PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3990654

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the LAST NAME OF INVENTOR NO. 3 previously recorded on Reel 037051 Frame 0617. Assignor(s) hereby confirms the ASSIGNMENT.

CONVEYING PARTY DATA

Name	Execution Date
SUPRIYO CHAKRABORTY	11/13/2015
KEITH GRUENEBERG	11/09/2015
BONGJUN KO	11/11/2015
CHRISTIAN MAKAYA	11/11/2015
JORGE J. ORTIZ	11/12/2015
SWATI RALLAPALLI	11/05/2015
THEODOROS SALONIDIS	11/10/2015
RAHUL URGAONKAR	11/11/2015
DINESH VERMA	11/13/2015
XIPING WANG	11/11/2015

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:	14942618

CORRESPONDENCE DATA

Fax Number:

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.

Email: jennifer@tb-iplaw.com

Correspondent Name: TUTUNJIAN & BITETTO, P.C.
Address Line 1: 401 BROADHOLLOW ROAD
Address Line 4: MELVILLE, NEW YORK 11747

ATTORNEY DOCKET NUMBER: YOR920150725US1 163-1058

PATENT REEL: 039559 FRAME: 0440

503943999

NAME OF SUBMITTER: JAMES J. BITETTO		
NAME OF SUBMITTEN:	JAIVIES J. BITETTO	
SIGNATURE: /jjb/		
DATE SIGNED:	08/03/2016	
This document serves as an Oath/Declaration (37 CFR 1.63).		
Total Attachments: 10		
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source=163-1058_CorrectiveAssignment#page4.tif		
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source=163-1058_CorrectiveAssignment#page10.tif		

PATENT REEL: 039559 FRAME: 0441

503571449 11/16/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3618076

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SUPRIYO CHAKRABORTY	11/13/2015
KEITH GRUENEBERG	11/09/2015
BONGJUN KU	11/11/2015
CHRISTIAN MAKAYA	11/11/2015
JORGE J. ORTIZ	11/12/2015
SWATI RALLAPALLI	11/05/2015
THEODOROS SALONIDIS	11/10/2015
RAHUL URGAONKAR	11/11/2015
DINESH VERMA	11/13/2015
XIPING WANG	11/11/2015

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	e Number	
Application Number:	14942618	

CORRESPONDENCE DATA

Fax Number: (631)844-0081

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Phone: 6318440080

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Correspondent Name: TUTUNJIAN & BITETTO, P.C.

Address Line 1: 425 BROADHOLLOW ROAD, SUITE 302

Address Line 4: MELVILLE, NEW YORK 11747

ATTORNEY DOCKET NUMBER: YOR920150725US1 163-1058

PATENT REEL: 039559 FRAME: 0442

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:

RECOMMENDATIONS BASED ON PRIVATE DATA USING A DYNAMICALLY DEPLOYED PRE-FILTER

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 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: [Supriyo Chakraborty]	
	Date: 11/13/2015
(2) Legal Name of Inventor: [Keith Grueneberg]	
Signature:	Date:
(3) Legal Name of Inventor: [Bongjun Ko]	
Signature:	Date:
(4) Legal Name of Inventor: [Christian Makaya]	
Signature:	Date:
(5) Legal Name of Inventor: [Jorge J. Ortiz]	
Signature:	Date:
(6) Legal Name of Inventor: [Swati Rallapalli]	
Signature:	Date:

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.

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(1) Legal Name of Inventor: (Suprive Chakrahorty)

(1)	Esgai Name of inventor, journey o chamber 194	
	Signature:	Date:
(2)	Legal Name of Inventor: [Keith Grueneberg]	
(3)	Signature:	Date: 11/9/15
(4)	Signature: Legal Name of Inventor: [Christian Makaya]	Date:
	Signature:	Date:
(5)	Legal Name of Inventor: [Jorge J. Ortiz]	
	Signature:	Date:
(6)	Legal Name of Inventor: [Swati Rallapalli]	
	Signature:	Date:

Page 2 of 3

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(1)	Legal Name of Inventor: [Supriyo Chakraborty]	
	Signature:	Date:
(2)	Legal Name of Inventor: [Keith Grueneberg]	
	Signature:	Date:
(3)	Legal Name of Inventor: [Bongjun Ko]	
		Date: 11/11/2015
(4)	Legal Name of Inventor: [Christian Makaya]	
	Signature Distriction Reservery	Date: 11/11/15
` '	Legal Name of Inventor: [Jorge J. Optiz] Signature:	Date: 11/12/2015
(6)	Legal Name of Inventor: [Swati Rallapalli]	
	Signature:	Date:

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.

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(1) 1 egai Name of inventor. [Supriyo Chakrabort]	
Signature:	Date:
(2) Legal Name of Inventor: [Keith Grueneberg]	
Signature:	Date:
(3) Legal Name of Inventor. [Bongjun Ko]	
Signature:	Date:
(4) Legal Name of Inventor: [Christian Makaya]	
Signature:	Date:
(5) Legal Name of Inventor: [Jorge J. Ortiz]	
Signature:	Date:
6) Legal Name of Inventor: [Swati Rallapalli]	
Signature:	Date: Nov. 5th, 2015

(7) Legal Name of Inventor: [Theodoros Salonidis]	,
Signature:	Date: 11/10/2015
(8) Legal Name of Inventor: [Rahul Urgaonkar]	
Signature:	Date:
(9) Legal Name of Inventor: [Dinesh Verma]	
Signature:	Date:
(10) Legal Name of Inventor: [Xiping Wang]	
	Deter

(7) Legal Name of inventor: [Theodoros Salonidis]	
Signature:	Date:
(8) Legal Name of Inventor: [Rahul Urgaonkar]	
Signature: Rell Garrier	Date: 11 11 2015
(9) Legal Name of Inventor: [Dinesh Verma]	
Signature:	Date:
(10) Legal Name of Inventor: [Xiping Wang]	
e in the second of the second	
Signature	Date:

(7) Legal Name of Inventor: [Theodoros Salonidis]		
Signature:	Date:	
(8) Legal Name of Inventor: [Rahul Urgaonkar]		
Signature:	Date:	
(9) Legal Name of Inventor: [Dinesh Verma]		
Signature:	Date:	11/13/2015
(10) Legal Name of Inventor: [Xiping Wang]		
Cionatura	Data	

(7) Legal Name of Inventor: [Theodoros Salonidis]	
Signature:	Date:
(8) Legal Name of Inventor: [Rahul Urgaonkar]	
Signature:	Date:
(9) Legal Name of Inventor: [Dinesh Verma]	
Signature:	Date:
(10) Legal Name of Inventor: [Xiping Wang]	
Signature: W	Date: 11/11/2015