### 505181134 11/08/2018

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5227902

SUBMISSION TYPE:	NEW ASSIGNMENT						
NATURE OF CONVEYANCE:	ASSIGNMENT						

### **CONVEYING PARTY DATA**

Name	Execution Date
HERNAN A. CUNICO	08/15/2016
JONATHAN DUNNE	08/17/2016
JEREMIAH O'CONNOR	08/15/2016
ASIMA SILVA	08/22/2016

### **RECEIVING PARTY DATA**

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

### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16183911

### **CORRESPONDENCE DATA**

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Correspondent Name: SCHMEISER, OLSEN & WATTS

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Address Line 4: LATHAM, NEW YORK 12110

ATTORNEY DOCKET NUMBER:	END920160261US03
NAME OF SUBMITTER:	JACK P. FRIEDMAN, REG. NO. 44688
SIGNATURE:	/Jack P. Friedan/
DATE SIGNED:	11/08/2018
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 8

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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

Title of Invention: **ROOT CAUSE ANALYSIS** 

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 numberfiled 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.

Page 1 of 2

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: Hernan A. Cunico		
Signature:	Date: 2016/08/15	
(2) Legal Name of Inventor: <b>Jonathan Dunne</b>		
Signature:	Date:	_
(3) Legal Name of Inventor: Jeremiah O'Connor		
Signature:	Date:	_
(4) Legal Name of Inventor: <b>Asima Silva</b>		
Signature	Date:	

# DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATIONS AND ASSESSMENT

### Title of Invention ROOT CAUSE ANALYSIS

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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 inventor in the application.

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

Lam aware of the duty to disclose to the United States Patent and Trademark Critica at Information Known to me to be material to patentability as defined in 3.7 CFR Section 1.96

Whereas, I ("ASSIGNOR") have made certain inventions improvement, and discount of the control of the above identified patent application and to the control of the IBM Docket Number provided above in the heater of this document.

Whereas, International Business Machines Corporation therein referred to as the 1938 (1938) and corporation of New York having a place of business at Armonk. New York, decrease acquire and desire to gram to the ASSIGNER, my entire worldwide right title, and increase mand to be observed in and to any and all patent applications and patents directed thereto.

Now, therefore, for good and valuable consideration, the receipt and sufficiently the real being become acknowledged. I hereby self or bave sold, assign or lave assigned, and otherwise transfer or have transferred to the ASSIGNED as successors, legal representatives, and assents in come nor distincright, 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 livention which may be replied by a granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions. continuations, reissues, reexaminations, renewals, extensions, counterparts, substitute, and extensions thereof, and all rights of priority resulting from the filing of such applications and grating of such paleurs. In addition, I hereby authorize and request the Direction of the Critical States (along the Trademark Office to issue on United States Patent and torright point authorities in tour any include patent, granted for the Invention, in the ASSIGNEE, its nuclearing legal representative, and assign in enting worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSE SEC. It successors, legal representatives, and assigns to the full end of the terms for which significally such patents may be granted or fully and entirely is second have been held and injured by the list this Assignment not been made and I agree to execute any and all documents and necessions on performal lawful acts reasonably related to recording the Assignment or perfecting title to be livention and all related patents and applications, in the ASSIGNED, its successors legal representatives and assumwhenever requested by the ASSIGNEE, its successors legal representative, or as ign

Page 1 of 2

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(2) Legal None of Invener Jonathan Dunne		
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(3) Legal Name of Inventor Jeremiah O'Connor		
Sycurity	Description	
April agai Name of Incomer Asima Silva		
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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

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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
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 self 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.

Page 1 of 2

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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: Hernan A. Cunico

Signature:	Date:	
(2) Legal Name of Inventor: Jonathan D	unne	
Signature:	Date:	
(3) Legal Name of Inventor: Jeremiah O Signature:		15/08/2016
(4) Legal Name of Inventor: Asima Silva		
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

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This declaration is directed to the attached application, or (if following box is checked):	. Managarahan
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hatchiowardged, I. hereby sell or have sold, assign or have assigned, and otherwise transfer thansferred to the ASSIGNEE, its successors, legal representatives, and assigns, my entire right, title, and interest in and to the Invention, the above-identified United States patent a any and all other patent applications and patents for the Invention which may be applied for the refer in the United States and in all foreign countries and jurisdictions, including all displacements.	or nave worldwide pplication, and or or granted visions,
continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and thereof, and all rights of priority resulting from the filling of such applications and granting patents. In addition, I hereby authorize and request the Director of the United States Pater Trademark Office to issue any United States Patent, and foreign patent authorities to issue patent, granted for the Invention, to the ASSIGNEE, its successors, legal representatives, entire worldwide right, title, and interest in and to the same to be held and enjoyed by the	nt and e any foreign and assigns, my ASSIGNEE, its
successors, legal representatives, and assigns to the full end of the terms for which any an patents may be granted, as fully and entirely as would have been held and enjoyed by me Assignment not been made; and I agree to execute any and all documents and instruments lawful acts reasonably related to recording this Assignment or perfecting title to the Inventiglated spatents and applications, in the ASSIGNEE, its successors, legal representatives, a	mad this s and perform all ation and all and assigns,

Page 1 of 2

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(1) Legal Name of Inventor: Hernan A. Cunico Signature:	Date:	
(2) Legal Name of Inventor: Jonathan Dunne the ASSIGNATURE! 100/Signature! 100/Si	Date:	
Signature:	Date:	
(4) Legal Name of Inventor: Asima Silva Signature:	Date: 8/2.	2//4

Page 2 of 2