PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4468314

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HONG HE	01/16/2012
JUNTAO LI	02/11/2016
JUNLI WANG	02/11/2016
CHIH-CHAO YANG	02/11/2016

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:	15627680

CORRESPONDENCE DATA

Fax Number: (631)844-0081

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 6318440080

Email: elyssa@tb-iplaw.com

TUTUNJIAN & BITETTO, P.C. **Correspondent Name:**

Address Line 1: 401 BROADHOLLOW ROAD, SUITE 402

Address Line 4: MELVILLE, NEW YORK 11747

ATTORNEY DOCKET NUMBER:	YOR920160013US2(1229C)
NAME OF SUBMITTER:	JAMES J. BITETTO
SIGNATURE:	/jjb/
DATE SIGNED:	06/20/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 6

source=YOR920160013US2_FiledDecAssign#page1.tif

PATENT REEL: 042756 FRAME: 0355 504421614

source=YOR920160013US2_FiledDecAssign#page2.tif
source=YOR920160013US2_EmploymentAgreement_HongHe#page1.tif
source=YOR920160013US2_EmploymentAgreement_HongHe#page2.tif
source=YOR920160013US2_EmploymentAgreement_HongHe#page3.tif
source=YOR920160013US2_EmploymentAgreement_HongHe#page4.tif

PATENT REEL: 042756 FRAME: 0356

DECLARATION (37 C.F.R. L63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT

Title of Invention: DIRECTIONAL DEPOSITION OF PROTECTION LAYER

As a below named and undersigned 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	44
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.	
8 5 5 7 8 6 7 8 6 7 8 6 7 8 7 8 8 8 8 8 8 8 8	

Whereas, I ("ASSIGNOR") 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 (herein referred to as the "ASSIGNEE"), a corporation of New York having a place of business at Armonk, New York, desires to acquire, and I desire to grant to the ASSIGNEE, my 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, I hereby sell or have sold, assign or have assigned, and otherwise transfer or have transferred to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, fitle, 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, I hereby authorize and request 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 the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, 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 me had this Assignment not been made; and I agree 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 the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns,

Page Lof 2

I acknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to the ASSIGNEE and am unaware of any reason why I may not have the full and unencumbered right to sell, assign, and transfer my rights hereby sold, assigned, and transferred, and have not executed, and will not execute, any document or instrument in conflict herewith. I also hereby gram the ASSIGNEE, 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.

Thereby 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 In	ventor:[HONG HE]				
	Signature:			iiniiiniiniiniiniiniiniiniiniinii	Date:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
(2)	Legal Name of In	ventor: [JUNTAO I	.11			
	Signature	J. m. m			Date:	
(3)	Legal Name of In	ventor: JUNLI W /	NG]			
	Signature:				Date:	2/11/23/6
(4)	Legal Name of In	ventor: [CHIH-CH	ao yangi			
	Signature:		44	<u> </u>	Date Z	<u>4.4.2016</u>



Agreement Regarding Confidential Information, Intellectual Property, and Other Matters

In consideration of my employment or my continued employment by International Business Machines Corporation or one of its subsidiaries or affiliates (collectively, "IBM"), which I acknowledge is employment at will, and the payment to me of a salary or other compensation during my employment, I agree as follows:

1. I will not, without IBM's prior written permission, disclose to anyone outside of IBM or use in other than IBM's business, either during or after my employment, any confidential information or material of IBM, or any information or material received by IBM in confidence from third parties, such as suppliers or customers. If I leave the employ of IBM or at the request of IBM, I will return to IBM all property in my possession belonging to IBM or received by IBM from any third party, whether or not containing confidential information and whether stored on an IBM owned asset or a personally owned asset, including, but not limited to, electronic data, electronic files, diskettes and other storage media, drawings, notebooks, reports, and any other hard copy or electronic documents or records.

Confidential information or material of IBM is any information or material: (a) generated or collected by or utilized in the operations of IBM, received from any third party, or suggested by or resulting from any task assigned to me or work performed by me for or on behalf of IBM, and (b) which has not been made available generally to the public, whether or not expressed in a document or other medium and whether or not marked "IBM Confidential" or with any similar legend of IBM or any third party. Confidential information or material may include, but is not limited to, information and material related to past, present and future development, manufacturing activities, or personnel matters; marketing and business plans; technical specifications, drawings, and designs; prototypes; computer programs; and databases.

- 2. During my employment with IBM and for two years following the termination of my employment for any reason, I will not directly or indirectly hire, solicit or make an offer to any employee of IBM to be employed or perform services outside of IBM. Also, I agree that during my employment with IBM and for one year following the termination of my employment for any reason, I will not directly or indirectly, solicit, for competitive business purposes, any customer of IBM with which I was involved as part of my job responsibilities during the last year of my employment with IBM. I acknowledge that IBM would suffer irreparable harm if I fail to comply with the foregoing, and that IBM would be entitled to any appropriate relief, including money damages, equitable relief and attorneys' fees.
- 3. I will not disclose to IBM, use in its business, or cause it to use, any information or material which is confidential to any third party unless authorized by IBM. In addition, I will not incorporate into any product used and/or sold by IBM, any copyrighted materials of any third party, unless authorized by IBM.
- 4. I will comply, and do all things necessary for IBM to comply, with (a) the laws and regulations of all governments under which IBM does business, (b) the provisions of contracts between any such government or its contractors and IBM that relate to intellectual property or to the safeguarding of information, and (c) IBM's corporate directives, including policies, issued from time to time as well as the IBM Business Conduct Guidelines as amended from time to time.
- 5. I hereby assign to IBM my entire right, title, and interest in any idea, concept, technique, invention, design (whether the design is ornamental or otherwise), computer programs and related documentation, other works of authorship, mask works, and the like (all hereinafter called "Developments"), hereafter made, conceived, written, or otherwise created solely or jointly by me, whether or not such Developments are patentable, subject to copyright protection or susceptible to any other form of protection which: (a) relate to the actual or anticipated business or research or development of IBM or its subsidiaries or (b) are suggested by or result from any task assigned to me or work performed by me for or on behalf of IBM or its subsidiaries.

In the case of any "other works of authorship", such assignment shall be limited to those works of authorship which meet both conditions (a) and (b) above.

California Notice: For Developments subject to California law, notwithstanding anything above to the contrary, I understand that this assignment does not apply to a Development which qualifies fully under the provisions of Section 2870 of the California Labor Code.

The above provisions concerning assignment of Developments apply to Developments created while I am employed by IBM in an executive, managerial, professional, product or technical planning, technical, research, programming, or engineering capacity (including development, product, manufacturing, systems, applied science, and field engineering).

Excluded are any Developme	nts that I cannot assign	to IBM because of prior agreement with	Nont
which is effective until	None	(Give name and date or write "none").	
I acknowledge that the copyright authorship, created within the s	at and any other intellectu	al property right in designs, computer programs and belong to IBM by operation of law.	d related documentation, and other works of
Department; and (b) I will, on IE necessary to enable IBM or such addition. I agree to promptly	IM's request, promptly ex th designee to secure a portify the IRM Intellectual	by Paragraph 5: (a) I will promptly disclose them in secute a specific assignment of title to IBM or its des patent, copyright or other form of protection therefor I Property Law Department in writing of any patent of which discloses or claims any Development made, or	in the United States and in other countries. or patent application in which I am an

7. IBM and its licensees, successors, or assigns (direct or indirect) are not required to designate me as an author of any Development which is subject to Paragraph 5, when it is distributed, publicly or otherwise, or to secure my permission to change or otherwise alter its integrity. I hereby waive and release, to the extent permitted by law, all rights in and to such designation and any rights I may have concerning modifications of such Developments.

I understand that any rights, waivers, releases, and assignments herein granted and made by me are freely assignable by IBM and are for the benefit of IBM and its subsidiaries, licensees, successors, and assigns.

PERSONNEL COPY

Updated March 2011

None



Agreement Regarding Confidential Information, Intellectual Property, and Other Matters

	Agreement negare	ang Componial mornialion, mor	,	•
8. I have identified all Developm conceived solely or jointly by me	nents not assigned by Para e, or written wholly or in pa	graph 5 in which I have any right, title, or in It by me, but neither published nor filed in a	nterest, and which were previously made or any patent office.	None
If I do not have any to identify	, I have written "none" o	n this line:		
9. I consent to IBM (or authorize such as my name, photo, contac limitation, its online directories)	ct information, career deve	lopment and skills, in internal and external	ferring, and making available information at IBM databases or websites (including, with	oout me, out
with all IBM policies and practice social computing tools (whether	es regarding use of social of on IBM's internal platforms	computing tools and I understand that I am	ual worlds and other social media. I agree to personally responsible for the content I ponation I post, including any of my personal cess to these tools.	to comply st on any
10. The term "subsidiaries", as unternational Business Machines		ludes any entity owned or controlled, direc	tly or indirectly, by	
11. The term "employment at wi IBM or I can terminate the emplo	ill", as used in this Agreem oyment relationship at will,	ent, means the employment at the mutual at any time, with or without cause or adva	consent of both me and IBM. Accordingly, ance notice.	either
the subject matter hereof. Any v	vaiver of a term in this Agre	communications, representations, unders sement and any amendment to this Agreer al Business Machines Corporation and my	tandings, undertakings, or agreements rela ment may only be made in a writing signed rself.	iting to by the
13. This Agreement shall be governovision of this Agreement is un	verned by the laws of the S nenforceable at law, the re	State of New York, as if it had been execute mainder shall remain in effect.	ed and fully performed within such state. If	any
14. I recognize that any violation appropriate relief for IBM include	n of my obligations describ- ing money damages, equit	ed herein can result in disciplinary action, i able relief and attorneys fees.	including dismissal from IBM, and any othe	ŗ
My agreement, and my acknowle	ledgment of receipt of a co	py of this Agreement, are indicated by my	signature below.	
Hano A	10	hmoho	1/16	3/12 Date
Employee's Kull Name (p	lease print)	Employee's Signature	Employee Serial D	ate
The following are Developments either wholly or in part by me, be Description of Documents (if Title on Document	ut neither published nor file applicable):	n 5, in which I have any right, title, or intere ad in any Patent Office: Date on Document	est, and which were previously conceived o Name of Witness on Document	r written
		Signed:	Employee's Full Name	
		Date:		
in datail, but identify them only f	hy the titles and dates of di	e made, conceived, or written before your	employment by IBM. You should not disclonterest IBM in any of them, you may contactiful instructions for submitting them to IBM.)	a are
			PERSONN	
			Updated Mar	ch 2011

PATENT REEL: 042756 FRAME: 0360

	SERIAL#	HIRE DATE 12 1 01 120 08
11	BM	Agreement Regarding Confidential Information, Intellectual Property, and Other Matters
in (co	consideration of my employment or my	continued employment by International Business Machines Corporation or one of its subsidiaries or affiliates is employment at will, and the payment to me of a salary or other compensation during my employment, I
1.	employment, any confidential informat	rmission, disclose to anyone outside of IBM or use in other than IBM's business, either during or after my on or material of IBM, or any information or material received in confidence from third parties, such as supplie employ of IBM, I will return to IBM all property in my possession belonging to IBM or received from any third g confidential information, including, but not limited to, diskettes and other storage media, drawings, ints.
	from any third party, or suggested by one to been made available generally to the dential" or with any similar legend of the material related to past, present and fit	IBM is any information or material: (a) generated or collected by or utilized in the operations of IBM, received it resulting from any task assigned to me or work performed by me for or on behalf of IBM, and (b) which has ne public, whether or not expressed in a document or other medium and whether or not marked "IBM Confide or any third party. Confidential information or material may include, but is not limited to, information and ture development, manufacturing activities, or personnel matters; marketing and business plans; technical prototypes; computer programs; and databases.
2.	solicit or make an offer to any employed any customer of IBM with which I have	or one year following the termination of my employment for any reason, I will not directly or indirectly: a) hire, e of IBM to be employed or perform services outside of IBM; or b) solicit for competitive business purposes been involved as part of my job responsibilities during the last year of my employment with IBM. I acknowl- harm if I fail to comply with the foregoing.
3.	I will not disclose to IBM, use in its bus by IBM. In addition, I will not incorpora by IBM.	iness, or cause it to use, any information or material which is confidential to any third party unless authorized the into any product used and/or sold by IBM, any copyrighted materials of any third party, unless authorized
4.	(b) with provisions of contracts between	try for IBM to comply, (a) with the laws and regulations of all governments under which IBM does business, in any such government or its contractors and IBM that relate to intellectual property or to the safeguarding of Business Conduct Guidelines as amended from time to time.
5.	otherwise), computer programs and re- ments"), hereafter made, conceived, v	title, and interest in any idea, concept, technique, invention, design (whether the design is ornamental or lated documentation, other works of authorship, mask works, and the like (all hereinafter called "Develop-ritten, or otherwise created solely or jointly by me, whether or not such Developments are patentable, subject or any other form of protection which: (a) relate to the actual or anticipated business or research or developments are patentable, subject or suggested by or result from any task assigned to me or work performed by me for or on behalf of IBM or
	In the case of any "other works of auth above.	orship", such assignment shall be limited to those works of authorship which meet both conditions (a) and (b)
	California Notice: For Developm ment does not apply to a Develop	ents subject to California law, notwithstanding anything above to the contrary, I understand that this assign- oment which qualifies fully under the provisions of Section 2870 of the California Labor Code.
	The above provisions concerning assi managerial, professional, product or to manufacturing, systems, applied scient	gnment of Developments apply to Developments created while I am employed by IBM in an executive, schnical planning, technical, research, programming, or engineering capacity (including development, product, ce, and field engineering).
		cannot assign to IBM because of prior agreement with
	which is effective until	(Give name and date or write "none").
	Lacknowledge that the copyright and	iny other intellectual property right in designs, computer programs and related documentation, and other escope of my employment, belong to IBM by operation of law.
	Law Department; and (b) I will, on IBM reasonably necessary to enable IBM other countries. In addition, I agree to which I am an inventor but which is no I am employed by IBM.	nents assigned by Paragraph 5: (a) I will promptly disclose them in writing to the IBM Intellectual Property 's request, promptly execute a specific assignment of title to IBM or its designee, and do anything else r such designee to secure a patent, copyright or other form of protection therefor in the United States and in promptly notify the IBM Intellectual Property Law Department in writing of any patent or patent application in t assigned by Paragraph 5 and which discloses or claims any Development made, conceived, or written while
7.	IBM and its licensees, successors, or to Paragraph 5, when it is distributed,	assigns (direct or indirect) are not required to designate me as an author of any Development which is subject publicly or otherwise, or to secure my permission to change or otherwise alter its integrity. I hereby waive and

release, to the extent permitted by law, all rights in and to such designation and any rights I may have concerning modifications of such Developments.

I understand that any rights, waivers, releases, and assignments herein granted and made by me are freely assignable by IBM and are for the benefit of IBM and its subsidiaries, licensees, successors, and assigns.

8. I have identified all Developments not assigned by Paragraph 5 in which I have any right, title, or interest, and which were previously made or conceived solely or jointly by me, or written wholly or in part by me, but neither published nor filed in any patent office.

- 9. The term "subsidiaries", as used in this Agreement, includes any entity owned or controlled, directly or indirectly, by International Business Machines Corporation.
- 10. The term "employment at will", as used in this Agreement, means the employment at the mutual consent of both me and IBM. Accordingly, either IBM or I can terminate the employment relationship at will, at any time, with or without cause or advance notice.

PERSONNEL COPY ZM04-3097-14 D1.01

- 11. This Agreement supersedes all previous oral or written communications, representations, understandings, undertakings, or agreements relating to the subject matter hereof. Any waiver of a term in this Agreement and any amendment to this Agreement may only be made in a writing signed by the Senior Vice President of Human Resources for International Business Machines Corporation and myself.
- 12. This Agreement shall be governed by the laws of the State of New York, as if it had been executed and fully performed within such state. If any provision of this Agreement is unenforceable at law, the remainder shall remain in effect.
- 13. I recognize that any violation of my obligations described herein can result in disciplinary action, including dismissal from IBM, and any other appropriate relief for IBM including money damages, equitable relief and attorneys fees.

Hong HQ Employee's Full Name (please print)	Employee's Signature	e Employee Serial	12/01/20 Date
If you have entered "none" in Paragraph 8, do not fill in t	his section 1		
The following are Developments not covered by Paragraphithms wholly or in part by me, but neither published nor fi	oh 5, in which I have any right, title, or	r interest, and which were previously conc	eived or written
Description of Documents (if applicable): Title on Document	Date on Document	Name of Witness on Docum	nent
A CONTRACTOR OF THE CONTRACTOR		Signed:	
		Employee's Full Name	

(It is in your interest to establish that any of the above were made, conceived, or written before your employment by IBM. You should not disclose them in detail, but identify them only by the titles and dates of documents describing them. If you wish to interest IBM in any of them, you may contact the Intellectual Property and Licensing Department at Corporate Headquarters, which will provide you with instructions for submitting them to IBM.)

PERSONNEL COPY

ZM04-3097-14 01.01

RECORDED: 06/20/2017