504678995 12/08/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4725717

NATURE OF CONVEYANCE: Corrective Assignment to correct the ORDER OF THE NAMED INVENTORS AS SHOWN IN THE ORIGINAL FILED ASSIGNMENT previously recorded on Reel 024193 Frame 0268. Assignor(s) hereby confirms the ORDER OF THE NAMED INVENTORS IN THE ASSIGNMENT.	SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
· ·	NATURE OF CONVEYANCE:	INVENTORS AS SHOWN IN THE ORIGINAL FILED ASSIGNMENT previously recorded on Reel 024193 Frame 0268. Assignor(s) hereby confirms the ORDER OF THE NAMED INVENTORS IN THE

CONVEYING PARTY DATA

Name	Execution Date
LIGANG LU	02/25/2010
ASHISH JAGMOHAN	03/12/2010
DAKE HE	02/25/2010

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
Patent Number:	8532220

CORRESPONDENCE DATA

Fax Number: (408)463-3030

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: 408-463-5676 Email: lldrev@us.ibm.com

Correspondent Name: INTERNATIONAL BUSINESS MACHINES CORP

Address Line 1: 1101 KITCHAWAN ROAD, ROUTE 134, P.O. BOX 218

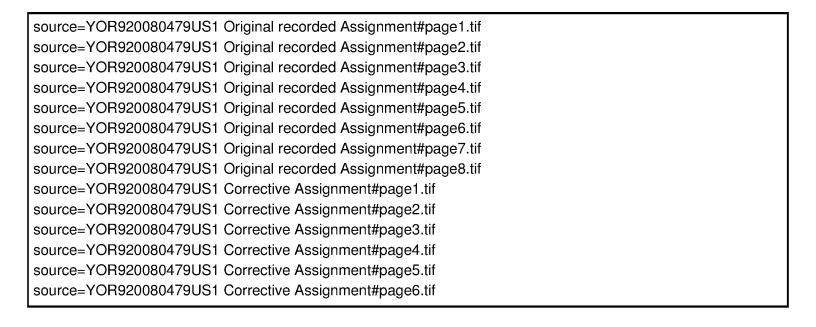
IP LAW DEPARTMENT T.J. WATSON RESEARCH CENTER Address Line 2:

Address Line 4: YORKTOWN, NEW YORK 10598

ATTORNEY DOCKET NUMBER:	YOR920080479US1
NAME OF SUBMITTER:	ALICIA BROOKS
SIGNATURE:	/Alicia Brooks/
DATE SIGNED:	12/08/2017

Total Attachments: 14

PATENT REEL: 044801 FRAME: 0658



PATENT REEL: 044801 FRAME: 0659

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Dake He	02/25/2010
Ashish Jagmohan	03/12/2010
Ligang Lu	02/25/2010

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:	12712740

CORRESPONDENCE DATA

Fax Number: (203)255-6570

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Correspondent Name: Kevin M. Mason

Address Line 1: Ryan, Mason & Lewis, LLP
Address Line 2: 1300 Post Road, Suite 205
Address Line 4: Fairfield, CONNECTICUT 06824

ATTORNEY DOCKET NUMBER:	YOR920080479US1
NAME OF SUBMITTER:	Kevin M. Mason

Total Attachments: 7

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PATENT REEL: 024193 FRAME: 0268 PATENT

REEL: 044801 FRAME: 0660

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PATENT

REEL: 024193 FRAME: 0269 PATENT

REEL: 044801 FRAME: 0661

ASSIGNMENT

Whereas, the undersigned Inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") in:

Title of the Invention: METHODS AND APPARATUS FOR SECURE DISTRIBUTION OF DATA USING N CHANNELS

and further identified by the IBM Dock which an application for a United State	set Number provided above in the header of this Assignment, for es Patent was executed concurrently herewith or was filed having:
Serial Number:	(insert series code and serial number here if/when available)
business at Armonk, New York (herein	ines Corporation, a corporation of New York having a place of referred to as "IBM"), desires to acquire, and each undersigned attre worldwide right, title, and interest in and to the Invention and a and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned Inventor ("ASSIGNOR") hereby sells, assigns, and otherwise transfers to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the 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, each undersigned Inventor hereby authorizes and requests 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, the 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 the undersigned had this Assignment not been made; and each undersigned Inventor agrees 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.

Each undersigned Inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned Inventor also hereby grants IBM, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent application Serial 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.

vinternation of the contract c	Executed	by Inventor 1	
Signature:	Ligang Lu	Date:	
	Executed	by Inventor 2	
Signature;	Ashish Jagmohan	Date:	
***************************************	Executed	by Inventor 3	,
Signature:	Dake He	Date: <u>Feb. 25, 20</u>	2/0

ASSIGNMENT

Whereas, the undersigned Inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") in:

Title of the Invention: METHODS AND APPARATUS FOR SECURE DISTRIBUTION OF DATA USING N CHANNELS

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Executed b	y Inventor 1	
Ligang Lu	Date:	
Executed by	Inventor 2	***************************************
Ashish Jagmohan	Date: 03 12 10	O
Executed by	Inventor 3	
Daka Ha	Date:	
	Ligang Lu Executed by Ashish Jagmohan Executed by	Executed by Inventor 2 Date: 03 12 16 Ashish Jagmohan Executed by Inventor 3

ASSIGNMENT

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Executed by Inventor 1		
Signature:	Ligang Lu Date: 0/25/2010	
	Executed by Inventor 2	
Signature:	Date: Ashish Jagmohan	
	Executed by Inventor 3	
Signature:	Dake He	

Page 2 of 2

RECORDED: 04/06/2010

ASSIGNMENT

Whereas, the undersigned Inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") in:

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Executed by Inventor 1		
Signature:	Ligang Lu Date: 0/25/2010	
	Executed by Inventor 2	
Signature:	: Date: Date:	
	Executed by Inventor 3	
Signature:	: Date:	

Page 2 of 2

RECORDED: 04/06/2010

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[Inventor Signature Page(s) Follows]

REEL: 044803 FRANKE: 062702

Executed b	y Inventor 1	
Ligang Lu	Date:	
Executed by	Inventor 2	***************************************
Ashish Jagmohan	Date: 03 12 10	O
Executed by	Inventor 3	
Daka Ha	Date:	
	Ligang Lu Executed by Ashish Jagmohan Executed by	Executed by Inventor 2 Date: 03 12 16 Ashish Jagmohan Executed by Inventor 3

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Signature:	Ligang Lu
the contest of the state of the	Executed by Inventor 2
Signature:	Ashish Jagmohan
	Executed by Inventor 3
Signature:	Date: Teb. 25, 20/0