### PATENT ASSIGNMENT COVER SHEET

# Electronic Version v1.1 Stylesheet Version v1.2

# EPAS ID: PAT2602342

	NEW ASSIGNMENT				
NATURE OF CONVE	YANCE:	ASSIGNMENT			
CONVEYING PARTY	΄ DATA				
Name		Execution Date			
SHANG Q. GUO		10/16/2013			
CHRISTOPHER P. JONES			10/22/2013		
JONATHAN LENCH	NER		10/19/2013		
NATHAN E. MASTER	RS		10/20/2013		
JAMES A. ORAVEC			10/16/2013		
RODRIGO A. REY			10/16/2013		
MATTHEW R. SOW	DERS		10/30/2013		
Street Address: Citv:		NEW ORCHARD ROAD			
Name:		BUSINESS MACHINES CORPO			
Street Address:	NEW ORCHARD	NEW ORCHARD ROAD			
City:	ARMONK				
State/Country:	NEW YORK				
	10504				
Postal Code:					
	RS Total: 1				
PROPERTY NUMBER	RS Total: 1	Num	iber		
	RS Total: 1	Num 58809	iber		
PROPERTY NUMBER	RS Total: 1		iber		
PROPERTY NUMBER Property T Application Number:	RS Total: 1	58809	iber		
PROPERTY NUMBER Property T Application Number: CORRESPONDENCE	RS Total: 1 ype 1408 E DATA (512)301- 512-301-	-6742 6738	ıber		
PROPERTY NUMBER Property T Application Number: CORRESPONDENCE Fax Number: Phone: Email:	RS Total: 1 ype 1405 DATA (512)301- 512-301- leslie@vl-	-6742 6738 -patents.com			
PROPERTY NUMBER Property T Application Number: CORRESPONDENCE Fax Number: Phone: Email: <i>Correspondence will</i>	RS Total: 1 ype 140! E DATA (512)301- 512-301- leslie@vl- be sent via US Mail	-6742 -6738 -patents.com <i>when the email attempt is unsucc</i>			
PROPERTY NUMBER Property T Application Number: CORRESPONDENCE Fax Number: Phone: Email: <i>Correspondence will A</i> Correspondent Name	RS Total: 1 ype 1405 E DATA (512)301- 512-301- leslie@vl- be sent via US Mail c: LESLIE A	-6742 6738 -patents.com <i>when the email attempt is unsucc</i> A. VAN LEEUWEN			
PROPERTY NUMBER Property T Application Number: CORRESPONDENCE Fax Number: Phone: Email: <i>Correspondence will</i>	RS Total: 1 ype 1405 E DATA (512)301- 512-301- leslie@vl- be sent via US Mail 5: LESLIE A 6123 PER	-6742 -6738 -patents.com <i>when the email attempt is unsucc</i>			
PROPERTY NUMBER Property T Application Number: CORRESPONDENCE Fax Number: Phone: Email: <i>Correspondence will J</i> Correspondent Name Address Line 1:	RS Total: 1 ype 1408 1408 E DATA (512)301- 12-301- leslie@vl be sent via US Mail be sent via US Mail c: LESLIE A 6123 PER AUSTIN,	-6742 6738 -patents.com <i>when the email attempt is unsucc</i> A. VAN LEEUWEN BBLE GARDEN CT.			

# REEL: 031539 FRAME: 0077

NAME OF SUBMITTER:	LESLIE A. VAN LEEUWEN, REG. NO. 42,196	
Signature:	/Leslie A. Van Leeuwen, Reg. No. 42,196/	
Date:	11/04/2013	
	This document serves as an Oath/Declaration (37 CFR 1.63).	
Total Attachments: 21 source=SVL920130061US1_SignedDeclAss	sign#page2.tif sign#page3.tif sign#page4.tif sign#page5.tif sign#page6.tif sign#page7.tif sign#page8.tif sign#page9.tif sign#page10.tif sign#page10.tif sign#page12.tif sign#page13.tif sign#page14.tif sign#page15.tif sign#page16.tif sign#page17.tif sign#page18.tif sign#page19.tif sign#page19.tif sign#page20.tif	

#### 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: Sorting, Swapping, and Organizing Objects on Transfer Ball Grids

As a below named and undersigned inventor, I hereby declare that:

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

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, 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 Armon's. 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, title, and interest in and to the Invention, the above-identified United States potent 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 parisdictions, 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 1 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,

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(1) Legal Name of 1	Inventor: Shang Q. Guo		10 11 1 to 10
SIGNATURE:S	ihang Q. Guo	DAT5:	10/16/2013
(2) Legal Name of 1	Inventor: Christopher P. Jones		
SIGNATURE:C	hristopher P. Jones	DATE:	
(3) Legal Name of	Inventor: Jonathan Lenchner		- ····
SIGNATURE:I	onathan Lenchner	DATE:	·
(4) Name of Invent	or: Nathan E. Masters		· · · · · ·
SIGNATURE:	Yathan E. Masters	DATE:	
(5) Name of Invent	or: James A. Oravec		
SIGNATURE:	ames A. Oravee	DATE:	

Additional Signature Page(s) Follows

Page 2 of 3

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(6) Name of Inventor: Rodrigo A. Rey	
SIGNATURE:	DATE:
(7) Name of Inventor: Matthew R. Sowders	
	DATE:

Page 3 of 3

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#### DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT

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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):

W United States application or PCT international application number  $\frac{14/058}{909}$ 

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(1) Legal Name	e of Inventor: Shang Q. Guo	
SIGNATURE:	Shang Q. Guo	DATE:
(2) Legal Name SIGNATURE:	cof Inventor: Christopher P. Jones	date: <u>10/22/20</u> /3
(3) Legal Name SIGNATURE:	of Inventor: Jonathan Lenchner Jonathan Lenchner	DATE:
(4) Name of Inv SIGNATURE:	rentor: Nathan E. Masters	DATE:
	Nathan E. Masters	
(5) Name of Inv	rentor: James A. Oravee	
SIGNATURE:	James A. Oravec	DATE:

Additional Signature Page(s) Follows

Page 2 of 3

(6) Name of Inventor: Rodrigo A. Rey	
SIGNATURE: Rodrigo A. Rey	DATE:
(7) Name of Inventor: Matthew R. Sow	ders
SIGNATURE: Matthew R. Sowders	DATE:

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PrOnited States application or PCT international application number <u>14/058,809</u> filed on <u>04 al.</u>, 2013

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SIGNATURE:		DATE:	
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SIGNATURE:	Jona Day July	DATE: 10	18/2013
	Jonathan Lenchner		1.
	-		
(4) Name of Inv	entor: Nathan E. Masters		
SIGNATURE:		DATE:	
	Nathan E. Masters		
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SIGNATURE:		DATE:	
	James A. Oravec		
	Additional Signature Page(s)	Follown	

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SIGNATURE: Rodrigo A. Rey	DATE:			
(7) Name of Inventor: Matthew R. Sowders				
SIGNATURE: Matthew R. Sowders	DATE:			

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SIGNATURE:	Alutan Martin	DATE: 10-20-24	OB
biointi entr.	Nathan E. Masters		
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Additional Signature Page(s) Follows

Page 2 of 3

(6) Name of Inventor: Rodrigo A. Rey				
SIGNATURE:	Rodrigo A. Rey	DATE:		
(7) Name of Inve	ntor: Matthew R. Sowders			
SIGNATURE:	Matthew R. Sowders	DATE:		

#### 1/3

#### IBM DOCKET NUMBER: SVL920130061US1

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(5) Name of Inv	entor: James A. Oravec	· · · · · · · · · · · · · · · · · · ·
SIGNATURE:	- minders El	DATE: 10/16/13
and the second se	Jämes A. Oravec	·

Additional Signature Page(s) Follows

Page 2 of 3

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### IBM DOCKET NUMBER: SVL920130061US1

(6) Name of Inventor: Rodrigo A. Rey		
SIGNATURE:	DATE:	
Koungo A. Key		
(7) Name of Inventor: Matthew R. Sowders		
SIGNATURE:	DATE:	
Matthew R. Sowders		

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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, 1 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, 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, 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,

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 grant 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.

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.

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(1) Legal Name	e of Inventor: Shang Q. Guo	
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(2) Legal Name	e of Inventor: Christopher P. Jones	
SIGNATURE:	Christopher P. Jones	DATE:
(3) Legal Name	e of Inventor: Jonathan Lenchner	
SIGNATURE:	Jonathan Lenchner	DATE:
(4) Name of Inv	ventor: Nathan E. Masters	·····
SIGNATURE:	Nathan E. Masters	DATE:
(5) Name of Inv	ventor: James A. Oravec	
SIGNATURE:	James A. Oravec	DATE:

Additional Signature Page(s) Follows

(6) Name of Inventor: Rodrigo A, Rey SIGNATURE: Rodrigo A, Rey	DATE:	10.16.2013
(7) Name of Inventor: Matthew R. Sowders	,	

SIGNATURE:

\_\_\_\_\_ DATE: \_\_\_\_\_

Matthew R. Sowders

### 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: Sorting, Swapping, and Organizing Objects on Transfer Ball Grids

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):

[X] United States application or PCT international application number <u>14/058,809</u> filed on <u>October 21, 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.

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#### IBM DOCKET NUMBER: SVL920130061US1

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(1) Legal Name of Inventor: Shang Q. Guo	
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(2) Legal Name of Inventor: Christopher P. J	ones
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Page 2 of 3

(6) Name of Inv SIGNATURE:	entor: Rodrigo A. Rey	DATE:	DATE.		
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(7) Name of Inv	entor: Matthew R. Sowder	\$			
SIGNATURE:	Matthew R. Sowders	DATE:	10/30/2013		

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