PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Himanshu Gupta	09/26/2013
Rajeev Gupta	09/27/2013
Sanjeev Kumar Gupta	09/25/2013
Sriram K. Padmanabhan	09/26/2013
Sriram Raghavan	09/26/2013

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:	14039602

CORRESPONDENCE DATA

Fax Number: 4127419292

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

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NAME OF SUBMITTER:	Jennifer L. Lineberry	
NAME OF SUBMITTER: Signature:	Jennifer L. Lineberry /Jennifer L. Lineberry/	PATENT
ATTORNEY DOCKET NUMBER:	790.205	

502512847 REEL: 031300 FRAME: 0089

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Date:	09/27/2013
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 10 source=790-205-Oath-Dec-Assignment-5parts#page1.tif source=790-205-Oath-Dec-Assignment-5parts#page3.tif source=790-205-Oath-Dec-Assignment-5parts#page4.tif source=790-205-Oath-Dec-Assignment-5parts#page5.tif source=790-205-Oath-Dec-Assignment-5parts#page5.tif source=790-205-Oath-Dec-Assignment-5parts#page6.tif source=790-205-Oath-Dec-Assignment-5parts#page7.tif source=790-205-Oath-Dec-Assignment-5parts#page8.tif source=790-205-Oath-Dec-Assignment-5parts#page8.tif source=790-205-Oath-Dec-Assignment-5parts#page9.tif source=790-205-Oath-Dec-Assignment-5parts#page9.tif	

PATENT REEL: 031300 FRAME: 0090

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: SYSTEM AND A METHOD FOR HIERARCHICAL DATA COLUMN STORAGE AND EFFICIENT QUERY PROCESSING

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 each undersigned inventor desires to grant to IBM, the 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, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred 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

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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 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: Himanshu Gupta	ı
Signature: Houpla	
(2) Legal Name of Inventor: Rajeev Gupta	
Signature:	Date:
(3) Legal Name of Inventor: Saajeev Kumar G	црŧа
Signature:	Date:
(4) Legal Name of Inventor: Sriram K. Padmar	nabhau
Signature:	Date:
(5) Legal Name of Inventor: Sriram Raghavan	
Signature:	Date:

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PATENT

REEL: 031300 FRAME: 0092

DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT

SYSTEM AND A METHOD FOR HIERARCHICAL DATA COLUMN STORAGE AND EFFICIENT QUERY PROCESSING Title of Invention: As a below named 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 _ filed 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 CFR Section 1.56.

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(1) Legal Name of Inventor: Himanshu Gupta	
Signature:	Date:
(2) Legal Name of Inventor: Rajeev Gupta	
Signature:	Date: Sept 27,2017
(3) Legal Name of Inventor: Sanjeev Kumar Gupta	
Signature:	Date;
(4) Legal Name of Inventor: Sriram K. Padmanabhan	
Signature:	Date:
(5) Legal Name of Inventor: Sriram Raghavan	
Signature:	Date:

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PATENT

REEL: 031300 FRAME: 0094

DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT

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SYSTEM AND A METHOD FOR HIERARCHICAL DATA COLUMN STORAGE AND EFFICIENT OUERY PROCESSING

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(1)	Legal Name of Inventor: Himanshu Gupta	
	Signature:	_ Date:
(2)	Legal Name of Inventor: Rajcev Gupta	
	Signature:	Date:
(3)	Legal Name of Inventor: Sanjeev Kumar Gupta	
	Signature:	Date: Sep 25 th 2013
(4)	Legal Name of Inventor: Sriram K. Padmanabhan	
	Signature:	Date:
(5)	Legal Name of Inventor: Sriram Raghavan	
	Signature:	Date:

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Signature:	Date:
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Signature:	Date:
(4) Legal Name of Inventor: Sriram K. Padmanabhan	•
Signature: Sourcus K. Padmanabhan	Date: Sep 26, 2013
(5) Legal Name of Inventor: Sriram Raghavan	
Signature:	Date:

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Signature:	Date:
(2) Legal Name of Inventor: Rajeev Gupta	
Signature:	Date:
(3) Legał Name of Inventor: Sanjeev Kumar Gupta	•
Signature:	Date:
(4) Legal Name of Inventor: Sriram K. Padmanabhan	
Signature:	Date:
(5) Legal Name of Inventor; Sriram Raghavan	
Signature:	Date: 26/09/2013

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PATENT REEL: 031300 FRAME: 0100

RECORDED: 09/27/2013