502710454 03/06/2014

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2757059

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CASIMER M. DECUSATIS	12/17/2013
MIRCEA GUSAT	01/08/2014
VINIT JAIN	12/17/2013
KESHAV G. KAMBLE	12/24/2013
CYRIEL J. MINKENBERG	01/06/2014
VIJOY A. PANDEY	01/07/2014
RENATO J. RECIO	01/08/2014

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:	14144367

CORRESPONDENCE DATA

 Fax Number:
 (424)229-6815

 Phone:
 4242296800

 Email:
 patent@sziplaw.com

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

Correspondent Name: SHERMAN & ZARRABIAN LLP

Address Line 1: 1519 26TH STREET

Address Line 4: SANTA MONICA, CALIFORNIA 90404

ATTORNEY DOCKET NUMBER: SJO920130084US1

PATENT REEL: 032371 FRAME: 0563

NAME OF SUBMITTER: MICHAEL ZARRABIAN, REG. NO. 39,886 Signature: /Michael Zarrabian/ Date: 03/06/2014 This document serves as an Oath/Declaration (37 CFR 1.63). Total Attachments: 21 source=SJO920130084US1_Declaration-Assignment#page1.tif source=SJO920130084US1_Declaration-Assignment#page2.tif source=SJO920130084US1_Declaration-Assignment#page3.tif source=SJO920130084US1_Declaration-Assignment#page4.tif source=SJO920130084US1_Declaration-Assignment#page5.tif source=SJO920130084US1_Declaration-Assignment#page6.tif source=SJO920130084US1_Declaration-Assignment#page7.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif				
Date: Date: 03/06/2014	NAME OF SUBMITTER:	MICHAEL ZARRABIAN, REG. NO. 39,886		
Total Attachments: 21 source=SJO920130084US1_Declaration-Assignment#page1.tif source=SJO920130084US1_Declaration-Assignment#page2.tif source=SJO920130084US1_Declaration-Assignment#page3.tif source=SJO920130084US1_Declaration-Assignment#page4.tif source=SJO920130084US1_Declaration-Assignment#page6.tif source=SJO920130084US1_Declaration-Assignment#page6.tif source=SJO920130084US1_Declaration-Assignment#page7.tif source=SJO920130084US1_Declaration-Assignment#page8.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page14.tif	Signature:	/Michael Zarrabian/		
Total Attachments: 21 source=SJO920130084US1_Declaration-Assignment#page1.tif source=SJO920130084US1_Declaration-Assignment#page2.tif source=SJO920130084US1_Declaration-Assignment#page3.tif source=SJO920130084US1_Declaration-Assignment#page4.tif source=SJO920130084US1_Declaration-Assignment#page5.tif source=SJO920130084US1_Declaration-Assignment#page6.tif source=SJO920130084US1_Declaration-Assignment#page7.tif source=SJO920130084US1_Declaration-Assignment#page8.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	Date:	03/06/2014		
source=SJO920130084US1_Declaration-Assignment#page1.tif source=SJO920130084US1_Declaration-Assignment#page3.tif source=SJO920130084US1_Declaration-Assignment#page4.tif source=SJO920130084US1_Declaration-Assignment#page5.tif source=SJO920130084US1_Declaration-Assignment#page6.tif source=SJO920130084US1_Declaration-Assignment#page6.tif source=SJO920130084US1_Declaration-Assignment#page7.tif source=SJO920130084US1_Declaration-Assignment#page8.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page14.tif	This document serves as an Oath/Declaration (37 CFR 1.63).			
source=SJO920130084US1_Declaration-Assignment#page2.tif source=SJO920130084US1_Declaration-Assignment#page3.tif source=SJO920130084US1_Declaration-Assignment#page4.tif source=SJO920130084US1_Declaration-Assignment#page5.tif source=SJO920130084US1_Declaration-Assignment#page6.tif source=SJO920130084US1_Declaration-Assignment#page7.tif source=SJO920130084US1_Declaration-Assignment#page8.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	Total Attachments: 21			
source=SJO920130084US1_Declaration-Assignment#page3.tif source=SJO920130084US1_Declaration-Assignment#page5.tif source=SJO920130084US1_Declaration-Assignment#page5.tif source=SJO920130084US1_Declaration-Assignment#page6.tif source=SJO920130084US1_Declaration-Assignment#page7.tif source=SJO920130084US1_Declaration-Assignment#page8.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	source=SJO920130084US1_Declaration-As	ssignment#page1.tif		
source=SJO920130084US1_Declaration-Assignment#page4.tif source=SJO920130084US1_Declaration-Assignment#page5.tif source=SJO920130084US1_Declaration-Assignment#page6.tif source=SJO920130084US1_Declaration-Assignment#page7.tif source=SJO920130084US1_Declaration-Assignment#page8.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	source=SJO920130084US1_Declaration-As	_		
source=SJO920130084US1_Declaration-Assignment#page5.tif source=SJO920130084US1_Declaration-Assignment#page7.tif source=SJO920130084US1_Declaration-Assignment#page8.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif				
source=SJO920130084US1_Declaration-Assignment#page6.tif source=SJO920130084US1_Declaration-Assignment#page7.tif source=SJO920130084US1_Declaration-Assignment#page8.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	source=SJO920130084US1_Declaration-Assignment#page4.tif			
source=SJO920130084US1_Declaration-Assignment#page7.tif source=SJO920130084US1_Declaration-Assignment#page8.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	· · · · · · · · · · · · · · · · · · ·			
source=SJO920130084US1_Declaration-Assignment#page8.tif source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif				
source=SJO920130084US1_Declaration-Assignment#page9.tif source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	_			
source=SJO920130084US1_Declaration-Assignment#page10.tif source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	source=SJO920130084US1_Declaration-Assignment#page8.tif			
source=SJO920130084US1_Declaration-Assignment#page11.tif source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	source=SJO920130084US1_Declaration-Assignment#page9.tif			
source=SJO920130084US1_Declaration-Assignment#page12.tif source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	source=SJO920130084US1_Declaration-Assignment#page10.tif			
source=SJO920130084US1_Declaration-Assignment#page13.tif source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	source=SJO920130084US1_Declaration-Assignment#page11.tif			
source=SJO920130084US1_Declaration-Assignment#page14.tif source=SJO920130084US1_Declaration-Assignment#page15.tif	· · · · · · · · · · · · · · · · · · ·			
source=SJO920130084US1_Declaration-Assignment#page15.tif				
	source=SJO920130084US1_Declaration-Assignment#page14.tif			
	source=SJO920130084US1_Declaration-Assignment#page15.tif			
source=SJO920130084US1_Declaration-Assignment#page16.tif				
source=SJO920130084US1_Declaration-Assignment#page17.tif	source=SJO920130084US1_Declaration-As	ssignment#page17.tif		

source=SJO920130084US1_Declaration-Assignment#page18.tif source=SJO920130084US1_Declaration-Assignment#page19.tif source=SJO920130084US1_Declaration-Assignment#page20.tif source=SJO920130084US1_Declaration-Assignment#page21.tif

PATENT REEL: 032371 FRAME: 0564

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: OVERLAY NETWORK MOVEMENT OPERATIONS

As a below named inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

[X] United States application or PCT international application number <u>14/144,367</u> filed on <u>December 30</u>, 2013.

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.

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 (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 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)	Legal Name of Inventor: Casimer M. Declaratis	
	Signature: Carlor W. Dolumb	Date: \2/17\\zo(3
(2)	Legal Name of Inventor: Mircea Gusat	
	Signature:	Date:
(3)	Legal Nume of Inventor: Vinit Jain	
	Signature:	Date:
(4)	Legal Name of Inventor: Keshav G. Kamble	
	Sionafure:	Date:

(5) Legal Name of Inventor: Cyriel J. Minkenberg	
Signature:	Date:
(6) Legal Name of Inventor: Vijoy A. Pandey	
Signature:	Date:
(7) Legal Name of Inventor: Renato J. Recio	
Signature:	Date:

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: OVERLAY NETWORK MOVEMENT OPERATIONS

As a below named inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

[X] United States application or PCT international application number <u>14/144,367</u> filed on <u>December 30</u>, 2013.

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.

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 (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 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.

(1)	Legal Name of Inventor: Casimer M. DeCusatis	
S	Signature:	Date:
	Legal Name of Inventor: Mircea Gusat	
(3)	Legal Name of Inventor: Vinit Jain	
S	Signature:	Date:
(4)	Legal Name of Inventor: Keshav G. Kamble	
	Signature:	Date:

(5)	Legal Name of Inventor:	Cyriel J. Minkenberg	
	Signature:		Date:
(6)	Legal Name of Inventor:	Vijoy A. Pandey	
	Signature:		Date:
(7)	Legal Name of Inventor:	Renato J. Recio	
	01		Datas

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: OVERLAY NETWORK MOVEMENT OPERATIONS

As a below named inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

[X] United States application or PCT international application number <u>14/144,367</u> filed on <u>December 30</u>, 2013.

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.

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 (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 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.

(1)	Legal Name of Inventor: Casimer M. DeCusatis		
	Signature:	Date:	
(2)	Legal Name of Inventor: Mircea Gusat		
	Signature:	Date:	
(3)	Legal Name of Inventor: Vinit Jain		
	Signature: Vinit Fair	Date: 12/17/20/	2
(4)	Legal Name of Inventor: Keshav G. Kamble		
	Simatura	Date:	

(5)	Legal Name of Inventor:	Cyriel J. Minkenberg	
	Signature:		Date:
(6)	Legal Name of Inventor:	Vijoy A. Pandey	
	Signature:		Date:
(7)	Legal Name of Inventor:	Renato J. Recio	
	Signature:		Date:

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: OVERLAY NETWORK MOVEMENT OPERATIONS

As a below named inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

[X] United States application or PCT international application number <u>14/144,367</u> filed on <u>December 30</u>, 2013.

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.

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 (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 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.

11) I am Norma of Inventor Consister M. Del'rection

(+)	TIPER LARIE OF TOLOROW S CONSUMA WAS NOT ACCOUNT.	
	Signature:	_Date:
(2)	Legal Name of Inventor: Mircea Gusat	
	Signature:	_Date:
(3)	Legal Name of Inventor: Vinit Jain	
	Signature:	Date:
(4)	Legal Name of Inventor: Keshav G. Kamble	
	Signature: (1) Kowhile	Date: 12/24/2013

Page 2 of 3

(5)	Legal Name of Inventor: Cyriel J. Minkenberg		
	Signature:	Date:	
(6)	Legal Name of Inventor: Vijoy A. Pandey		
	Signature:	Date:	
(7)	Legal Name of Inventor: Renato J. Recio		
	Signatura.	Date	

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: OVERLAY NETWORK MOVEMENT OPERATIONS

As a below named inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

[X] United States application or PCT international application number <u>14/144,367</u> filed on <u>December 30</u>, <u>2013</u>.

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.

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 (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 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.

(1) Legal Name of Inventor: Casimer M. DeCusatis	
Signature:	Date;
(2) Legal Name of Inventor: Mircea Gusat	
Signature:	Date:
(3) Legal Name of Inventor: Vinit Jain	
Signature:	Date:
(4) Legal Name of Inventor: Keshav G. Kamble	
C'amatana.	Date

(5)	Legal Name of Inventor: Cyriel .J. Minkenberg	
	Signature: Cepiel J. Minkenberg	Date: Jan. 6 201
(6)	Legal Name of Inventor: Vijoy A. Pandey	
	Signature:	Date:
(7)	Legal Name of Inventor: Renato J. Recio	
	6° A	Data

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: OVERLAY NETWORK MOVEMENT OPERATIONS

As a below named inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

[X] United States application or PCT international application number <u>14/144,367</u> filed on <u>December 30</u>, 2013.

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.

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 (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 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.

(1)	Legal Name of Inventor: Casimer M. DeCusatis	
	Signature:	Date:
(2)	Legal Name of Inventor: Mircea Gusat	
	Signature:	Date;
(3)	Legal Name of Inventor: Vinit Jain	
	Signature:	Date:
(4)	Legal Name of Inventor: Keshav G. Kamble	
	Cianatura:	Date:

(5) Legal Name of Inventor: Cyriel J. Minkenberg	
Signature:	Date:
(6) Legal Name of Inventor: Vijox A. Pandey Signature:	Date: 1/7/14
(7) Legal Name of Inventor: Renato J. Recio	

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: OVERLAY NETWORK MOVEMENT OPERATIONS

As a below named inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

[X] United States application or PCT international application number <u>14/144,367</u> filed on <u>December 30</u>, 2013.

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.

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 (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 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.

(1) Legal Name of Inventor: Casimer M. DeCusatis	
Signature:	Date:
(2) Legal Name of Inventor: Mircea Gusat	
Signature:	Date:
(3) Legal Name of Inventor: Vinit Jain	
Signature:	Date:
(4) Legal Name of Inventor: Keshav G. Kamble	
Cimpoturo	Date:

(5)	Legal Name of Inventor: Cyriel J. Minkenberg	
	Signature:	Date:
(6)	Legal Name of Inventor: Vijoy A. Pandey	
	Signature:	Date:
(7)	Legal Name of Inventor: Renato J. Recio Signature:	Date: 1/8/2019