07/13/2017 504456205

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4502906

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BHAVNA AGRAWAL	06/01/2017
NIKOLAOS ANEROUSIS	06/01/2017
FRANK A. SCHAFFA	07/12/2017
JIN XIAO	06/01/2017

RECEIVING PARTY DATA

lame: 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:	15649272

CORRESPONDENCE DATA

Fax Number: (203)517-9615

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: 203 433 3157

Email: docket@oeklaw.com

OTTERSTEDT, ELLENBOGEN & KAMMER, LLP **Correspondent Name:**

Address Line 1: P.O. BOX 381

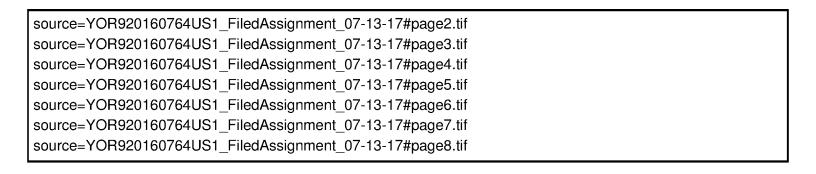
Address Line 4: COS COB, CONNECTICUT 06807-0381

ATTORNEY DOCKET NUMBER:	YOR920160764US1
NAME OF SUBMITTER:	PAUL J. OTTERSTEDT
SIGNATURE:	/Paul J. Otterstedt/
DATE SIGNED:	07/13/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 8

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PATENT REEL: 043001 FRAME: 0961



PATENT REEL: 043001 FRAME: 0962

Title of Invention: USER/GROUP SERVICING BASED ON DEEP NETWORK 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):
[x] United States application or PCT international application number _filed on _13-JUL-2017	15649272

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.

TBM DOCKET NUMBER: YOR920160764US1

Lacknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to the ASSIGNEE and an 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. § 100) by fine or imprisonment of not more than five (5) years, or both.

(1) Legal Name of Inventor: Bhavna Agrawal

	Signature: Bhowna	Aground	One: June 1, 201	7
2)	Legal Name of Inventor: Nikolaus *	knerousis		
	Signature:		Date:	
(3)	Legal Name of Inventor: Frank 4.5	Sebalta		
	Signature:		Date:	
(»(·)	Legal Name of Inventor: Jin Xiao			
	Signature:		Oate:	

Title of Invention: USER/GROUP SERVICING BASED ON DEEP NETWORK 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):

[x] United States application or PCT international application number 15649272 filed on 13-JUL-2017

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(1)	Legal Name of Inventor: Bhavna Agrawai	
	Signature:	_ Date:
(2)	Legal Name of Inventor: Nikolaos Anerousis	
	Signature: N. Arwowin	Date: 6/1/2017
(3)	Legal Name of Inventor: Frank A. Schaffa	
	Signature:	_ Date:
(4)	Legal Name of Inventor: Jin Xiao	
	Signature	Plate

Title of Invention: USER/GROUP SERVICING BASED ON DEEP NETWORK ANALYSIS

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IBM DOCKET NUMBER: YOR920160764USI

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(1)	Legal Name of Inventor: Bhavna Agrawal	
	Signature:	Date:
(2)	Legal Name of Inventor: Nikolaos Anerousis	
	Signature:	_Date:
(3)	Legal Name of Inventor: Frank A. Schaffa	
	Signature: TLL WA	Date: Jul 12, 2017
(4)	Legal Name of Inventor: Jin Xiao	
	Signature	Dota

Title of Invention: USER/GROUP SERVICING BASED ON DEEP NETWORK ANALYSIS

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filed on 13-JUL-2017			

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Signature:	Date:
(2) Legal Name of Inventor: Nikolaos Anerousis	
Signature:	Date:
(3) Legal Name of Inventor: Frank A. Schaffa	
Signature:	Date:
egal Name of Inventor: Jin Xiao	
ignature: 2	Date: June 1st, 201

Page 2 of 2

(4)