PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date	
DANIEL HEIDINGA	09/11/2019	
SHARON WANG	09/11/2019	
OLUWATOBI ADEOYE AJILA	09/12/2019	
GRAHAM ALAN CHAPMAN	09/13/2019	

RECEIVING PARTY DATA

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Street Address:	NEW ORCHARD ROAD
City:	ARMONK
State/Country:	NEW YORK
Postal Code:	10504

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16570475

CORRESPONDENCE DATA

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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.

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ATTORNEY DOCKET NUMBER:	P201907969US01
NAME OF SUBMITTER:	SABRINA ERNST
SIGNATURE:	/Sabrina Ernst/
DATE SIGNED:	09/13/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 4

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

DEFERRED BYTECODE CLASS VERIFICATION IN MANAGED RUNTIME ENVIRONMENTS

As a below named 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
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, the undersigned inventor(s) has/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, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned inventor desires to grant to IBM, the 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, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the 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 filling of such applications and granting of such patents. In addition, each undersigned inventor hereby authorizes and requests 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 IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, 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 the undersigned had this Assignment not been made; and each undersigned inventor agrees 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 IBM, its successors, legal representatives, or assigns. Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full an
to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned inventor also hereby grants IBM, 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: DANIEL HEIDINGA

Page 1 of 4

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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 therefold all rights of priority resulting from the filing of such applications and granting of such patents. In addition, eundersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full ethe terms for which any and all such patents may be granted, as fully and entirely as would have been held an enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees to examy and all documents and instruments and perform all lawful acts reasonably related to recording this Assign or perfecting fiftle to the Invention and all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns. Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumber to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will nexecute, any document or instrument in conflict herewith. Each undersigned inventor also hereby grants IBM 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 this Assignment. This Assignment is governed by the substa	of, and ach Office rest in nd of id ecute nment rights red right of M, its on of sputes
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Signature:Date:Date:Date:Date:	**************************************

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IBM DOCKET NUMBER: P201907969US01

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Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned inventor desires to grato IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;	nt
applications and patents directed mereto; Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns the 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, each undersigned inventor hereby authorizes and requests 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 IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, 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 the undersigned had this Assignment not been made; and each undersigned inventor agrees 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 IBM, its successors, legal representatives, or assigns. Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any	l e n t
by fine or imprisonment of not more than five (5) years, or both. (3) Legal Name of Inventor: QLUWATOBI ADEOYE AJILA	

~ *(*)

Signature: Date: September 12, 2019

ENVIRONMENTS

As a below named 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 be material to patentability as defined in 37 CFR Section 1.56. Whereas, the undersigned inventor(s) has/have made certain inventions, improvements, and discoveries referred to as the "Invention") disclosed in the above-identified patent application and further identified Docket Number provided above in the header of this document; Whereas, International Business Machines Corporation, a corporation of New York having a place of be Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned inventor de to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all prapplications and patents directed thereto; Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby accept undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwest.	ation. who me to therein by the IBM usiness at sires to grant atent cknowledged.
or has transferred to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the enti- right, title, and interest in and to the Invention, the above-identified United States patent application, an other patent applications and patents for the Invention which may be applied for or granted therefor in t States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reex renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting filing of such applications and granting of such patents. In addition, each undersigned inventor hereby and requests the Director of the United States Patent and Trademark Office to issue any United States P foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, I representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held a by IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned h Assignment not been made; and each undersigned inventor agrees to execute any and all documents and and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Inv all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever IBM, its successors, legal representatives, or assigns.	re worldwide d any and all he United aminations, g from the authorizes atent, and legal and enjoyed all such led this d instruments ention and
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(4) Legal Name of Inventor: GRAHAM ALAN CHAPMAN Signature:	<u> 142</u> 06

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