

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT						
NATURE OF CONVEYANCE:	ASSIGNMENT						
CONVEYING PARTY DATA							
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Jayant R. Kalagnanam</td> <td>02/29/2012</td> </tr> <tr> <td>Ali Koc</td> <td>02/06/2012</td> </tr> </tbody> </table>		Name	Execution Date	Jayant R. Kalagnanam	02/29/2012	Ali Koc	02/06/2012
Name	Execution Date						
Jayant R. Kalagnanam	02/29/2012						
Ali Koc	02/06/2012						
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							
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13414044</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13414044		
Property Type	Number						
Application Number:	13414044						
CORRESPONDENCE DATA							
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NAME OF SUBMITTER:	Steven Fischman						

Total Attachments: 6

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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: SYSTEMS AND METHODS FOR SOLVING LARGE SCALE  
STOCHASTIC UNIT COMMITMENT PROBLEMS

and further identified by the IBM Docket Number provided above in the header of this Assignment, for which an application for a United States Patent was executed concurrently herewith or was filed having:

Serial Number: 13/414,044 (insert series code and serial number here if/when available)

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;

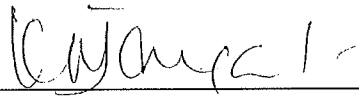
Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned Inventor ("ASSIGNOR") hereby sells, assigns, and otherwise transfers to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the entire worldwide right, 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.

IBM DOCKET NUMBER: YOR920110325US1

Executed by Inventor 1 of 2

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Signature:  Date: 2/29/12  
Jayant R. Kalagnanam

IBM DOCKET NUMBER: YOR920110325US1

**Executed by Inventor 2 of 2**

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Ali Koc**

**ASSIGNMENT**

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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.

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Executed by Inventor 1 of 2

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Jayant R. Kalagnanam**

Executed by Inventor 2 of 2

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Signature: Ali Koc Date: 02/06/2017  
Ali Koc