

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6394989

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the 1ST ASSIGNOR'S FULL FIRST NAME previously recorded on Reel 044416 Frame 0925. Assignor(s) hereby confirms the ASSIGNMENT OF ASSIGNORS INTEREST.
<b>RESUBMIT DOCUMENT ID:</b>	506249432

## CONVEYING PARTY DATA

Name	Execution Date
BRADLEY JOSEPH HOOVER	09/11/2020
RAJARAM B. KRISHNAMURTHY	11/08/2017
MICHAEL LAPOINTE	11/03/2017
JAYAPREETHA NATESAN	11/08/2017
KANAYO G. OKONJI	11/03/2017
CHANCHAL SAHA	11/06/2017
THOMAS WARD	11/08/2017

## RECEIVING PARTY DATA

<b>Name:</b>	INTERNATIONAL BUSINESS MACHINES CORPORATION
<b>Street Address:</b>	NEW ORCHARD ROAD
<b>City:</b>	ARMONK
<b>State/Country:</b>	NEW YORK
<b>Postal Code:</b>	10504

## PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15808972

## CORRESPONDENCE DATA

**Fax Number:** (860)286-0115

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

**Phone:** 8602862929

**Email:** usptopatentmail@cantorcolburn.com

**Correspondent Name:** CANTOR COLBURN LLP

**Address Line 1:** 20 CHURCH STREET

**Address Line 2:** 22ND FLOOR

**Address Line 4:** HARTFORD, CONNECTICUT 06103

<b>ATTORNEY DOCKET NUMBER:</b>	POU820160791US01
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<b>NAME OF SUBMITTER:</b>	ANNE DAVIS BARRY
<b>SIGNATURE:</b>	/Anne Davis Barry/
<b>DATE SIGNED:</b>	11/11/2020
	This document serves as an Oath/Declaration (37 CFR 1.63).
<b>Total Attachments: 28</b> source=8NC8985#page1.tif source=8NC8985#page2.tif source=8NC8985#page3.tif source=8NC8985#page4.tif source=8NC8985#page5.tif source=8NC8985#page6.tif source=8NC8985#page7.tif source=8NC8985#page8.tif source=8NC8985#page9.tif source=8NC8985#page10.tif source=8NC8985#page11.tif source=8NC8985#page12.tif source=8NC8985#page13.tif source=8NC8985#page14.tif source=8NC8985#page15.tif source=8NC8985#page16.tif source=8NC8985#page17.tif source=8NC8985#page18.tif source=8NC8985#page19.tif source=8NC8985#page20.tif source=8NC8985#page21.tif source=8NC8985#page22.tif source=8NC8985#page23.tif source=8NC8985#page24.tif source=8NC8985#page25.tif source=8NC8985#page26.tif source=8NC8985#page27.tif source=8NC8985#page28.tif	



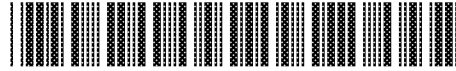
**UNITED STATES PATENT AND TRADEMARK OFFICE**

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

November 02, 2020

PTAS

CANTOR COLBURN LLP  
20 CHURCH STREET  
22ND FLOOR  
HARTFORD, CT 06103



506249432

United States Patent and Trademark Office  
Notice of Non-Recordation of an Assignment Document

The enclosed document has been examined and found non-recordable by the Assignment Recordation Branch of the U.S. Patent and Trademark Office. The reason(s) for non-recordation are stated below:

1. The document submitted to correct errors in the previously recorded document is not acceptable. To correct an error in the recorded document, you must file a new cover sheet stating the error and the nature of conveyance, attach the previously recorded cover sheet which contains the error and the supporting document and pay the recording fees as set forth in 37 C.F.R. §3.34

Documents being resubmitted for recordation must reflect the corrected information to be recorded, the Document ID number referenced above and all pages from this submitted document. The original date of filing of this assignment document will be maintained if resubmitted with the appropriate correction(s) by **Monday, January 4, 2021**, as outlined under 37 CFR 3.51. The resubmitted document must include a stamp with the official date of receipt under 37 CFR 3. Applicants may use the certified procedures under 37 CFR 1.8 or 1.10 for resubmission of the returned papers if they desire to have the benefit of the date of deposit in the United States Postal Service.

To file the resubmission electronically, navigate to the EPAS website at <http://epas.uspto.gov>, click the Start Resubmission button and enter the following information:

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To file the resubmission in paper, send documents to: U.S. Patent and Trademark Office, Mail Stop: Assignment Recordation Branch, P.O. BOX 1450, Alexandria, VA 22313. If you have any questions regarding this notice, you may contact the Assignment Recordation Branch at 571-272-3350.

ANDREA FREEMAN  
ASSIGNMENT RECORDATION BRANCH  
PUBLIC RECORDS DIVISION

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT6296177

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THOMAS WARD	11/08/2017
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<b>Phone:</b>	8602862929
<b>Email:</b>	usptopatentmail@cantorcolburn.com
<b>Correspondent Name:</b>	CANTOR COLBURN LLP
<b>Address Line 1:</b>	20 CHURCH STREET
<b>Address Line 2:</b>	22ND FLOOR
<b>Address Line 4:</b>	HARTFORD, CONNECTICUT 06103
<b>NAME OF SUBMITTER:</b>	ANNE DAVIS BARRY
<b>SIGNATURE:</b>	/Anne Davis Barry/

**DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN  
APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT**

**Title of Invention: COGNITIVE MANUFACTURING SYSTEMS TEST REPAIR  
ACTION**

As a below named and undersigned inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

[X] United States application or PCT international application number 15/808,972 filed on November 10, 2017.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. § 1.56.

Whereas, I ("ASSIGNOR") have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the IBM Docket Number provided above in the header of this document;

Whereas, International Business Machines Corporation (herein referred to as the "ASSIGNEE"), a corporation of New York having a place of business at Armonk, New York, desires to acquire, and I desire to grant to the ASSIGNEE, my entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, I hereby sell or have sold, assign or have assigned, and otherwise transfer or have transferred to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, I hereby authorize and request the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by me had this Assignment not been made; and I agree to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

I acknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to the ASSIGNEE and am unaware of any reason why I may not have the full and unencumbered right to sell, assign, and transfer my rights hereby sold, assigned, and transferred, and have not executed, and will not execute, any document or instrument in conflict herewith. I also hereby grant the ASSIGNEE, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any disputes will be resolved in a New York state court or federal court sited in New York.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

(1) Legal Name of Inventor: Bradley Joseph Hoover

Signature: Bradley J. Hoover Date: 9/11/20

(2) Legal Name of Inventor: Rajaram B. Krishnamurthy

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(3) Legal Name of Inventor: Michael Lapointe

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(4) Legal Name of Inventor: Jayapreetha Natesan

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(5) Legal Name of Inventor: Kanayo G. Okonji

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(6) Legal Name of Inventor: Chanchal Saha

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(7) Legal Name of Inventor: Thomas Ward

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

DECEMBER 19, 2017

PTAS

CANTOR COLBURN LLP  
20 CHURCH STREET  
22ND FLOOR  
HARTFORD, CT 06103

**504636686**

## UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT RECORDATION BRANCH OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE ASSIGNMENT RECORDATION BRANCH AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT RECORDATION BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 11/10/2017

REEL/FRAME: 044416/0925  
NUMBER OF PAGES: 23

BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

DOCKET NUMBER: POU820160791US01

ASSIGNOR:  
~~HOOPER, BRAD~~ Bradley Joseph Hoover

DOC DATE: ~~11/03/2017~~ 09/11/2020

ASSIGNOR:  
KRISHNAMURTHY, RAJARAM B.

DOC DATE: 11/08/2017

ASSIGNOR:  
LAPOINTE, MICHAEL

DOC DATE: 11/03/2017

ASSIGNOR:  
NATESAN, JAYAPREETHA

DOC DATE: 11/08/2017

ASSIGNOR:  
OKONJI, KANAYO G.

DOC DATE: 11/03/2017

ASSIGNOR:  
SAHA, CHANCHAL

DOC DATE: 11/06/2017

ASSIGNOR:  
WARD, THOMAS

DOC DATE: 11/08/2017



ASSIGNEE:

INTERNATIONAL BUSINESS MACHINES  
CORPORATION  
NEW ORCHARD ROAD  
ARMONK, NEW YORK 10504

APPLICATION NUMBER: 15808972

FILING DATE: 11/10/2017

PATENT NUMBER:

ISSUE DATE:

TITLE: COGNITIVE MANUFACTURING SYSTEMS TEST REPAIR ACTION

ASSIGNMENT RECORDATION BRANCH  
PUBLIC RECORDS DIVISION

**DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN  
APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT**

Title of Invention: COGNITIVE MANUFACTURING SYSTEMS TEST REPAIR ACTION

As a below named and undersigned inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

☐ United States application or PCT international application number \_\_\_\_\_  
filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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Whereas, I ("ASSIGNOR") have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the IBM Docket Number provided above in the header of this document;

Whereas, International Business Machines Corporation (herein referred to as the "ASSIGNEE"), a corporation of New York having a place of business at Armonk, New York, desires to acquire, and I desire to grant to the ASSIGNEE, my entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, I hereby sell or have sold, assign or have assigned, and otherwise transfer or have transferred to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, I hereby authorize and request the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by me had this Assignment not been made; and I agree to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

(1) Legal Name of Inventor: **Brad Hoover**

Signature:  Date: 11/3/17

(2) Legal Name of Inventor: **Rajaram B. Krishnamurthy**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(3) Legal Name of Inventor: **Michael Lapointe**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(4) Legal Name of Inventor: **Jayapreetha Natesan**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**[IF MORE INVENTORS, ADDITIONAL SIGNATURE PAGE(S) FOLLOWS]**

(5) Legal Name of Inventor: **Kanayo G. Okonji**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(6) Legal Name of Inventor: **Chanchal Saha**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(7) Legal Name of Inventor: **Thomas Ward**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, I hereby sell or have sold, assign or have assigned, and otherwise transfer or have transferred to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, I hereby authorize and request the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by me had this Assignment not been made; and I agree to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(2) Legal Name of Inventor: **Rajaram B. Krishnamurthy**

Signature: Rajaram B. Krishnamurthy Date: 11/8/2017

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(7) Legal Name of Inventor: **Thomas Ward**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Nov. 3. 2017 12:54PM

No. 0264 P. 2

IBM DOCKET NUMBER: POU820160791US01

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therefor in the United States and in all foreign countries and jurisdictions, including all divisions,  
continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions  
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Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign  
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Nov. 3. 2017 12:54PM

No. 0264 P. 3

IBM DOCKET NUMBER: POU820160791US01

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(2) Legal Name of Inventor: Rajaram B. Krishnamurthy

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(3) Legal Name of Inventor: Michael Lapointe

Signature: Michael Lapointe Date: 11/3/17

(4) Legal Name of Inventor: Jayapreetha Natesan

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

[IF MORE INVENTORS, ADDITIONAL SIGNATURE PAGE(S) FOLLOWS]

Nov. 3. 2017 12:54PM

No. 0264 P. 4

IBM DOCKET NUMBER: POU820160791US01

(5) Legal Name of Inventor: Kanayo G. Okonji

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(6) Legal Name of Inventor: Chanchal Saha

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(7) Legal Name of Inventor: Thomas Ward

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN  
APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT**

Title of Invention: COGNITIVE MANUFACTURING SYSTEMS TEST REPAIR ACTION

As a below named and undersigned inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

☐ United States application or PCT international application number \_\_\_\_\_  
filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.

Whereas, I ("ASSIGNOR") have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the IBM Docket Number provided above in the header of this document;

Whereas, International Business Machines Corporation (herein referred to as the "ASSIGNEE"), a corporation of New York having a place of business at Armonk, New York, desires to acquire, and I desire to grant to the ASSIGNEE, my entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, I hereby sell or have sold, assign or have assigned, and otherwise transfer or have transferred to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, I hereby authorize and request the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by me had this Assignment not been made; and I agree to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

I acknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to the ASSIGNEE and am unaware of any reason why I may not have the full and

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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

(1) Legal Name of Inventor: **Brad Hoover**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(2) Legal Name of Inventor: **Rajaram B. Krishnamurthy**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(3) Legal Name of Inventor: **Michael Lapointe**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(4) Legal Name of Inventor: **Jayapreetha Natesan**

Signature: Jayapreetha Date: 11/08/2017

[IF MORE INVENTORS, ADDITIONAL SIGNATURE PAGE(S) FOLLOWS]

(5) Legal Name of Inventor: **Kanayo G. Okonji**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(6) Legal Name of Inventor: **Chanchal Saha**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

(7) Legal Name of Inventor: **Thomas Ward**

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(5) Legal Name of Inventor: **Kanayo G. Okonji**

Signature:  Date: 11/03/2017

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Signature: Chanchal Saha Date: 11/06/2017

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