PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5276108

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT	
NATURE OF CONVEYANCE:	Corrective Assignment to correct the CONVEYING PARTY DATA OF INVENTOR #4 previously recorded on Reel 026897 Frame 0828. Assignor(s) hereby confirms the ASSIGNMENT.	

CONVEYING PARTY DATA

Name	Execution Date
CLAUDIUS FEGER	09/12/2011
MICHAEL A. GAYNES	08/23/2011
JAE-WOONG NAH	08/22/2011
DA-YUAN SHIH	08/30/2011

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
Patent Number:	8963340

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NAME OF SUBMITTER:	MELISSA M. O'DONNELL
SIGNATURE:	/Melissa M. O'Donnell/
DATE SIGNED:	12/11/2018

Total Attachments: 6

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PATENT 505229338 REEL: 047777 FRAME: 0238

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PATENT REEL: 047777 FRAME: 0239

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Claudius Feger	09/12/2011
Michael A. Gaynes	08/23/2011
Jae-Woong Nah	08/22/2011
Da_yuan Shih	08/30/2011

RECEIVING PARTY DATA

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Street Address:	New Orchard Road	
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PROPERTY NUMBERS Total: 1

	Number
Application Number:	13231594

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ATTORNEY DOCKET NUMBER: YOR920110036US1 (14-30)

NAME OF SUBMITTER: Robert J. Eichelburg

PATENT

REEL: 026897 FRAME: 0828 PATENT

REEL: 047777 FRAME: 0240

Total Attachments: 4

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> PATENT REEL: 026897 FRAME: 0829 PATENT

REEL: 047777 FRAME: 0241

IBM DOCKET NUMBER: YOR920110036US1 (14-30)

<u>ASSIGNMENT</u>

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

Title of the Invention:

NO FLOW UNDERFILL OR WAFER LEVEL UNDERFILL AND SOLDER COLUMN STRUCTURES

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:

Application No.: 13/231594 (Insert series code /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

Page 1 of 3

***************************************	Executed by Inventor 1	
Signature:	CLAUDIUS FEGER	_Date: <u>8//2/2011</u>
	Executed by Inventor 2	
Signature:	MICHAEL A. GAYNES	_ Date:
	Executed by Inventor 3	
Signature:	JAE-WOONG NAH	_Date:
	Executed by Inventor 4	
Signature:	PA.VIIAN GUIU	_Date:

Page 3 of 3

	Executed by Inventor 1	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Signature:	CLAUDIUS FEGER	_Date:	
	Executed by Inventor 2		
Signature: <u>Michael G.</u>		_Date: _	8/23/2011
	Executed by Inventor 3		
Signature: <u>Lewb</u> o	JAE-WOONG NAH	_Date: _	08/22/2011
	Executed by Inventor 4	***************************************	
Signature:	DA-YUAN SHIH	_Date: _	

Page 3 of 3

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IBM DOCKET NUMBER: YOR920110038US1 (14-30)

-	Executed by inventor 1	
Signature: _		Oate:
Mantananana	Executed by inventor 2	
Signature:	MICHAEL A. GAYNES	_ Date:
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Executed by Inventor 3	
Signature:	JAE-WOONG NAH	Date:
	Executed by Inventor 4	
Signature:	Da-Yen Shill DA-YUAN SHIH	Date: 8/30/2011

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**RECORDED: 12/11/2018**