506052556 05/09/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: CORRECTIVE ASSIGNMENT

NATURE OF CONVEYANCE: Corrective Assignment to correct the THE CONVEYING PARTY DATA previously recorded on Reel 048404 Frame 0443. Assignor(s) hereby

confirms the ASSIGNMENT.

EPAS ID: PAT6099270

CONVEYING PARTY DATA

Name	Execution Date
PAUL S ANDRY	12/29/2015
BING DANG	12/29/2015
JEFFREY DONALD GELORME	12/28/2015
LI-WEN HUNG	12/28/2015
JOHN U KNICKERBOCKER	12/26/2015
CORNELIA TSANG YANG	12/28/2015

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
Patent Number:	10573538

CORRESPONDENCE DATA

Fax Number: (845)432-9601

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: 9144560003

Email: Iddrev@us.ibm.com
Correspondent Name: HILDA HEINLEIN

Address Line 1: 1101 KITCHAWAN ROAD, ROUTE 134, P.O. BOX 218

Address Line 4: YORKTOWN, NEW YORK 10598

ATTORNEY DOCKET NUMBER: YOR920151291US06

NAME OF SUBMITTER: HILDA HEINLEIN

SIGNATURE: /HILDA HEINLEIN/

DATE SIGNED: 05/09/2020

PATENT 506052556 REEL: 052619 FRAME: 0626

Total Attachments: 14 source=assignment-pat-48404-443#page1.tif source=assignment-pat-48404-443#page2.tif source=assignment-pat-48404-443#page3.tif source=assignment-pat-48404-443#page4.tif source=assignment-pat-48404-443#page5.tif source=assignment-pat-48404-443#page6.tif source=assignment-pat-48404-443#page7.tif source=assignment-pat-48404-443#page8.tif source=assignment-pat-48404-443#page9.tif source=assignment-pat-48404-443#page9.tif source=assignment-pat-48404-443#page10.tif source=assignment-pat-48404-443#page11.tif source=assignment-pat-48404-443#page12.tif source=assignment-pat-48404-443#page13.tif source=assignment-pat-48404-443#page11.tif

PATENT REEL: 052619 FRAME: 0627

02/22/2019 505340878

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5387660

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PAUL S. ANDRY	12/29/2015
BING DANG	12/29/2015
JEFFREY DONALD GELORMEV	12/28/2015
LI-WEN HUNG	12/28/2015
JOHN U. KNICKERBOCKER	12/26/2015
CORNELIA TSANG YANG	12/28/2015

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Street Address:	NEW ORCHARD ROAD
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Postal Code:	10504

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16282432	

CORRESPONDENCE DATA

Fax Number: (561)989-9812

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: 561-989-9811

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FLEIT GIBBONS GUTMAN BONGINI & BIANCO PL Correspondent Name:

4800 N. FEDERAL HIGHWAY, SUITE B306 Address Line 1:

Address Line 4: **BOCA RATON, FLORIDA 33431**

ATTORNEY DOCKET NUMBER:	YOR920151291US06
NAME OF SUBMITTER:	THOMAS S. GRZESIK
SIGNATURE:	/Thomas S. Grzesik/
DATE SIGNED:	02/22/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).

PATENT REEL: 052609 FRAME: 0528

505340878

Total Attachments: 12 source=YOR920151291US06_AssignDec_02-22-19#page1.tif source=YOR920151291US06_AssignDec_02-22-19#page2.tif source=YOR920151291US06_AssignDec_02-22-19#page3.tif source=YOR920151291US06_AssignDec_02-22-19#page4.tif source=YOR920151291US06_AssignDec_02-22-19#page5.tif source=YOR920151291US06_AssignDec_02-22-19#page6.tif source=YOR920151291US06_AssignDec_02-22-19#page7.tif source=YOR920151291US06_AssignDec_02-22-19#page8.tif source=YOR920151291US06_AssignDec_02-22-19#page9.tif source=YOR920151291US06_AssignDec_02-22-19#page10.tif source=YOR920151291US06_AssignDec_02-22-19#page11.tif source=YOR920151291US06_AssignDec_02-22-19#page11.tif

PATENT REEL: 052609 FRAME: 0629

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: HANDLER BONDING AND DEBONDING FOR SEMICONDUCTOR DIES

As a below named inventor, I hereby declare that:

successors, legal representatives, or assigns.

• • • • • • • • • • • • • • • • • • • •
This declaration is directed to the attached application, or (if following box is checked):
United States application or PCT international application numberfiled on
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 fo 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 filling 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

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

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

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(1) Legal Name of Inventor: Paul S. ANDRY	
Signature: Deal A Array	Date:
(2) Legal Name of Inventor: Bing DANG	
Signature:	Date:
(3) Legal Name of Inventor: Jeffrey Donald GELORME	
Signature:	Date:
(4) Legal Name of Inventor: Li-Wen HUNG	
Signature:	Date:
(5) Legal Name of Inventor: John U. KNICKERBOCKER	
Signature:	Date:
(6) Legal Name of Inventor: Cornelia Tsang YANG	
Signature:	Date:

IBM DOCKET NUMBER: YOR920151291US1

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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.		

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Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor ("ASSIGNOR") hereby sells 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.

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I hereby acknowledge that any withit false statement made in this declaration is purishable under 16 U.S.C. 1001 by fire or imprisonment of not mans than five (5) years, or both.

of a Legal Name of Spreamon.	Paul :	S. ANDRY
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(2) Logal Name of Inventor: Sing Signature.		Onto: 12 / 2 9	1215
(1) Legal Name of Inventor: Jeffs			
Signature:	and the second s	Date:	
(4) Elegal Name of Investor: Li-M	Ven HUNG		
Signalure	and the second s	Dete:	
(5) Legal Name of Issumon John	n U. KMCKERBOCKER		
Signature	and the state of t	Date:	and the second second second second
(6) Legal Name of Inventor: Con	nelis Taang YAMG		
Signature		Date:	

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IBM DOCKET NUMBER: YOR920151291US1

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Signature:

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IBM DOCKET NUMBER: YOR920151291US1

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.

(!) Legal Name of Inventor: Paul S. ANDRY	
Signature:	Date;
(2) Legal Name of Inventor: Bing DANG	
Signature:	Date:
(3) Legal Name of Inventor: Jeffrey Donald GELORME Signature: Jeffrey Donald Jeline	Date: Ja 28, 2015
(4) Legal Name of Inventor: Li-Wen HUNG	
Signature:	Date:
(5) Legal Name of Inventor: John U. KNICKERBOCKER	
Signature:	Date:
(6) Legal Name of Inventor: Cornelia Tsang YANG	

Date: _

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Sgrafue		Sprature Committee Committ	Curature 2 Define Donald GELORME	Emg DANG	PARTS ANDRY
Date	Date	Date 12/22/2015	Date	Date	Date

PATENT REEL: 052609 FRAME: 0652

IBM DOCKET NUMBER: YOR920151291US1

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Signature:	Date:
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Signature:	Date:
(5) Legal Name of Inventor: John U. KNICKERE	BOCKER
Joh et Tall	
Signature: _	Date: 12/26/2015
(6) Legal Name of Inventor: Cornelia Tsang YAI	NG ·
Signature:	Date:

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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.

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Itherebytacknowledgethat any willfultfalse 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.

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