PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date	
Itzhack GOLDBERG	09/11/2013	
Neil SONDHI	09/12/2013	

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:	14025583

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	TUC920130107US1 (0574)
NAME OF SUBMITTER:	John A. Griffiths
Signature:	/JOHN A. GRIFFITHS/
Date:	09/12/2013

REEL: 031209 FRAME: 0264

This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 3

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PATENT REEL: 031209 FRAME: 0265

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 Investigat DEFRAGMENTATION-LESS DEDUPLICATION

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
The above-identified application was made or authorized to be made by me.
I believe that I am the original investor or an original joint investor of a claimed investors in the application.
I have reviewed and understand the contents of the application; including the claims,
Lam aware of the duty to disclose to the United States Patent and Trademark Office all information known to use to be material to patentability as defined in 37 CFR Section 1.56.

known to me to be material to patentability as defined in 37 CFR Section 1.56.

Whereas, the undersigned inventor(s) has/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 (berein referred to as "HBM"), desires to acquire, and each undersigned inventor desires to grant to HBM, 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 ocknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to IBM (the "ASSN(NFF"), 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 restons 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, recogningtions, renessals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the Ming of such applications and granting of each patents. In addition, each undersigned inventor hereby authorises 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, gramed for the Invention, to IHM, its successors, legal representatives, and assigns, the entire worldwide right, fitle, and interest in and to the same to be held and enjoyed by HBM, its successors; legal representatives, and assigns to the full end of the forms 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.

8.

TUC920130107US1 (0574)

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 us, 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: **Roback GOLDBERG**Signature: 172//3 / A Legal Name of Inventor: **Neil SONDHI**Signature: Date: Date: Date:

HE MORE INVENTORS, ADDITIONAL SIGNATURE PAGE(S) FOLLOWS:

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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.

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(1)	Legal Name of Inver	itor: Itzhack GO	LDBERG		
			, 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	Signature:			Date:	
(2)	Legal Name of Inver	ntor: Neil SONDI			
	Signature:	W		Date: 12	· Sapi 13

[IF MORE INVENTORS, ADDITIONAL SIGNATURE PAGE(S) FOLLOWS]

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PATENT REEL: 031209 FRAME: 0268

RECORDED: 09/12/2013