

PATENT ASSIGNMENT

Electronic Version v1.1  
Stylesheet Version v1.1

SUBMISSION TYPE:

NEW ASSIGNMENT

NATURE OF CONVEYANCE:

ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Eric A. Foreman	07/28/2011
James C. Gregerson	07/28/2011
Peter A. Habitz	07/28/2011
Jeffrey G. Hemmett	07/28/2011
Debjit Sinha	07/29/2011
Natesan Venkateswaran	08/02/2011
Chandramouli Visweswariah	07/29/2011
Xiaoyue Wang	07/28/2011
Vladimir Zolotov	07/29/2011

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:	13197320

CORRESPONDENCE DATA

Fax Number: (518)449-0047

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

Phone: 518-449-0044

Email: vfleming@hoffmanwarnick.com

Correspondent Name: Hoffman Warnick LLC

Address Line 1: 75 State Street

Address Line 2: 14th Floor

501617965

PATENT  
REEL: 026707 FRAME: 0777

CH \$40.00 13197320

Address Line 4: Albany, NEW YORK 12207

ATTORNEY DOCKET NUMBER:

BUR920110028US1

NAME OF SUBMITTER:

Hunter E. Webb

Total Attachments: 18

source=BUR920110028US1\_Signed\_Assignment#page1.tif  
source=BUR920110028US1\_Signed\_Assignment#page2.tif  
source=BUR920110028US1\_Signed\_Assignment#page3.tif  
source=BUR920110028US1\_Signed\_Assignment#page4.tif  
source=BUR920110028US1\_Signed\_Assignment#page5.tif  
source=BUR920110028US1\_Signed\_Assignment#page6.tif  
source=BUR920110028US1\_Signed\_Assignment#page7.tif  
source=BUR920110028US1\_Signed\_Assignment#page8.tif  
source=BUR920110028US1\_Signed\_Assignment#page9.tif  
source=BUR920110028US1\_Signed\_Assignment#page10.tif  
source=BUR920110028US1\_Signed\_Assignment#page11.tif  
source=BUR920110028US1\_Signed\_Assignment#page12.tif  
source=BUR920110028US1\_Signed\_Assignment#page13.tif  
source=BUR920110028US1\_Signed\_Assignment#page14.tif  
source=BUR920110028US1\_Signed\_Assignment#page15.tif  
source=BUR920110028US1\_Signed\_Assignment#page16.tif  
source=BUR920110028US1\_Signed\_Assignment#page17.tif  
source=BUR920110028US1\_Signed\_Assignment#page18.tif

ASSIGNMENT

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

**EFFICIENT SLACK PROJECTION FOR TRUNCATED DISTRIBUTIONS**

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: 13/197,320 (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.

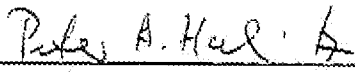
Executed by Inventor 1 of 9

Signature:  Date: 7/28/2011  
Eric A. Foreman

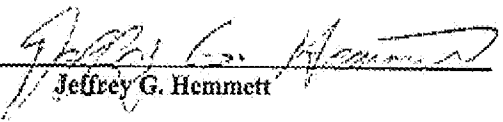
Executed by Inventor 2 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
James C. Gregerson

Executed by Inventor 3 of 9

Signature:  Date: 7-28-2011  
Peter A. Habitz

Executed by Inventor 4 of 9

Signature:  Date: 7/28/11  
Jeffrey G. Hemmett

Executed by Inventor 5 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Debjit Sinha

Executed by Inventor 6 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Natesan Venkateswaran

Executed by Inventor 7 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Chandramouli Visweswariah

Executed by Inventor 8 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Xiaoyue Wang

Executed by Inventor 9 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Vladimir Zolotov

**ASSIGNMENT**

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

**EFFICIENT SLACK PROJECTION FOR TRUNCATED DISTRIBUTIONS**

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: 13/197,320 (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.

Executed by Inventor 1 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Eric A. Foreman

Executed by Inventor 2 of 9

Signature: James C. Gregerson Date: July 28 2011  
James C. Gregerson

Executed by Inventor 3 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Peter A. Habitz

Executed by Inventor 4 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Jeffrey G. Hemmett

Executed by Inventor 5 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Debjit Sinha

Executed by Inventor 6 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Natesan Venkateswaran

Executed by Inventor 7 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Chandramouli Visweswariah

Executed by Inventor 8 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Xiaoyue Wang

Executed by Inventor 9 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Vladimir Zolotov



**ASSIGNMENT**

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

**EFFICIENT SLACK PROJECTION FOR TRUNCATED DISTRIBUTIONS**

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: 13/197,320 (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.

Executed by Inventor 1 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Eric A. Foreman

Executed by Inventor 2 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
James C. Gregerson

Executed by Inventor 3 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Peter A. Habitz

Executed by Inventor 4 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Jeffrey G. Hemmett

Executed by Inventor 5 of 9

Signature: Debjit Sinha Date: 07/29/2011  
Debjit Sinha

Executed by Inventor 6 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Natesan Venkateswaran

Executed by Inventor 7 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Chandramouli Visweswariah

Executed by Inventor 8 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Xiaoyue Wang

Executed by Inventor 9 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Vladimir Zolotov

**ASSIGNMENT**

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

**EFFICIENT SLACK PROJECTION FOR TRUNCATED DISTRIBUTIONS**

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: 13/197,320 (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.

Executed by Inventor 1 of 9

Signature:

Erle A. Foreman

Date: \_\_\_\_\_

Executed by Inventor 2 of 9

Signature:

James C. Gregerson

Date: \_\_\_\_\_

Executed by Inventor 3 of 9

Signature:

Peter A. Habitz

Date: \_\_\_\_\_

Executed by Inventor 4 of 9

Signature:

Jeffrey G. Hammond

Date: \_\_\_\_\_

Executed by Inventor 5 of 9

Signature:

Dhijit Sinha

Date: \_\_\_\_\_

Executed by Inventor 6 of 9

Signature:

Notung Venkateswaran

Date: \_\_\_\_\_

Executed by Inventor 7 of 9

Signature: Chandramouli Visweswariah Date: 7/29/11  
Chandramouli Visweswariah

Executed by Inventor 8 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Xiaoyue Wang

Executed by Inventor 9 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Vladimir Zolotov

**ASSIGNMENT**

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

**EFFICIENT SLACK PROJECTION FOR TRUNCATED DISTRIBUTIONS**

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: 13/197,320 (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.

Executed by Inventor 1 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Eric A. Foreman**

Executed by Inventor 2 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**James C. Gregerson**

Executed by Inventor 3 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Peter A. Habitz**

Executed by Inventor 4 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Jeffrey G. Hemmett**

Executed by Inventor 5 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Debjit Sinha**

Executed by Inventor 6 of 9

---


Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Natesan Venkateswaran**



Executed by Inventor 7 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Chandramouli Visweswariah

Executed by Inventor 8 of 9

Signature:  \_\_\_\_\_ Date: 7/28/2011  
Xiaoyue Wang

Executed by Inventor 9 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Vladimir Zolotov

**ASSIGNMENT**

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

**EFFICIENT SLACK PROJECTION FOR TRUNCATED DISTRIBUTIONS**

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: 13/197,320 (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.

Executed by Inventor 1 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Eric A. Foreman**

Executed by Inventor 2 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**James C. Gregerson**

Executed by Inventor 3 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Peter A. Habitz**

Executed by Inventor 4 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Jeffrey G. Hemmett**

Executed by Inventor 5 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Debjit Sinha**

Executed by Inventor 6 of 9

---

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Natesan Venkateswaran**

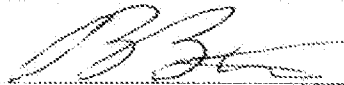
Executed by Inventor 7 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Chandramouli Visweswariah

Executed by Inventor 8 of 9

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Xiaoyue Wang

Executed by Inventor 9 of 9

Signature:  Date: 07.29.2011  
Vladimir Zolotov