PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2777952

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YANG SONG	03/14/2014
RAMANI R. ROUTRAY	03/13/2014
DAVID R. BLEA	03/14/2014
KAVITA CHAVDA	03/20/2014

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:	14220713

CORRESPONDENCE DATA

Fax Number: (203)255-6570

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via

US Mail.

Phone: 2032556560

Email: car@rml-law.com

Correspondent Name: MICHAEL J. COOPER

Address Line 1: 1175 POST ROAD EAST, SECOND FLOOR

Address Line 2: RYAN, MASON & LEWIS, LLP

Address Line 4: WESTPORT, CONNECTICUT 06880

ATTORNEY DOCKET NUMBER: ARC920130150US1		
NAME OF SUBMITTER: MICHAEL J. COOPER		
SIGNATURE:	/Michael J. Cooper/	
DATE SIGNED: 03/20/2014		
	This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 5

source=ARC920130150US1_FiledAssignment_03202014#page1.tif

PATENT REEL: 032488 FRAME: 0318

502731346

source=ARC920130150US1_FiledAssignment_03202014#page2.tif source=ARC920130150US1_FiledAssignment_03202014#page3.tif source=ARC920130150US1_FiledAssignment_03202014#page4.tif source=ARC920130150US1_FiledAssignment_03202014#page5.tif

> PATENT REEL: 032488 FRAME: 0319

FORM PTO-1595

RECORDATION FORM COVER SHEET PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

PATENTS ONLY (Rev.6-93) **Patent and Trademark Office** To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies) Yang Song, Ramani R. Routray, David R. Blea and Kavita Chavda **Name: International Business Machines Corporation** Additional name(s) of conveying party(ies) attached? Yes X No **Internal Address:** 3. Nature of conveyance: **Street Address: New Orchard Road** _ Merger X Assignment _ Security Agreement __ Change of Name City: Armonk State: NY **ZIP: 10504** Other **Execution Date: March 14, 2014, March 13, 2014,** Additional name(s) & address(es) attached? Yes X No March 14, 2014, March 20, 2014 **4.** Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s) 14/220,713 Filed March 20, 2014 B. Patent No.(s) Additional numbers attached? Yes X No 5. Name and address of party to whom 6. Total number of applications and patents correspondence concerning document should be involved: 1 mailed: 7. Total Fee (37 CFR 3.41)..... \$ 40.00 Name: Michael J. Cooper **Enclosed** Internal Address: Ryan, Mason & Lewis, LLP Authorized to be charged to deposit account Street Address: 1175 Post Road East, Second Floor City: Westport State: CT ZIP: 06880 8. Deposit account number 09-0441 DO NOT USE THIS SPACE 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Michael J. Cooper March 20, 2014 Reg. No. 57,749 Total number of pages including cover sheet, attachments, and document: Do not detach this portion Mail documents to be recorded with required cover sheet information to: Commissioner of Patents and Trademarks

Box Assignments Washington, DC 20231

Public burden reporting for this sample cover sheet is estimated to average about 30 minutes per document to be recorded, including time for reviewing the document and gathering the data needed, and completing and reviewing the sample cover sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Office of Information Systems, PK2-1000C, Washington, DC, 20231, and to the Office of Management and Budget, Paperwork Reduction Project (0651-0011), Washington, DC 20503.

ARC920130150US1

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: NETWORKING-ASSISTED INPUT/OUTPUT ORDER PRESERVATION FOR DATA REPLICATION

Whereas, I 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 I desire to grant to IBM, 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 ("ASSIGNOR") hereby sell or have sold, assign or have assigned, and otherwise transfer or have transferred to IBM (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 IBM, its successors, legal representatives, and assigns, my 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 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 IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.

I acknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to IBM 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 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) I	Legal Name of Inventor:	Yang Song	
S	Signature:	<u> </u>	Date: 3-14.7016
(2) I	Legal Name of Inventor:	Ramani R. Routray	
S	Signature:	with.	Date: 13 m March 2014
(3) I	Legal Name of Inventor:	David R. Blea	
S	Signature:		Date:
(4) 1	Legal Name of Inventor:	Kavita Chavda	
S	Signature:		Date:

I acknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to IBM 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 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: Yang Song		
	Signature:	Date:	a Parish Assarba Maraka Maraka Maraka Maraka Angal ang Maraka Maraka Maraka Maraka Maraka Maraka Maraka Maraka
(2)	Legal Name of Inventor: Ramani R. Routray		
	Signature:	Date:_	
(3)	Legal Name of Inventor: David R. Blea		
	Signature PPC	Date:_	3/14/14
(4)	Legal Name of Inventor: Kavita Chavda		
	Signature:	Date:	

Page 2 of 2

I acknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to IBM 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 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.

Thereby 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: Yang Song	
Signature:	Date:
(2) Legal Name of Inventor: Ramani R. Routray	
Signature:	Date:
(3) Legal Name of Inventor: David R. Blea	
Signature:	Date:
(4) Legal Name of Inventor: Kavita Chavda	
Signature: ///////	Date: 3/20/2014

Page 2 of 2