#### 10/20/2016 504059845

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4106511

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
NATHAN C. BUCK	10/14/2016
ERIC A. FOREMAN	10/14/2016
JEFFREY G. HEMMETT	10/14/2016
KERIM KALAFALA	10/14/2016
GREGORY M. SCHAEFFER	10/14/2016
STEPHEN G. SHUMA	10/14/2016
NATESAN VENKATESWARAN	10/14/2016
CHANDRAMOULI VISWESWARIAH	10/17/2016
VLADIMIR ZOLOTOV	10/14/2016

### **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:	15298921

### **CORRESPONDENCE DATA**

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ATTORNEY DOCKET NUMBER:	FIS920160054US1 (33830)
NAME OF SUBMITTER:	STEVEN FISCHMAN

PAIENI

**REEL: 040437 FRAME: 0019** 504059845

SIGNATURE:	/Steven Fischman/
DATE SIGNED:	10/20/2016
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 24	

source=FIS920160054US1 FiledAssignDec#page1.tif source=FIS920160054US1 FiledAssignDec#page2.tif source=FIS920160054US1 FiledAssignDec#page3.tif source=FIS920160054US1\_FiledAssignDec#page4.tif source=FIS920160054US1 FiledAssignDec#page5.tif source=FIS920160054US1 FiledAssignDec#page6.tif source=FIS920160054US1\_FiledAssignDec#page7.tif source=FIS920160054US1\_FiledAssignDec#page8.tif source=FIS920160054US1 FiledAssignDec#page9.tif source=FIS920160054US1 FiledAssignDec#page10.tif source=FIS920160054US1\_FiledAssignDec#page11.tif source=FIS920160054US1 FiledAssignDec#page12.tif source=FIS920160054US1 FiledAssignDec#page13.tif source=FIS920160054US1 FiledAssignDec#page14.tif source=FIS920160054US1 FiledAssignDec#page15.tif source=FIS920160054US1 FiledAssignDec#page16.tif source=FIS920160054US1 FiledAssignDec#page17.tif source=FIS920160054US1 FiledAssignDec#page18.tif source=FIS920160054US1\_FiledAssignDec#page19.tif source=FIS920160054US1 FiledAssignDec#page20.tif source=FIS920160054US1 FiledAssignDec#page21.tif source=FIS920160054US1 FiledAssignDec#page22.tif source=FIS920160054US1 FiledAssignDec#page23.tif

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PATENT REEL: 040437 FRAME: 0020

## 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: TIMING OPTIMIZATION DRIVEN BY STATISTICAL SENSITIVITES

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 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 all such

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(1) Legal Name of Inventor: Nathan C. Buck Signature:	Date: 10/14/20/6
(2) Legal Name of inventor: Eric A. Foreman	
Signature:	Date:
(3) Legal Name of Inventor: Jeffrey G. Hemmett	
Signeture:	Date;
(4) Legal Name of Inventor. Kerim Kalafala	
Signulure	Date:
(5) Legal Name of Inventor, Gregory M. Schaeffer	
Signature:	Date:

PATENT REEL: 040437 FRAME: 0022

(6) Legal Name of Inventor: Stephen G. Shuma	
Signature:	Date:
(7) Legal Name of Inventor: Natesan Venkateswaran	
Signature:	Date:
(8) Legal Name of Inventor: Chandramouli Visweswariah	
Signature:	Date:
(9) Legal Name of Inventor: Vladimir Zolotov	
Signature	Date

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Signature:	Date:
(2) Legal Name of Inventor: Eric A. Foreman	Date: 10/19/2016
(3) Legal Name of Inventor: Jeffrey G. Hemmett	Date
Signature: Marca/fund	Date: 10/14/2016
(4) Legal Name of Inventor: Kerim Kalafala	
Signature:	Date:
(5) Legal Name of Inventor: Gregory M. Schaeffer	
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Signature:	Date:
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Signature:	Date: OCT 14, 70/16
(5) Legal Name of Inventor: Gregory M. Schaeffer	
Signature	Date:

Page 2 of 3

(6) Legal Name of Inventor: Stephen G. Shuma		
Signature:	Date:	<del></del>
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Signature: Gregory M. Schreft	Date: 10/14/16

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Signature:	Date:
(2) Legal Name of Inventor: Krie A. Foreman	
Signature:	Dute:
(3) Logal Name of inventor: Jeffrey G. Hemmett	
Signature:	Date:
(4) Legal Name of Inventor: Kerim Kalafala	
Signature:	Date:
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Signature	Dare:

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(b) Legal Name of Inventor, Stephen G. Sauma	
Signature:	Date: 10/14/16
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Signature:	Detc:
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Signature:	Date:
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Signature:

REEL: 040437 FRAME: 0037

Date:

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Signature:	Date:
(7) Legal Name of Inventor: Natesan Venkateswaran Signature:	Date: 10 14 2016
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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.
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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

Page 1 of 3

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.

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

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: Nathan C. Buck		
Signature:	Date:	
(2) Legal Name of Inventor: Eric A. Foreman		
Signature:	Date:	
(3) Legal Name of Inventor: Jeffrey G. Hemmett		
Signature:	Date:	
(4) Legal Name of Inventor: Kerim Kalafala		
Signature:	Date:	····
(5) Legal Name of Inventor: Gregory M. Schaeffer		
Signature:	Date:	

Page 2 of 3

**PATENT** 

(6) Legal Name of Inventor: Stephen G. Shuma	
Signature:	Date:
(7) Legal Name of Inventor: Natesan Venkateswaran	
Signature:	Date:
(8) Legal Name of Inventor: Chandramouli Visweswariah	
Signature: Chandramouli V	Date:_October 17, 2016
(9) Legal Name of Inventor: Vladimir Zolotov	
Signature:	Date:

REEL: 040437 FRAME: 0041

# 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: TIMING OPTIMIZATION DRIVEN BY STATISTICAL SENSITIVITES

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 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;

, 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: \$15 / Walling Do Zalat	(u/ 5. 1011. 2011

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