## 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	06/06/2011
Mark H. McLeod	06/02/2011
Jae-Woong Nah	06/06/2011
Eric D. Perfecto	06/06/2011

### **RECEIVING PARTY DATA**

Name:	INTERNATIONAL BUSINESS MACHINES CORPORATION
Street Address:	New Orchard Road
City:	Armonk
State/Country:	NEW YORK
Postal Code:	10504

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	13154412

### **CORRESPONDENCE DATA**

Fax Number: (203)769-5706

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

Phone: 203 433 3157
Email: docket@oeklaw.com

Correspondent Name: Otterstedt, Ellenbogen & Kammer, LLP

Address Line 1: P.O. Box 381

Address Line 4: Cos Cob, CONNECTICUT 06807-0381

ATTORNEY DOCKET NUMBER:	YOR920110167US1
NAME OF OURWITTER	Be I I Officially

NAME OF SUBMITTER: Paul J. Otterstedt

Total Attachments: 8

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PATENT REEL: 026398 FRAME: 0151 \$40,00 1315441;

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PATENT REEL: 026398 FRAME: 0152

### ASSIGNMENT

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

Title of the Invention: INJECTION MOLDED SOLDER PROCESS FOR FORMING SOLDER BUMPS ON SUBSTRATES

I Could be described by the state of the sta

which an application for a United States Patent was executed concurrently herewith or was filed baving:		
Application No.: 13/154,412	(insert series code /serial number here it/when available)	
business at Armonk, New York (herein ref	Corporation, a corporation of New York having a place of cred to as "IBM"), desires to acquire, and each undersigned worldwide right, title, and interest in and to the Invention and dipatents directed thereto:	
The state of the s	onsideration, 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 bereby 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.

[Inventor Signature Page(s) Follows]

Page 1 of 2

Assignment Form.Rev2 (Updated 08/07/2009)

Executed by Inventor 1		
		Date: 6/6/2011
hidadia		Executed by Inventor 2
Signature:	Mark H. McLeod	Date:
		Executed by Inventor 3
Signature:	Jae-Woong Nah	Date:
		Executed by Inventor 4
Signature:	Eric D. Perfecto	Date:

Page 2 of 2

### ASSIGNMENT

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

# Fige of the Invention: INJECTION MOLDED SOLDER PROCESS FOR FORMING SOLDER BUMPS ON SUBSTRATES

		Number provided above in the header of this Assignment, for Patent was executed concurrently herewith or was filed having:
Application No.:	13/154,412	(insert series code /serial number here if/when available
bashiosa se Armon Exceptor desires se	k. New York (herein regrant to IBM, the entire	es Corporation, a corporation of New York having a place of effected to as "IBM"), desires to acquire, and each undersigned be worldwide right, title, and interest in and to the Invention and patents directed thereto:

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby unknowledged, each undersigned Inventor ("ASSIGNOR") hereby sells, assigns, and otherwise transfers to BMS (the CASSIGNATE), 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 sherefor in the United States and in all foreign countries and jurisdictions, including all divisions, configurations, ressures, 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 were any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and resigns, 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.

Luch roder-upded to enter acknowledges their prior and engoing 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 updecombered 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 bereby grants IBM, its successors, legal representatives, and assigns, the right to insert in the Assignment my further identification (including, but not limited to, patent Application Number) and the recessors 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.

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Page 1 of 2

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## IBM DOCKET NUMBER: YOR920110467081

		Executed by Inv	entor 1	******
Signature:	Claudius Feger		Dale:	
		Executed by Inv	entor 2	
Signature: 🗻	Mark H. McLeod	وبر		
		Executed by Inv	entor 3	
Signature:	Jae-Woong Nah		Date:	
		Executed by Inv	entor 4	
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Signature:	Eric D. Perfecto	anders of the state of the stat	Date:	

### **ASSIGNMENT**

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

## Title of the Invention: INJECTION MOLDED SOLDER PROCESS FOR FORMING SOLDER BUMPS ON SUBSTRATES

	•	sber provided above in the header of this Assignment, for
which an applicat	ion for a United States Paten	t was executed concurrently herewith or was filed having:
Application No.:	13/154,412	(insert series code /serial number here if/when available
Whereas Internot	inpul Brainace Machines For	moration, a comprehien of New York having a place of

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 scknowledged, 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 inserest 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, configurations, reissues, recyaminations, 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.

[Inventor Signature Page(s) Follows]

Page 1 of 2

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	Executed by Inventor !
Signature:	Date:
	Executed by Inventor 2
Signature:	Date:  Mark H. McLcod  Executed by Inventor 3
Signature:	Jac-Woong Nah  Executed by Inventor 4
Signature:	Eric D. Perfecto

Page 2 of 2

#### **ASSIGNMENT**

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

# Title of the Invention: INJECTION MOLDED SOLDER PROCESS FOR FORMING SOLDER BUMPS ON SUBSTRATES

	er provided above in the header of this Assignment, for was executed concurrently herewith or was filed having:
Application No.: 13/154,412	(insert series code /serial number here if/when available)
3771	

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.

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[Inventor Signature Page(s) Follows]

Page 1 of 2

	Executed by Inventor 1
Signature:	——————————————————————————————————————
1905	Executed by Inventor 2
Signature:	Date: Date:
	Executed by Inventor 3
Signature:	Jac-Woong Nah
	Executed by Inventor 4
Signature: _	Eric D. Perfecto)  Date: 6/6/2011

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**RECORDED: 06/06/2011**