
REF-01-01-0004	Alford, James; Maitav, Adam	SYSTEMS AND METHODS TO CONVERT COMMERCIAL IMAGERS INTO LOCK-IN CAMERA	Non-Provisional Continuation / Provisional	20-May-2018; US 10,721,896	17-Sep-2020; US 2019/024549 A1						
REF-01-01-0005	Alford, James; Maitav, Adam	ULTRASOUND MODULATING OPTICAL TOMOGRAPHY USING REDUCED LASER PULSE DURATION	Non-Provisional	4-Feb-2018; US 9,936,838	5-Sep-2018; US 2019/0288331 A1						
REF-01-01-0006	Wang, Changhui; Akopyants, Adam; Jaffer, Dennis; Sobik, David	NON-INVASIVE OPTICAL DETECTION SYSTEMS AND METHODS FOR HIGHLY SCATTERING MEDIA	Non-Provisional	11-Mar-2018; US 9,998,087	17-Oct-2019; US 2018/0318912 A1						
REF-01-01-0007	Alford, James; Maitav, Adam	NON-INVASIVE FREQUENCY-DOMAIN OPTICAL SPECTROSCOPY FOR NEURAL CODING	Non-Provisional	9-Apr-2018; US 9,975,690	7-Nov-2018; US 2019/0336665 A1						
REF-01-01-0008	Wang, Changhui; Akopyants, Adam; Jaffer, Dennis; Sobik, David	NON-INVASIVE OPTICAL DETECTION SYSTEMS AND METHODS	Non-Provisional	13-Apr-2018; US 9,992,481	7-Nov-2018; US 2019/0336057 A1						
REF-01-01-0009	Alford, James; Maitav, Adam; Jaffer, Dennis; Sobik, David	FAST-GATED PHOTODIODE ARCHITECTURES	PCT	11-Jun-2018; PCT/US18/05686	11-Jun-2018; PCT/US18/05686						YES
REF-01-01-0010	Wang, Changhui; Akopyants, Adam; Jaffer, Dennis; Sobik, David	NON-INVASIVE WEARABLE BRAIN INTERFACE SYSTEMS	PCT	28-Nov-2018; PCT/US18/05777	21-Nov-2019; PCT/US18/05777						YES
REF-01-01-0011	Wang, Changhui; Akopyants, Adam; Jaffer, Dennis; Sobik, David	NON-INVASIVE WEARABLE BRAIN INTERFACE SYSTEMS	International - AU National Phase Entry under the PCT	In process; PCT/US18/05777							YES
REF-01-01-0012	Wang, Changhui; Akopyants, Adam; Jaffer, Dennis; Sobik, David	NON-INVASIVE WEARABLE BRAIN INTERFACE SYSTEMS	International - CA National Phase Entry under the PCT	In process; PCT/US18/05777							YES
REF-01-01-0013	Wang, Changhui; Akopyants, Adam; Jaffer, Dennis; Sobik, David	NON-INVASIVE WEARABLE BRAIN INTERFACE SYSTEMS	International - CN National Phase Entry under the PCT	In process; PCT/US18/05777							YES
REF-01-01-0014	Wang, Changhui; Akopyants, Adam; Jaffer, Dennis; Sobik, David	NON-INVASIVE WEARABLE BRAIN INTERFACE SYSTEMS	International - EP National Phase Entry under the PCT	In process; PCT/US18/05777							YES
REF-01-01-0015	Wang, Changhui; Akopyants, Adam; Jaffer, Dennis; Sobik, David	NON-INVASIVE WEARABLE BRAIN INTERFACE SYSTEMS	International - JP National Phase Entry under the PCT	In process; PCT/US18/05777							YES
REF-01-01-0016	Wang, Changhui; Akopyants, Adam; Jaffer, Dennis; Sobik, David	NON-INVASIVE WEARABLE BRAIN INTERFACE SYSTEMS	International - KR National Phase Entry under the PCT	In process; PCT/US18/05777							YES
REF-01-01-0017	Wang, Changhui; Akopyants, Adam; Jaffer, Dennis; Sobik, David	NON-INVASIVE WEARABLE BRAIN INTERFACE SYSTEMS INCLUDING A HEADGEAR AND A PLURALITY OF PHOTODETECTOR UNITS	Non-Provisional Continuation	23-Apr-2020; US 2020/0189832 A1	6-Aug-2021; US 2020/0189832 A1						YES

2023-02-23-001	Horowitz, Roark; Allard, Janu; Suah; Hoowen, Zhen; Haojiang, Shen; Yuecheng	OTHER TECHNOLOGY: Frequency-sweep source and detection in photonic IC.	OTHER TECHNOLOGY: Frequency-sweep source and detection in photonic IC.	7-Nov-2019 US 2019/0356206 A1	24-Apr-2019 PCT/US19/29883	7-Nov-2019 WO 2019/12322 A1			
2023-02-23-002	Horowitz, Roark; Allard, Janu; Suah; Hoowen, Zhen; Haojiang, Shen; Yuecheng	OTHER TECHNOLOGY: Frequency-sweep source and detection in photonic IC.	OTHER TECHNOLOGY: Frequency-sweep source and detection in photonic IC.	7-Nov-2019 US 2019/0356206 A1	24-Apr-2019 16/361,563	7-Nov-2019 US 2019/0356206 A1			
2023-02-23-003	Shen, Yuecheng; Suah, Roark; Horowitz, Roark; Haojiang, Shen; Yuecheng	OTHER TECHNOLOGY: Single-shot SRS based on orthogonal polarization.	OTHER TECHNOLOGY: Single-shot SRS based on orthogonal polarization.	7-Nov-2019 US 2019/0356206 A1	24-Apr-2019 16/362,373	7-Nov-2019 US 2019/0356206 A1			
2023-02-23-004	Suah, Roark; Horowitz, Roark; Shen, Yuecheng; Haojiang, Shen; Yuecheng	OTHER TECHNOLOGY: Single-shot SRS based on orthogonal polarization.	OTHER TECHNOLOGY: Single-shot SRS based on orthogonal polarization.	7-Nov-2019 US 2019/0356206 A1	24-Apr-2019 16/363,002	7-Nov-2019 US 2019/0356206 A1			
2023-02-23-005	Zhou, Haojiang; Horowitz, Roark; Suah, Roark; Shen, Yuecheng; Haojiang, Shen; Yuecheng	OTHER TECHNOLOGY: Coherence gated SRS with polarization continuous wave laser.	OTHER TECHNOLOGY: Coherence gated SRS with polarization continuous wave laser.	7-Nov-2019 US 2019/0356206 A1	15-Apr-2019 16/363,365	7-Nov-2019 US 2019/0356206 A1			
2023-02-23-006	Allard, Janu	OTHER TECHNOLOGY: Magnetic field measurement systems and methods of making and using.	OTHER TECHNOLOGY: Magnetic field measurement systems and methods of making and using.	7-Nov-2019 US 2019/0356206 A1	31-May-2019 PCT/US19/292467	2-Jan-2020 WO 2020/065440 A1			YES
2023-02-23-007	Allard, Janu	OTHER TECHNOLOGY: Magnetic field measurement systems and methods of making and using.	OTHER TECHNOLOGY: Magnetic field measurement systems and methods of making and using.	7-Nov-2019 US 2019/0356206 A1	31-May-2019 PCT/US19/292467	2-Jan-2020 WO 2020/065440 A1			YES
2023-02-23-008	Abdel, Janu; Barabansky, Adam; Viskochil, No; Pajunash, Brian; Sabek, Daniel; Henniger, Michael; Shent, Yuecheng; Horowitz, Roark	OTHER TECHNOLOGY: Time-of-flight measurements fast-optical signals.	OTHER TECHNOLOGY: Time-of-flight measurements fast-optical signals.	7-Nov-2019 US 2019/0356206 A1	6-Aug-2019 16/343,149	17-Feb-2020 US 2020/065442 A1			

KERN-DESIGNATION	INVENTOR(S)	TECHNOLOGY	SPATIAL AND TEMPORAL BASED DIFFUSIVE CORRELATION SPECTROSCOPY SYSTEMS AND METHODS	Non-Provisional	5-Aug-2013 US 2013/0153152	26-Dec-2013 US 2013/0158818 A1
KERN-0281801	Hongmei, Nanter; Zhou, Haiqing; Shen, Xueping; Wang, Ruiwen	OTHER TECHNOLOGY: CCDs parallelized CCDs using 2D single-photon counting arrays optical and temporal speckle decorrelation	NON-INVASIVE MEASUREMENT SYSTEMS WITH SINGLE-PROTON COUNTING ELEMENTS	Non-Provisional	5-Jun-2013 US 2013/0153793	23-Jan-2013 US 2013/0031578 A1
KERN-0281802	Puan, Fouren; Zhou, Haiqing; Shen, Xueping; Wangmei, Nanter	OTHER TECHNOLOGY: SNS; Interfered confocal wave optical source; CCD line sensor; single-photon counting camera; SPCD gate; SPCD time domain; CCD BRIS; frequency domain; balanced detector	MAGNETIC FIELD MEASUREMENT SYSTEM AND METHOD OF USING VARIABLE PARAMETER OPTICAL ELEMENTS	Non-Provisional	11-May-2013 US 2013/0157433	23-Jan-2013 US 2013/0031584 A1
KERN-0303201	Adami, Brian; Soren, Daniel; Lara, Antonio	SYSTEM APPLICATIONS: Detecting Impairment	NON-INVASIVE SYSTEMS AND METHODS FOR DETECTING MENTAL IMPAIRMENT	PROCT	26-Jul-2013 US 2013/0157433	6-Feb-2013 US 2013/0031582 A1
KERN-0303202	Zanoni, Ricardo; Soren, Daniel; Lara, Antonio	SYSTEM APPLICATIONS: Detecting Impairment	NON-INVASIVE SYSTEMS AND METHODS FOR DETECTING MENTAL IMPAIRMENT	Non-Provisional	26-Jul-2013 US 2013/0157433	30-Jan-2013 US 2013/0031588 A1
KERN-0303203	Lara, Antonio; Alfaro, Ivonne; Benitez, Ricardo	FIELD: Optical field	MULTI-RATE GAS CELL AND OPTICAL COMPONENTS FOR ATOMIC MAGNETOMETRY AND METHODS FOR INTEGRATED GAS CELL AND OPTICAL COMPONENTS FOR ATOMIC MAGNETOMETRY AND METHODS FOR	PROCT	12-May-2013 US 2013/0157433	30-Feb-2013 US 2013/0031586 A1
KERN-0303204	Soren, Antonio; Alfaro, Ivonne; Benitez, Ricardo	FIELD: Opto gas	INTEGRATED GAS CELL AND OPTICAL COMPONENTS FOR ATOMIC MAGNETOMETRY AND METHODS FOR	Non-Provisional	21-May-2013 US 2013/0157433	30-Feb-2013 US 2013/0031587 A1
KERN-0303205	Soren, Antonio; Alfaro, Ivonne; Benitez, Ricardo	FIELD: Chemistry	DISPERSED OF ALKALI METALS MEDIATED BY ZERO OXIDATION STATE GOLD SURFACES	Non-Provisional	7-May-2013 US 2013/0157433	30-Feb-2013 US 2013/0031585 A1
KERN-0303206	Zanoni, Ricardo; Alfaro, Ivonne; Benitez, Ricardo	FIELD: Magnetics	MAGNETIC FIELD SHAPING COMPONENTS AND METHODS FOR MAKING AND USING	PROCT	28-Jun-2013 US 2013/0157433	27-Feb-2013 US 2013/0031588 A1
KERN-0303207	Zanoni, Ricardo; Alfaro, Ivonne; Benitez, Ricardo	FIELD: Magnetics	MAGNETIC FIELD SHAPING COMPONENTS FOR MAGNETIC FIELD MEASUREMENT SYSTEMS AND METHODS FOR MAKING AND USING	Non-Provisional	28-Jun-2013 US 2013/0157433	28-Feb-2013 US 2013/0031589 A1
KERN-0303208	Alfaro, Ivonne; Benitez, Ricardo	FIELD: arbor and gear nodes	SYSTEMS AND METHODS INCLUDING MULTI-MAGNETOMETRIES	PROCT	21-May-2013 US 2013/0157433	5-Nov-2013 US 2013/0031587 A1
KERN-0303209	Alfaro, Ivonne; Benitez, Ricardo	FIELD: arbor and gear nodes	SYSTEMS AND METHODS INCLUDING MULTI-MAGNETOMETRIES	Non-Provisional	20-Jun-2013 US 2013/0157433	2-Jul-2013 US 2013/0031592 A1
KERN-0303210	Wu, Michael; Hsu, Hsuan	FIELD: magnetic shielding and beamforming using ferromagnetic compact wafer	OPTICALLY BIREFRINGENT FERROELECTRIC BEAMFORMING USING FERROELECTRIC	PROCT	28-Jun-2013 US 2013/0157433	30-Nov-2013 US 2013/0031595 A1

KERN-028502	Mohamed, Hossain	MES: magnetic shielding and beamforming using ferrofluid for compact magnetoencephalography (MEG)	Non-Provisional	28-Jun-2020 US 20201008891 A1	YES	
KERN-028503	Sreek, Daniel; Photosynthetica, Subhro	MES: Chemistry processing of alkali metals via electrochromism using alkali metal salts in ionic liquid	Non-Provisional	9-Apr-2020 US 20200105481 A1	YES	
KERN-028504	Reed, Ryan; Kaseem, Ahsan; Du, Xie; Huang, Jie; Song, Dabie; Jacob, Hiram; Wang, Kishan; Prasad, Jeeva; Suresh, Jay	OPTICAL SPAD for tracking for memory effect modulation, but not for	PCT	23-Feb-2020 PCT/US19/3317	YES	
KERN-028505	Field, Roger; Kaseem, Hossain; Du, Xie; Prasad, Jeeva; Suresh, Jay	OPTICAL SPAD for tracking for memory effect modulation, but not for	Non-Provisional	11-Aug-2020 US 20201032876 A1	YES	
KERN-028506	Walters, Hossain	DETECTION OF FAST-NEURAL SIGNAL USING BIRTH-RESOLVED SPECTROSCOPY	Non-Provisional	9-Sep-2020 US 20201113436 A1		
KERN-028507	Shanmugan, Sankar; Sankar, Sankar; Sankar, Sankar	MES: chemistry processing of alkali metals via electrochromism using alkali metal salts in ionic liquid	Non-Provisional	17-Apr-2020 US 20201022445 A1	YES	
KERN-028508	Sankar, Sankar; Sankar, Sankar; Sankar, Sankar	MES: chemistry processing of alkali metals via electrochromism using alkali metal salts in ionic liquid	Non-Provisional	8-Nov-2020 US 20200101062 A1	YES	
KERN-028509	Sankar, Sankar; Sankar, Sankar; Sankar, Sankar	BIOPHYSICS: BIOSENSING AND DETECTION OF NEURAL STATE USING A NON-INVASIVE BRAIN INTERFACE SYSTEM AND METHOD	PCT	25-Mar-2020 PCT/US19/24027	YES	
KERN-028510	Sankar, Sankar; Sankar, Sankar; Sankar, Sankar	BIOPHYSICS: BIOSENSING AND DETECTION OF NEURAL STATE USING A NON-INVASIVE BRAIN INTERFACE SYSTEM AND METHOD	Non-Provisional	26-Mar-2020 US 20200106937 A1	YES	
KERN-028511	Sankar, Sankar; Sankar, Sankar; Sankar, Sankar	BIOPHYSICS: BIOSENSING AND DETECTION OF NEURAL STATE USING A NON-INVASIVE BRAIN INTERFACE SYSTEM AND METHOD	Non-Provisional	13-Jan-2020 US 20200107413 A1	YES	
KERN-028512	Sankar, Sankar; Sankar, Sankar; Sankar, Sankar	BIOPHYSICS: BIOSENSING AND DETECTION OF NEURAL STATE USING A NON-INVASIVE BRAIN INTERFACE SYSTEM AND METHOD	PCT	14-Jan-2020 PCT/US19/32675	YES	
KERN-028513	Sankar, Sankar; Sankar, Sankar; Sankar, Sankar	BIOPHYSICS: BIOSENSING AND DETECTION OF NEURAL STATE USING A NON-INVASIVE BRAIN INTERFACE SYSTEM AND METHOD	Non-Provisional	23-Feb-2020 US 20200105235 A1	YES	
KERN-028514	Sankar, Sankar; Sankar, Sankar; Sankar, Sankar	BIOPHYSICS: BIOSENSING AND DETECTION OF NEURAL STATE USING A NON-INVASIVE BRAIN INTERFACE SYSTEM AND METHOD	Non-Provisional	13-Aug-2020 US 20200105025 A1	YES	
KERN-028515	Sankar, Sankar; Sankar, Sankar; Sankar, Sankar	BIOPHYSICS: BIOSENSING AND DETECTION OF NEURAL STATE USING A NON-INVASIVE BRAIN INTERFACE SYSTEM AND METHOD	Non-Provisional	7-Apr-2020 US 20200103123 A1	YES	
KERN-028516	Sankar, Sankar; Sankar, Sankar; Sankar, Sankar	BIOPHYSICS: BIOSENSING AND DETECTION OF NEURAL STATE USING A NON-INVASIVE BRAIN INTERFACE SYSTEM AND METHOD	Non-Provisional	7-Apr-2020 US 20200103245 A1	YES	
KERN-028517	Sankar, Sankar; Sankar, Sankar; Sankar, Sankar	BIOPHYSICS: BIOSENSING AND DETECTION OF NEURAL STATE USING A NON-INVASIVE BRAIN INTERFACE SYSTEM AND METHOD	Non-Provisional	7-Apr-2020 US 20200103343 A1	YES	





KERN-0721001	<p>MEG: Baz Girard for major cells in a wearable sensor unit.</p>	<p>MEG: Baz Girard for major cells in a wearable sensor unit.</p>	<p>SYSTEMS AND METHODS FOR LOCATING ALONG METAL WITHIN A VAPOR CELL OF A MAGNETOMETER AWAY FROM A TRANSDUCER OF LIGHT.</p>	Non-Provisional	30-Apr-2020 14/062,901					YES
KERN-0721002	<p>MEG: Baz Girard Component of Active Magnetic Shield</p>	<p>MEG: Baz Girard Component of Active Magnetic Shield</p>	<p>MAGNETIC FIELD GENERATOR FOR A MAGNETIC FIELD MEASUREMENT SYSTEM</p>	Non-Provisional	30-Apr-2020 14/062,919					YES
KERN-0721003	<p>MEG: Baz Girard Component of Active Magnetic Shield</p>	<p>MEG: Baz Girard Component of Active Magnetic Shield</p>	<p>MAGNETIC FIELD GENERATOR FOR A MAGNETIC FIELD MEASUREMENT SYSTEM</p>	Non-Provisional	30-Apr-2020 14/062,946					YES
KERN-0721004	<p>MEG: Wearable Assembly w/ Plurality of Active Magnetic Field Sensors/Units</p>	<p>MEG: Wearable Assembly w/ Plurality of Active Magnetic Field Sensors/Units</p>	<p>MAGNETIC FIELD MEASUREMENT SYSTEMS INCLUDING A PLURALITY OF WEARABLE SENSOR UNITS HAVING A MAGNETIC FIELD GENERATOR</p>	Non-Provisional	30-Apr-2020 14/062,973					YES
KERN-0721005	<p>MEG: Homogenous Optically-Pumped Nuclear Cell Array Assembly</p>	<p>MEG: Homogenous Optically-Pumped Nuclear Cell Array Assembly</p>	<p>METHODS AND SYSTEMS FOR HOMOGENEOUS OPTICALLY-PUMPED VAPOR CELL ARRAY ASSEMBLY FROM INDIVIDUAL VAPOR CELLS</p>	Provisional	5-Feb-2020 02/073,132					YES
KERN-0721006	<p>MEG: CONTROLS Active Shielding Techniques</p>	<p>MEG: CONTROLS Active Shielding Techniques</p>	<p>REAL-TIME PERIODIC ARTIFACT EXTRACTION FROM A PHYSIOLOGICAL SIGNAL</p>	Provisional	20-Jan-2020 02/096,124					YES
KERN-0721007	<p>MEG: CONTROLS Active Shielding Techniques</p>	<p>MEG: CONTROLS Active Shielding Techniques</p>	<p>SELF-CALIBRATION OF FLEET-SIZE OFFSET AND GAIN DRIFT TO IMPROVE MEASUREMENT ACCURACY OF MAGNETIC FIELDS FROM THE BRAIN USING A WEARABLE NEURAL DETECTION SYSTEM</p>	Provisional	5-Jun-2020 02/095,679					YES
KERN-0721008	<p>MEG: CONTROLS Active Shielding Techniques</p>	<p>MEG: CONTROLS Active Shielding Techniques</p>	<p>METHODS AND SYSTEMS FOR TASK-A CONTROL TOOLS FOR ACTIVE MEASUREMENT OF MAGNETIC FIELDS FROM THE BRAIN USING A NEURAL DETECTION SYSTEM</p>	Provisional	5-Jun-2020 02/092,650					YES
KERN-0721009	<p>MEG: CONTROLS Active Shielding Techniques</p>	<p>MEG: CONTROLS Active Shielding Techniques</p>	<p>ESTIMATING THE MAGNETIC FIELD OF DISTANCES FROM OBJECT MEASUREMENTS USING FINE SENSORS TO MEASURE THE MAGNETIC FIELD FROM THE BRAIN USING A NEURAL DETECTION SYSTEM</p>	Provisional	5-Jun-2020 02/095,664					YES





KERN-006PR02	Optical Measurement Window Calibration for System	Phase Lock Loop Circuit Based Adjustment of a Measurement Window in an Optical Measurement System	Provisional	15-May-2020	63,002,7338	YES
KERN-007PR02	Optical Measurement Window Calibration for System	Techniques for Determining a Final Response of a Component of an Optical Measurement System	Provisional	16-Jun-2020	63,054,533	YES
KERN-008PR02	Optical Measurement Window Calibration for System	Techniques for Controlling a Nonlinearity of a Time-to-Digital Converter in an Optical Measurement System	Provisional	16-Jun-2020	63,055,382	YES
KERN-009PR02	Optical Measurement Window Calibration for System	Regional Resolution Control for Temporal Point Spread Function Measurement in an Optical Measurement System	Provisional	19-May-2020	63,067,525	YES
KERN-100PR02	Optical Measurement Window Calibration for System	Signal Voltage Generation in an Optical Measurement System	Provisional	23-Jul-2020	63,075,480	YES
KERN-101PR02	Optical Measurement Window Calibration for System	Detection of Motion Artifacts in Signals Output by Detectors of a Wearable Optical Measurement System	Provisional	13-Sep-2020	63,085,1093	YES
KERN-102PR02	Optical Measurement Window Calibration for System	High Density Optical Measurement Systems with Minimal Number of Light Sources	Provisional	16-Jul-2020	63,092,809	YES
KERN-103PR02	Optical Measurement Window Calibration for System	Dynamic Range Optimization in an Optical Measurement System	Provisional	27-Jul-2020	63,095,077	YES
KERN-104PR02	Optical Measurement Window Calibration for System	Maintaining Consistent Photo Detector Sensitivity in an Optical Measurement System	Provisional	4-Sep-2020	63,097,721	YES
KERN-105PR02	Optical Measurement Window Calibration for System	Photodetector Calibration of an Optical Measurement System	Provisional	15-Aug-2020	63,098,123	YES
KERN-106PR02	Optical Measurement Window Calibration for System	Estimation of Separation in an Optical Measurement System	Provisional	25-Aug-2020	63,097,123	YES
KERN-107PR02	Optical Measurement Window Calibration for System	Measurable Accurate Assemblies for an Optical Measurement System	Provisional	23-Sep-2020	63,098,134	YES
KERN-108PR02	Optical Measurement Window Calibration for System	Measurable Devices and Measurable Assemblies with Adjustable Properties for Use in an Optical Measurement System	Provisional	3-Oct-2020	63,098,362	YES
KERN-109PR02	Optical Measurement Window Calibration for System	Integrated Detector Assemblies for a Measurable Measurement System	Provisional	13-Jun-2020	63,098,453	YES
KERN-110PR02	Optical Measurement Window Calibration for System	Detector Assemblies for a Measurable System for Including Springs-Loaded Light-Receiving Members	Provisional	22-Jun-2020	63,098,468	YES

KEYN-112P001	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Integrated light source assembly with laser; OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	12-Jun-2020/03/02/18-981	YES						
KEYN-112P002	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	6-Sep-2020/03/06/348	YES						
KEYN-112P003	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	18-Jun-2020/03/07/194	YES						
KEYN-112P004	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	12-Aug-2020/03/08/698	YES						
KEYN-112P005	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	26-Apr-2020/03/07/15-012	YES						
KEYN-112P006	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	31-Mar-2020/03/08/238	YES						
KEYN-121P001	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	25-May-2020/03/09/199	YES						
KEYN-121P002	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	5-Sep-2020/03/07/6-215	YES						
KEYN-122P001	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	30-Jul-2020/03/08-118	YES						
KEYN-132P001	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	10-Sep-2020/03/07/6-880	YES						
KEYN-132P002	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	13-Sep-2020/03/07-277	YES						
KEYN-132P003	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	18-Sep-2020/03/06/348	YES						
KEYN-132P004	Optical, laser, beam splitter, lens, filter, detector, fiber optic cable, computer, software, hardware, assembly, etc.	OPTICAL: Beam splitter; OPTICAL: Lens; OPTICAL: Filter; OPTICAL: Detector; OPTICAL: Fiber optic cable; OPTICAL: Computer; OPTICAL: Software; OPTICAL: Hardware; OPTICAL: Assembly; etc.	Provisional	8-Oct-2020/03/08/556	YES						

**SCHEDULE B**

**To Plain English Intellectual Property Security Agreement  
Between HI LLC, as You (Grantor)  
and TRIPLEPOINT PRIVATE VENTURE CREDIT INC., as Us (Grantee)**

**TRADEMARKS AND TRADEMARK APPLICATIONS**

(See Attached)

Docket Number	Mark Title	Country	Application Date	Application No./Class Code	Class Category - Short Title	Class Description	Registration Date	Registration No.
KERNEL-2017-US-01	KERNEL	United States	13-Jul-2017	87527613/Class 10	Medical apparatus	Medical devices, namely, implantable neuroprosthetics; neurophysiological implants made from artificial materials; medical implants; implantable units featuring artificial intelligence technology for neurophysiology assessment; implantable computer hardware, namely, microchips for managing and treating neurodegenerative disease and dysfunction	Pending	6091561
KERNEL-2017-US-02	KERNEL	United States	13-Jul-2017	87527613/Class 42	Services	Computer and scientific services for use in the field of neurology; research and development of new technological and scientific products, treatments and techniques for others in the fields of neurology and cognitive behavior therapy; consultation services in the field of neuroscience research, neural engineering, and medical services; medical rehabilitation services for in the field of neurology; providing neurological rehabilitation services; Medical evaluation of neurological condition or neurological disease; Medical testing for diagnostic or treatment purposes; Medical testing for diagnostic or treatment purposes in the field of neurology; Medical diagnostic testing, monitoring and reporting services; Medical and healthcare services, namely, providing medical and healthcare information, and medical and healthcare advice	Pending	6091561
KERNEL-2017-US-01	KERNEL	United States	13-Jul-2017	87527613/Class 44	Services	Medical services	Pending	6091561
KERNEL-2018-AU-01	KERNEL	Australia [via Madrid Protocol]	10-Jan-2018	1927417/Class 09	Goods	Computer hardware, namely, microchips for controlling and enhancing human brain functionality	19-Feb-2020	1402611
KERNEL-2018-AU-01	KERNEL	Australia [via Madrid Protocol]	10-Jan-2018	1927417/Class 10	Goods	Medical devices for use in treating or diagnosing neurological conditions; medical devices, namely, implantable neuroprosthetics; neurophysiological implants made from artificial materials; Medical devices and implants, namely, neurophysiology instruments used for recording and processing signals from human and animal nervous systems; electrophysiology equipment used for recording and processing electrical signals from human and animal subjects and neuroprosthetic devices designed to interface to human and animal nervous systems to restore lost function; implantable circuits featuring artificial intelligence technology for neurophysiology assessment; implantable computer hardware, namely, microchips for managing and treating neurodegenerative disease and dysfunction	19-Feb-2020	1402611
KERNEL-2018-AU-01	KERNEL	Australia [via Madrid Protocol]	10-Jan-2018	1927417/Class 42	Services	Computer and scientific services for use in the field of neurology; research and development of new technological and scientific products, treatments and techniques for others in the fields of neurology and cognitive behavior therapy; scientific research for medical purposes in the field of artificial intelligence; technology consultation and research in the field of artificial intelligence; technology research in the field of artificial intelligence; advanced product research in the field of artificial intelligence; consultation services in the field of neuroscience research; neural engineering; product research and development consultation in the field of neurophysiology	19-Feb-2020	1402611
KERNEL-2018-AU-01	KERNEL	Australia [via Madrid Protocol]	10-Jan-2018	1927417/Class 44	Services	Medical services; medical rehabilitation services for in the field of neurology; providing neurological rehabilitation services; Medical evaluation of neurological condition or neurological disease; Medical testing for diagnostic or treatment purposes; Medical testing for diagnostic or treatment purposes in the field of neurology; Medical diagnostic testing, monitoring and reporting services; Medical and healthcare services, namely, providing medical and healthcare information, and medical and healthcare advice	19-Feb-2020	1402611

KERNEL-2018-CA-01	Canada	11-Jan-2018	1877912 / Class 42	Services	Computer and scientific apparatus	Medical devices, namely, sensor systems for use in screening and diagnosing neurological conditions; medical devices, namely, sensor systems for recording and processing brain activity and mental states from human and animal subjects. (1) Medical devices, namely, sensor systems comprising a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for use in performing scientific research for screening and diagnosing neurological conditions (2) Medical devices, namely, sensor systems comprising a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for recording, recording, and processing brain activity data and mental states from human subjects Research and development of new technological and scientific products, treatments and techniques for others in the fields of neurology and cognitive behavior theory; development and design of computer software for others; scientific research for medical purposes in the field of artificial intelligence; Technology consultation and research in the field of artificial intelligence; Technology research in the field of artificial intelligence; Advanced product research, namely, product development services, product design consulting services, and research and development of new products for others in the field of artificial intelligence; Consultation services in the field of neuroscience research, neural engineering; product research and development consultation in the field of neuroprosthetics	Pending	
KERNEL-2018-CA-01	Canada	11-Jan-2018	1877912 / Class 42	Services	Computer and scientific apparatus	Medical devices, namely, sensor systems for use in screening and diagnosing neurological conditions; medical devices, namely, sensor systems for recording and processing brain activity and mental states from human and animal subjects. (1) Medical devices, namely, sensor systems comprising a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for use in performing scientific research for screening and diagnosing neurological conditions (2) Medical devices, namely, sensor systems comprising a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for recording, recording, and processing brain activity data and mental states from human subjects Research and development of new technological and scientific products, treatments and techniques for others in the fields of neurology and cognitive behavior theory; development and design of computer software for others; scientific research for medical purposes in the field of artificial intelligence; Technology consultation and research in the field of artificial intelligence; Technology research in the field of artificial intelligence; Advanced product research, namely, product development services, product design consulting services, and research and development of new products for others in the field of artificial intelligence; Consultation services in the field of neuroscience research, neural engineering; product research and development consultation in the field of neuroprosthetics	Pending	
KERNEL-2018-CA-01	Canada	11-Jan-2018	1877912 / Class 44	Services	Medical Services	Medical rehabilitation services for in the field of neurology; providing neurological rehabilitation services; Medical evaluation of neurological condition and neurological disease; Medical testing for diagnosis or treatment purposes; Medical testing for diagnostic or treatment purposes in the field of neurology; Medical diagnostic services, namely, testing, monitoring and reporting services; Medical and healthcare services, namely, providing medical and healthcare information and medical and healthcare advice in the field of neurology (3) medical and healthcare services, namely, providing medical and healthcare advice and information in the field of diagnosis and treatment of neurological conditions and cognitive behavior therapy	Pending	
KERNEL-2018-CN-01	China	10-Jun-2018	3307688 / Class 42	Services	Computer and scientific apparatus	Computer hardware, namely, microchips for controlling and synchronizing human brain functionality	3-22-2018-2018 19-Oct-2018	1402611
KERNEL-2018-EP-02	European Union (via Madrid Protocol)	10-Jan-2018	372745 / 1402611 / Class 10	Goods	Medical apparatus	Medical devices for use in treating or diagnosing neurological conditions; Medical devices, namely, implantable neuroprosthetics; Neurophysiological implants made from artificial materials; Medical devices and implants, namely, neurophysiology instruments used for recording and processing signals from human and animal nervous systems, electrophysiology equipment used for recording and processing electrical signals from human and animal subjects and neuroprosthetic devices designed to interface to human and animal nervous systems to restore lost function; Implantable circuits featuring artificial intelligence technology for neurophysiology assessment; Implantable computer hardware, namely, microchips for managing and treating neurodegenerative disease and dysfunction	19-Oct-2018	1402611
KERNEL-2018-EP-01	European Union (via Madrid Protocol)	10-Jan-2018	372745 / 1402611 / Class 42	Services	Computer and scientific apparatus	Scientific research; Research and development of new technological and scientific products, treatments and techniques for others in the fields of neurology and cognitive behavior theory; development and design of computer software for others; scientific research for medical purposes in the field of artificial intelligence; Technology consultation and research in the field of artificial intelligence; Technology research in the field of artificial intelligence; Advanced product research in the field of artificial intelligence; Consultation services in the field of neuroscience research, neural engineering; product research and development consultation in the field of neuroprosthetics	19-Oct-2018	1402611

KERNEL-2018-EP-01	KERNEL	European Union (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 04	Services	Medical Services	Medical services; medical rehabilitation services for in the field of neurology; providing neurological rehabilitation services; Medical evaluation of neurological condition or neurological disease; Medical testing for diagnosis or treatment purposes; Medical testing for diagnosis or treatment purposes in the field of neurology; Medical diagnosis; testing, monitoring and reporting services; Medical and healthcare services; namely, providing medical and healthcare information, and medical and healthcare advice	19-Oct-2018	1402611
KERNEL-2018-IN-01	KERNEL	India (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 09	Goods	Electrical and scientific apparatus	Computer hardware, namely, microchips for controlling and managing neural activity; brain connectivity	3-Aug-2018	1402611
KERNEL-2018-IN-01	KERNEL	India (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 10	Goods	Medical apparatus	Medical devices for use in treating or diagnosing neurological conditions, namely, implantable neuroprosthetics; neurophysiological implants made from artificial materials; medical devices and implants, namely, neurophysiology instruments used for recording and processing signals from human and animal nervous systems; electrophysiology equipment used for recording and processing electrical signals from human and animal subjects and neuroprosthetic devices designed to interface to human and animal nervous systems to restore lost function; implantable circuits featuring artificial intelligence technology for neurophysiology assessment; implantable computer hardware, namely, microchips for managing and treating neurodegenerative disease and dysfunction	3-Aug-2018	1402611
KERNEL-2018-RW-01	KERNEL	India (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 42	Services	Computer and scientific services	Scientific research; research and development of new technological and scientific products, treatments and techniques for others in the fields of neurology and cognitive behavior therapy; scientific research for medical purposes in the field of artificial intelligence; technology consultation and research in the field of artificial intelligence; technology research in the field of artificial intelligence; advanced product research in the field of artificial intelligence; consultation services in the field of neuroscience research; neural engineering; product research and development consultation in the field of neuroprosthetics	3-Aug-2018	1402611
KERNEL-2018-IN-01	KERNEL	India (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 04	Services	Medical Services	Medical services; medical rehabilitation services in the field of neurology; providing neurological rehabilitation services; medical evaluation of neurological condition or neurological disease; medical testing for diagnosis or treatment purposes; medical testing for diagnosis or treatment purposes in the field of neurology; Medical diagnosis; testing, monitoring and reporting services; Medical and healthcare services; namely, providing medical and healthcare information, and medical and healthcare advice	3-Aug-2018	1402611
KERNEL-2018-JP-01	KERNEL	Japan (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 08	Goods	Electrical and scientific apparatus	Computer hardware, namely, microchips for controlling and enhancing human brain functionality	Pending	
KERNEL-2018-JP-01	KERNEL	Japan (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 10	Goods	Medical apparatus	Medical devices for use in treating or diagnosing neurological conditions, namely, implantable neuroprosthetics; neurophysiological implants made from artificial materials; Medical devices and implants, namely, neurophysiology instruments used for recording and processing signals from human and animal nervous systems; electrophysiology equipment used for recording and processing electrical signals from human and animal subjects and neuroprosthetic devices designed to interface to human and animal nervous systems to restore lost function; implantable circuits featuring artificial intelligence technology for neurophysiology assessment; implantable computer hardware, namely, microchips for managing and treating neurodegenerative disease and dysfunction	Pending	

KERNEL-2018-48-01	KERNEL	Japan (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 42	Services	Computer and scientific services	Scientific research; Research and development of new technological and scientific products, treatments and techniques for others in the fields of neurology and cognitive behavior therapy; development and design of computer software for others; scientific research for medical purposes in the field of artificial intelligence; Technology consultation and research in the field of artificial intelligence; Technology research in the field of artificial intelligence; Advanced product research in the field of artificial intelligence; Consultation services in the field of neuroscience research, neural engineering; product research and development consultation in the field of neuroprosthetics	Pending	1402611
KERNEL-2018-48-02	KERNEL	Japan (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 44	Services	Medical Services	Medical services; medical rehabilitation services in the field of neurology; providing neurological rehabilitation services; Medical evaluation of neurological condition or neurological disease; Medical testing for diagnosis or treatment purposes; Medical testing for diagnosis or treatment purposes in the field of neurology; Medical diagnostic testing, monitoring and reporting services; Medical and healthcare services, namely, providing medical and healthcare information, and medical and healthcare advice	Pending	1402611
KERNEL-2018-48-03	KERNEL	South Korea (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 09	Goods	Electrical and scientific apparatus	Computer hardware, namely, microchips for controlling and enhancing human brain functionality	14-Aug-2019	1402611
KERNEL-2018-48-04	KERNEL	South Korea (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 10	Goods	Medical apparatus	Medical devices for use in treating or diagnosing neurological conditions; medical devices, namely, implantable neuroprosthetics; neurophysiological implants; made from artificial materials; medical devices and implants, namely, neurophysiology instruments used for recording and processing signals from human and animal nervous systems; electrophysiology equipment used for recording and processing electrical signals from human and animal subjects and neuroprosthetic devices designed to interface to human and animal nervous systems to restore lost function; implantable circuits featuring artificial intelligence technology for neurophysiology assessment; implantable computer hardware, namely, microchips for managing and treating neurodegenerative disease and dysfunction	14-Aug-2019	1402611
KERNEL-2018-48-05	KERNEL	South Korea (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 42	Services	Computer and scientific services	Scientific research; research and development of new technological and scientific products, treatments and techniques for others in the fields of neurology and cognitive behavior therapy; scientific research for medical purposes in the field of artificial intelligence; technology consultation and research in the field of artificial intelligence; technology research in the field of artificial intelligence; advanced product research in the field of artificial intelligence; consultation services in the field of neuroscience research, neural engineering; product research and development consultation in the field of neuroprosthetics	14-Aug-2019	1402611
KERNEL-2018-48-06	KERNEL	South Korea (via Madrid Protocol)	10-Jan-2018/27245 / 1402611/Class 44	Services	Medical Services	Medical services; medical rehabilitation services in the field of neurology; providing neurological rehabilitation services; medical evaluation of neurological condition or neurological disease; medical testing for diagnosis or treatment purposes; medical testing for diagnosis or treatment purposes in the field of neurology; medical diagnostic testing, monitoring and reporting services; medical and healthcare services, namely, providing medical and healthcare information, and medical and healthcare advice	14-Aug-2019	1402611
KERNEL-2018-48-07	KERNEL	Madrid Protocol (Designated Jurisdictions: Australia, European Union, India, Japan, Korea, South Korea, Switzerland)	10-Jan-2018/27245 / 1402611/Class 09	Goods	Electrical and scientific apparatus	Computer hardware, namely, microchips for controlling and enhancing human brain functionality	17-May-2018	1402611

KERNEL-2018-MP-01	KERNEL	Madrid Protocol [Designated Jurisdictions: Australia, European Union, India, Japan, Norway, South Korea, Switzerland]	10-Jan-2018	1402611 Class 30	Goods	Medical apparatus	Medical devices for use in treating or diagnosing neurological conditions; medical devices, namely, implantable neuroprosthetics; neurophysiological implants made from artificial, inorganic; medical devices and implants, namely, neurophysiology instruments used for recording and processing signals from human and animal nervous systems; electrophysiology equipment used for recording and processing electrical signals from human and animal subjects and neuroprosthetic devices designed to interface to human and animal nervous systems to restore lost function; implantable circuits featuring artificial intelligence technology for neurophysiology assessment; implantable computer hardware, namely, microchips for imaging and treating neurodegenerative disease and reconstruction	17-May-2018	1402611
KERNEL-2018-MP-01	KERNEL	Madrid Protocol [Designated Jurisdictions: Australia, European Union, India, Japan, Norway, South Korea, Switzerland]	10-Jan-2018	1402611 Class 42	Services	Computer and scientific research	Scientific research; research and development of new technological and scientific products; treatments and techniques for others in the fields of neurology and cognitive behavior therapy; scientific research for medical purposes in the field of artificial intelligence; technology consultation and research in the field of artificial intelligence; technology research in the field of artificial intelligence; advanced product research in the field of artificial intelligence; consultation services in the field of neuroscience research; neural engineering; product research and development consultation in the field of neuroprosthetics	17-May-2018	1402611
KERNEL-2018-MP-01	KERNEL	Madrid Protocol [Designated Jurisdictions: Australia, European Union, India, Japan, Norway, South Korea, Switzerland]	10-Jan-2018	1402611 Class 44	Services	Medical Services	Neurology; providing neurological rehabilitation services; medical evaluation of neurological condition or neurological disease; medical testing for diagnostic or treatment purposes; medical testing for diagnostic or treatment purposes in the field of neurology; medical diagnosis or treatment purposes in the field of neurology; medical diagnostic testing, monitoring and reporting services; medical and healthcare services, namely, providing medical and healthcare information, and medical and healthcare advice	17-May-2018	1402611
KERNEL-2018-MP-01	KERNEL	Norway [via Madrid Protocol]	10-Jan-2018/272745 / 1402611	Class 30	Goods	Medical apparatus	Medical devices for use in treating or diagnosing neurological conditions; Medical devices and implants, namely, neurophysiology instruments used for recording and processing signals from human and animal nervous systems; electrophysiology equipment used for recording and processing electrical signals from human and animal subjects and neuroprosthetic devices designed to interface to human and animal nervous systems to restore lost function; none of the foregoing concerning operating system software	27-Sep-2019	1402611
KERNEL-2018-MP-01	KERNEL	Norway [via Madrid Protocol]	10-Jan-2018/272745 / 1402611	Class 42	Services	Computer and scientific research	Scientific research; Research and development of new technological and scientific products; treatments and techniques for others in the fields of neurology and cognitive behavior therapy; Consultation services in the field of neuroscience research; Neural engineering; product research and development consultation in the field of neuroprosthetics; none of the foregoing concerning operating system software	27-Sep-2019	1402611
KERNEL-2018-MP-01	KERNEL	Norway [via Madrid Protocol]	10-Jan-2018/272745 / 1402611	Class 44	Services	Medical Services	Neurology; providing neurological rehabilitation services; medical evaluation of neurological condition or neurological disease; medical testing for diagnostic or treatment purposes; medical testing for diagnostic or treatment purposes in the field of neurology; medical diagnosis or treatment purposes in the field of neurology; medical diagnostic testing, monitoring and reporting services; medical and healthcare services, namely, providing medical and healthcare information, and medical and healthcare advice	27-Sep-2019	1402611
KERNEL-2018-MP-01	KERNEL	Switzerland [via Madrid Protocol]	10-Jan-2018/272745 / 1402611	Class 39	Goods	Electrical and scientific apparatus	Computer hardware, namely, microchips for controlling and enhancing human brain functionality	28-Apr-2019	1402611



KERNEL-2018-SW-01	KERNEL	Switzerland (via Madrid Protocol)	10-Jan-2018/272745 / 1402611 (Class 10)	Goods	Medical apparatus	Medical devices for use in treating or diagnosing neurological conditions; Medical devices, namely, implantable neuroprosthetics; Neurophysiological implants made from artificial materials; Medical devices and implants, namely, neurophysiology instruments used for recording and processing signals from human and animal nervous systems; electrophysiology equipment used for recording and processing electrical signals from human and animal subjects and neuroprosthetic devices designed to interface to human and animal nervous systems to restore lost function; implantable circuits featuring artificial intelligence technology for neurophysiology assessment; implantable computer hardware, namely, microchips for managing and treating neurodegenerative disease and dysfunction	28-Apr-2019	1402611
KERNEL-2018-SW-02	KERNEL	Switzerland (via Madrid Protocol)	10-Jan-2018/272745 / 1402611 (Class 42)	Services	Computer and scientific services	Scientific research; Research and development of new technological and scientific products, treatments and techniques for others in the field of neurology and cognitive behavior therapy; development and design of computer software for others; Scientific research for medical purposes in the field of artificial intelligence; Technology consultation and research in the field of artificial intelligence; Technology research in the field of artificial intelligence; Advanced product research in the field of artificial intelligence; Consultation services in the field of neuroscience research; neural engineering; product research and development consultation in the field of neuroprosthetics	28-Apr-2019	1402611
KERNEL-2018-SW-03	KERNEL	Switzerland (via Madrid Protocol)	10-Jan-2018/272745 / 1402611 (Class 44)	Services	Medical Services	Medical services; medical rehabilitation services for the field of neurology; Providing neurological rehabilitation services; Medical evaluation of neurological condition or neurological disease; Medical testing for diagnostic or treatment purposes; Medical testing for diagnosis or treatment purposes in the field of neurology; Medical diagnostic testing, monitoring and reporting services; Medical and healthcare services, namely, providing medical and healthcare information, and medical and healthcare advice	28-Apr-2019	1402611
KERNEL-2019-AU-02	KERNEL	Australia (via Madrid Protocol)	13-Dec-2019	Goods	Electrical and scientific apparatus	Sensor system comprised of a wearable modular sensing unit, namely, feedback sensors, optical sensors, and magnetic sensors and supporting modular electronics for data processing, signal processing, and connectivity, namely, computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; sensor system, namely, modular electronic devices, namely, feedback sensors, optical sensors, magnetic sensors, and computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; recorded and downloadable computer software and recorded and downloadable mobile applications for processing, interpreting, monitoring, and managing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	13-Oct-2020	1519462
KERNEL-2019-AU-02	KERNEL	Australia (via Madrid Protocol)	13-Dec-2019	Goods	Medical apparatus	Medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, feedback sensors, optical sensors, magnetic sensors, and computer hardware for use in screening and diagnosing neurological conditions; medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, feedback sensors, optical sensors, magnetic sensors, and computer hardware for recording and processing brain activity and mental states from human and animal subjects	13-Oct-2020	1519462
KERNEL-2019-AU-02	KERNEL	Australia (via Madrid Protocol)	13-Dec-2019	Services	Advertising and business services	Online processing services, namely, processing data produced by a sensor system that measures, tracks or monitors brain activity and mental states	13-Oct-2020	1519462
KERNEL-2019-AU-02	KERNEL	Australia (via Madrid Protocol)	13-Dec-2019	Services	Computer and scientific services	Providing temporary use of online non-deterministic software for processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states; medical; reevaluation of neurological conditions or neurological diseases for drug development purposes	13-Oct-2020	1519462

KERNEL-2019-CA-02	KERNEL	Canada (via Madrid Protocol)	13-Dec-2019	3016984; Class 09	Goods	Electrical and scientific apparatus	namely, biofeedback sensors, optical sensors, and magnetic sensors and supporting modular electronics for data processing, signal processing, and connectivity, namely, computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; sensor system, namely, modular electronic devices, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; recorded and downloadable computer software and second and downloadable mobile applications for processing, interpreting, monitoring, and managing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	Pending
KERNEL-2019-CA-02	KERNEL	Canada (via Madrid Protocol)	13-Dec-2019	3016984; Class 10	Goods	Medical apparatus	Medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for use in screening and diagnosing neurological conditions; medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for recording and processing brain activity and mental states from human and animal subjects	Pending
KERNEL-2019-CA-02	KERNEL	Canada (via Madrid Protocol)	13-Dec-2019	2016984; Class 35	Services	Advertising and business services	sensor system that measures, tracks or monitors brain activity and mental states	Pending
KERNEL-2019-CA-02	KERNEL	Canada (via Madrid Protocol)	13-Dec-2019	3016984; Class 32	Services	Computer and scientific services	Providing temporary use of online non-downloadable software for processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states; medical research evaluation of neurological conditions or neurological diseases for drug development purposes	Pending
KERNEL-2019-CN-02	KERNEL	China (refile)	28-Oct-2019	41807986; Class 42	Services	Computer and scientific services	Scientific research; Research and development of new technological and scientific products, treatments and techniques for others in the fields of neurology and cognitive behavior therapy; development and design of computer software for others; Scientific research for medical purposes in the field of artificial intelligence; Technology consultation and research in the field of artificial intelligence; Technology research in the field of artificial intelligence; Advanced product research in the field of artificial intelligence; Consultation services in the field of neuroscience research, neural engineering, product research and development consultation in the field of neuroscientific	Pending
KERNEL-2019-CN-02	KERNEL	China	28-Nov-2019	42862129; Class 09	Goods	Electrical and scientific apparatus	sensor system for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states, consisting of a wearable modular sensing unit and supporting modular electronics for data processing, signal processing, and connectivity; sensor system, namely, modular electronic devices for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; computer software and mobile applications for processing, interpreting, monitoring, and managing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	Pending
KERNEL-2019-CN-02	KERNEL	China	28-Nov-2019	42862128; Class 10	Goods	Medical apparatus	Medical devices, namely, sensor systems for use in screening and diagnosing neurological conditions; medical devices, namely, sensor systems for recording and processing brain activity and mental states from human and animal subjects	Pending
KERNEL-2019-CN-02	KERNEL	China	28-Nov-2019	42862127; Class 35	Services	Advertising and business services	data processing services, namely, processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states	Pending
KERNEL-2019-CN-02	KERNEL	China	28-Dec-2019	42862126; Class 42	Services	Computer and scientific services	Providing temporary use of online non-downloadable software for processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states	Pending



KERNEL-2019-IP-02	KERNEL	India (via Madrid Protocol)	13-Dec-2019	1519482/Class 42	Services	Computer and scientific services	Providing temporary use of online non-downloadable software for processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states; medical research evaluation of neurological conditions or neurological diseases for drug development purposes	Pending
KERNEL-2019-IP-02	KERNEL	Japan (via Madrid Protocol)	13-Dec-2019	1519482/Class 09	Goods	Electrical and scientific apparatus	Sensor system comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, and magnetic sensors and supporting modular electronics for data processing, signal processing, and connectivity, namely, computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; sensor system, namely, modular electronic devices, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; recorded and downloadable computer software and recorded and downloadable mobile applications for processing, interpreting, monitoring, and managing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	Pending
KERNEL-2019-IP-02	KERNEL	Japan (via Madrid Protocol)	13-Dec-2019	1519482/Class 33	Goods	Medical apparatuses	Medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for use in screening and diagnosing neurological conditions; medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for recording and processing brain activity and mental states from human and animal subjects	Pending
KERNEL-2019-IP-02	KERNEL	Japan (via Madrid Protocol)	13-Dec-2019	1519482/Class 35	Services	Advertising and business services	Data processing services, namely, processing data produced by a sensor system that measures, tracks or monitors brain activity and mental states	Pending
KERNEL-2019-IP-02	KERNEL	Japan (via Madrid Protocol)	13-Dec-2019	1519482/Class 42	Services	Computer and scientific services	Providing temporary use of online non-downloadable software for processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states; medical research evaluation of neurological conditions or neurological diseases for drug development purposes	Pending
KERNEL-2019-IP-02	KERNEL	South Korea (via Madrid Protocol)	13-Dec-2019	1519482/Class 09	Goods	Electrical and scientific apparatuses	Sensor system comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, and magnetic sensors and supporting modular electronics for data processing, signal processing, and connectivity, namely, computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; sensor system, namely, modular electronic devices, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; recorded and downloadable computer software and recorded and downloadable mobile applications for processing, interpreting, monitoring, and managing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	Pending
KERNEL-2019-IP-02	KERNEL	South Korea (via Madrid Protocol)	13-Dec-2019	1519482/Class 33	Goods	Medical apparatuses	Medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for use in screening and diagnosing neurological conditions; medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for recording and processing brain activity and mental states from human and animal subjects	Pending
KERNEL-2019-IP-02	KERNEL	South Korea (via Madrid Protocol)	13-Dec-2019	1519482/Class 35	Services	Advertising and business services	Data processing services, namely, processing data produced by a sensor system that measures, tracks or monitors brain activity and mental states	Pending
KERNEL-2019-IP-02	KERNEL	South Korea (via Madrid Protocol)	13-Dec-2019	1519482/Class 42	Services	Computer and scientific services	Providing temporary use of online non-downloadable software for processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states; medical research evaluation of neurological conditions or neurological diseases for drug development purposes	Pending

KERNEL-2019-9P-02	KERNEL	Madrid Protocol (Designated Jurisdictions: Australia, Canada, European Union, India, Japan, Norway, South Korea, Switzerland)	13-Dec-2019	1519482/Class 09	Goods	Electrical and scientific apparatus	Sensor system comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, and magnetic sensors; and supporting modular electronics for data processing, signal processing, and connectivity, namely, computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; sensor system, namely, modular electronic devices, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; recorded and downloadable computer software and downloadable mobile applications for processing, interpreting, monitoring, and managing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	12-Mar-2020	1519482
KERNEL-2019-10P-02	KERNEL	Madrid Protocol (Designated Jurisdictions: Australia, Canada, European Union, India, Japan, Norway, South Korea, Switzerland)	13-Dec-2019	1519482/Class 10	Goods	Medical apparatus	Medical device, namely, sensor system comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for use in processing and managing neurological conditions; medical device, namely, sensor system comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for recording and processing brain activity and mental states from human and animal subjects	12-Mar-2020	1519482
KERNEL-2019-8P-02	KERNEL	Madrid Protocol (Designated Jurisdictions: Australia, Canada, European Union, India, Japan, Norway, South Korea, Switzerland)	13-Dec-2019	1519482/Class 35	Services	Advertising and business services	Data processing services, namely, processing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	12-Mar-2020	1519482
KERNEL-2019-9P-02	KERNEL	Madrid Protocol (Designated Jurisdictions: Australia, Canada, European Union, India, Japan, Norway, South Korea, Switzerland)	13-Dec-2019	1519482/Class 42	Services	Computer and scientific services	Providing temporary use of software downloadable software for processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states; medical research evaluation of neurological conditions or neurological diseases for drug development	12-Mar-2020	1519482
KERNEL-2019-10P-02	KERNEL	Norway (via Madrid Protocol)	13-Dec-2019	1519482/Class 09	Goods	Electrical and scientific apparatus	Sensor system comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, and magnetic sensors; and supporting modular electronics for data processing, signal processing, and connectivity, namely, computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; sensor system, namely, modular electronic devices, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; recorded and downloadable computer software and downloadable mobile applications for processing, interpreting, monitoring, and managing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	Pending	
KERNEL-2019-10P-02	KERNEL	Norway (via Madrid Protocol)	13-Dec-2019	1519482/Class 10	Goods	Medical apparatus	Medical device, namely, sensor system comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for use in processing and managing neurological conditions; medical device, namely, sensor system comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for recording and processing brain activity and mental states from human and animal subjects	Pending	
KERNEL-2019-10P-02	KERNEL	Norway (via Madrid Protocol)	13-Dec-2019	1519482/Class 35	Services	Advertising and business services	Data processing services, namely, processing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	Pending	
KERNEL-2019-10P-02	KERNEL	Norway (via Madrid Protocol)	13-Dec-2019	1519482/Class 42	Services	Computer and scientific services	Providing temporary use of software not downloadable software for processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states; medical research evaluation of neurological conditions or neurological diseases for drug development purposes	Pending	

KERNEL-2019-SW-02	KERNEL	Switzerland (via Madrid Protocol)	13-Dec-2019	1519482/Class 09	Goods	Electrical and scientific apparatus	namely, biofeedback sensors, optical sensors, and magnetic sensors and supporting modular electronics for data processing, signal processing, and connectivity, namely, computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; sensor system, namely, modular electronic devices, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; recorded and downloadable computer software and recorded and downloadable mobile applications for processing, interpreting, monitoring, and managing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	Pending	
KERNEL-2019-SW-02	KERNEL	Switzerland (via Madrid Protocol)	13-Dec-2019	1519482/Class 10	Goods	Medical apparatus	Medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for use in screening and diagnosing neurological conditions; medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for recording and processing brain activity and mental states from human and animal subjects	Pending	
KERNEL-2019-SW-02	KERNEL	Switzerland (via Madrid Protocol)	13-Dec-2019	1519482/Class 35	Services	Advertising and business services	sensor system that measures, tracks or monitors brain activity and mental states	Pending	
KERNEL-2019-SW-02	KERNEL	Switzerland (via Madrid Protocol)	13-Dec-2019	1519482/Class 42	Services	Computer and scientific services	Providing temporary use of online non-downloadable software for processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states; medical research evaluation of neurological conditions or neurological diseases for drug development purposes	Pending	
KERNEL-2019-US-02	KERNEL	United States	13-Jun-2019	88472864/Class 09	Goods	Electrical and scientific apparatus	Sensor system comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, and magnetic sensors and supporting modular electronics for data processing, signal processing, and connectivity, namely, computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; sensor system, namely, modular electronic devices, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; recorded and downloadable computer software and recorded and downloadable mobile applications for processing, interpreting, monitoring, and managing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	Pending	
KERNEL-2019-US-02	KERNEL	United States	13-Jun-2019	88472864/Class 10	Goods	Medical apparatus	Medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for use in screening and diagnosing neurological conditions; medical devices, namely, sensor systems comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for recording and processing brain activity and mental states from human and animal subjects	Pending	
KERNEL-2019-US-02	KERNEL	United States	13-Jun-2019	88472866/Class 35	Services	Advertising and business services	sensor system that measures, tracks or monitors brain activity and mental states	Pending	21-Jul-2020
KERNEL-2019-US-02	KERNEL	United States	13-Jun-2019	88472868/Class 42	Services	Computer and scientific services	Providing temporary use of online non-downloadable software for processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states	Pending	

HEIREL-2019-US-01	UNITED STATES	23-Jun-2019	85472670; Class 34	Services	Medical Services	Medical evaluation of neurological conditions or neurological diseases; Medical evaluation of neurological conditions or neurological diseases for drug development purposes; Medical testing for diagnostic or treatment purposes; Medical testing for diagnostic or treatment purposes in the field of neurology; Medical diagnostic testing, monitoring and reporting services; Medical and healthcare services, namely, providing medical and healthcare information, and medical and healthcare advice	Pending
WHAT ELSE ARE YOU CAPABLE OF?	United States	7-Aug-2019	86169817; Class 03	Goods	Electrical and scientific apparatus	Sensor system comprised of a wearable modular sensing unit, namely, biofeedback sensors, optical sensors, and magnetic sensors and supporting modular electronics for data processing, signal processing, and connectivity, namely, computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; sensor system, namely, modular electronic devices, namely, biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for the purpose of measuring, interpreting, tracking, and monitoring brain activity and mental states; recorded and downloadable computer software and recorded and downloadable mobile applications for processing, interpreting, monitoring, and managing data produced by a wearable sensor system that measures, tracks or monitors brain activity and mental states	Pending
WHAT ELSE ARE YOU CAPABLE OF?	United States	7-Aug-2019	86169820; Class 10	Goods	Medical apparatus	Medical devices, namely, neurophysiology instruments used for recording and processing signals from human and animal nervous systems AND electrophysiology equipment used for recording and processing electrical signals from human and animal subjects and neuroprosthetic devices designed to interface to human and animal nervous systems to restore lost function; Medical devices, namely, sensor systems comprised of a wearable modular sensing unit, <del>WHICH ARE COMPRISED OF</del> biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for use in screening and diagnosing neurological conditions; medical devices, namely, sensor systems comprised of a wearable modular sensing unit, <del>WHICH ARE COMPRISED OF</del> biofeedback sensors, optical sensors, magnetic sensors, and computer hardware for recording and processing brain activity and mental states from human and animal subjects	Pending
WHAT ELSE ARE YOU CAPABLE OF?	United States	7-Aug-2019	86169829; Class 35	Services	Advertising and business services	Business processing services, namely, processing data produced by a sensor system that measures, tracks or monitors brain activity and mental states	Pending
WHAT ELSE ARE YOU CAPABLE OF?	United States	7-Aug-2019	86169835; Class 42	Services	Computer and scientific services	Research and development of new technological and scientific products, treatments and techniques for others in the fields of neurology and cognitive behavior therapy; development and design of computer software for others; Scientific research for medical purposes in the field of artificial intelligence; Technology consultation and research in the field of artificial intelligence; Technology research in the field of artificial intelligence; Advanced product research in the field of artificial intelligence; Consultation services in the fields of neuroscience research and neural engineering; product research and development consultation in the field of neuroprosthetics; Providing temporary use of online non-downloadable software for processing, interpreting, monitoring, and managing data produced by a sensor system that measures, tracks or monitors brain activity and mental states	Pending
WHAT ELSE ARE YOU CAPABLE OF?	United States	7-Aug-2019	86169837; Class 44	Services	Medical Services	Medical services; medical rehabilitation services for the field of neurology; Providing neurological rehabilitation services; Medical evaluation of neurological condition or neurological disease; Medical testing for diagnostic or treatment purposes; Medical testing for diagnostic or treatment purposes in the field of neurology; Medical diagnostic testing, monitoring and reporting services; Medical and healthcare services, namely, providing medical and healthcare information, and medical and healthcare advice; Medical evaluation of neurological conditions or neurological diseases for drug development purposes	Pending

**SCHEDULE C**

**To Plain English Intellectual Property Security Agreement  
Between HI LLC, as You (Grantor)  
And TRIPLEPOINT PRIVATE VENTURE CREDIT INC., as Us (Grantee)**

**COPYRIGHTS AND COPYRIGHT APPLICATIONS**

**COPYRIGHT REGISTRATIONS**

None

**APPLICATIONS FOR COPYRIGHT REGISTRATIONS**

None