### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5009645

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
ANDREW S. CASSIDY	05/31/2018
MYRON D. FLICKNER	05/30/2018
PALLAB DATTA	05/30/2018
RATHINAKUMAR APPUSWAMY	05/30/2018
JOHN V. ARTHUR	05/30/2018
DHARMENDRA S. MODHA	05/31/2018
STEVEN K. ESSER	05/31/2018
BRIAN TABA	05/31/2018
JENNIFER KLAMO	05/31/2018
HARTMUT PENNER	06/07/2018
JUN SAWADA	05/31/2018

### **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:	16008949

### **CORRESPONDENCE DATA**

Fax Number:

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.

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Correspondent Name: FOLEY HOAG LLP

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Address Line 4: BOSTON, MASSACHUSETTS 02210

ATTORNEY DOCKET NUMBER: P201701657US01/IBI-15001

PATENT REEL: 046102 FRAME: 0807

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NAME OF SUBMITTER:	ERIK HUESTIS
SIGNATURE:	/Erik Huestis/
DATE SIGNED:	06/15/2018
Total Attachments: 16	
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PATENT REEL: 046102 FRAME: 0808

### 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: PARALLEL COMPUTATIONAL ARCHITECTURE WITH RECONFIGURABLE CORE-LEVEL AND VECTOR-LEVEL PARALLELISM

As a bolow named and undersigned inventor, I hereby declare that:	
This declaration is directed to the attached application, or (if following box is chec	ked):
[ ] United States application or PCT international application number	filed 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 in application.	evention in the
I have reviewed and understand the contents of the application, including the claim	<b>(S</b> .,
I am aware of the duty to disclose to the United States Patent and Trademark Offici known to me to be material to patentability as defined in 37 C.F.R. § 1.56.	c all information
Whereas, I ("ASSIGNOR") have made certain inventions, improvements, and disc- to as the "Invention") disclosed in the above-identified patent application and furth	overies (herein referred er identified by the

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;

IBM Docket Number provided above in the header of this document:

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 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

Page 1 of 4

Atty. Docket No. IBI-15001

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.

(1) Legal Name of Invento	r: ANDREW S. CASSIDY	
Signature:	<u> </u>	Date: <u>5/31/207</u> 8
(2) Legal Name of Invento	r: MYRON D. FLICKNER	
Signature:		Date:
(3) Legal Name of Invento	r: PALLAB DATTA	
Signature:		Date:
	Page 2 of 4	
		Atty. Docket No. IBI-15001

(4)	Legal Name of Inventor: HARTMUT PENNER	
	Signature:	_ Date:
(5)	Legal Name of Inventor: RATHINAKUMAR APPUSWAMY	
	Signature:	Date:
(6)	Legal Name of Inventor: JUN SAWADA	
	Signature:	_ Date:
(7)	Legal Name of Inventor: JOHN V. ARTHUR	
	Signature:	_ Date:
(8)	Legal Name of Inventor: <b>DHARMENDRA S. MODHA</b>	
	Signature:	_ Date:

Page 3 of 4

Atty. Docket No. IBI-15001

(9) Legal Name of Inventor: STEVEN K. ESSER	
Signature:	Date:
(10) Legal Name of Inventor: BRIAN TABA	
Signature:	
(11) Legal Name of Inventor: JENNIFER KLAMO	
Simistive	Pater

Page 4 of 4.

Atty, Docket No. IBI-15001

## 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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This declaration is directed to the attached application, or (if following box is checl	ced):	
United States application or PCT international application number	filed 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 in application.	vention in the	
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I am aware of the duty to disclose to the United States Patent and Trademark Office known to me to be material to patentability as defined in 37 C.F.R. § 1.56.	all information	
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Page 1 of 4

Atty. Docket No. IBI-15001

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.

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(1)	Legal Name of Inventor: ANDREW S. CASSIDY	
	Signature:	_Date:
(2)	Legal Name of Inventor: MYRON D. FLICKNER	
	Signature: Myn Flider	Date: 5/30/2.018
(3)	Legal Name of Inventor: PALLAB DATTA	
	Signature: <u>Pallal Ralla</u>	Date: 05/30//8

Page 2 of 4

Atty. Docket No. IBI-15001

(4) Legal Name of Inventor: HARTMUT PENNER	
Signature:	Date:
(5) Legal Name of Inventor: RATHINAKUMAR APPUSWAM	<b>Y</b>
Signature:	Date: 05\30\&0\8
(6) Legal Name of Inventor: JUN SAWADA	
Signature:	Date:
(7) Legal Name of Inventor: <b>JOHN V. ARTHUR</b>	
Signature: 4/1/2	Date:
(8) Legal Name of Inventor: DHARMENDRA'S MODHA Signature:	Date: 05/3//2018
<b>⊌</b>	

Page 3 of 4

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Atty, Docket No. IBI-15001

(9) Legal Name of Inventor: STEVEN K. ESSER	
Signature:	Date:
(10) Legal Name of Inventor: BRIAN TABA	
Signature:	Date: 5 - 중/- 7%
[11] Legal Name of Inventor: JENNIFER KLAMO	
Signature: Jwely J. Klamd	Date: <u>5 - 31 - 18</u>

Page 4 of 4

Atty, Docket No. IBI-15001

## 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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Atty. Docket No. IBI-15001

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	Signature:	Date:	
(3)	Legal Name of Inventor: PALLAB DATTA		
	Signature:	Date:	
	Page 2 of 4		

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Atty. Docket No. 181-15001

(4)	Legal Name of Inventor: HARTMUT PENNER	
	Signature: Yazkı M	
(5)	Legal Name of Inventor: RATHINAKUMAR APPUSWAMY	
	Signature:	Date:
(6)	Legal Name of Inventor: JUN SAWADA	
	Signature	Date:
(7)	Legal Name of Inventor: JOHN V. ARTHUR	
	Signature:	Date:
(8)	Legal Name of Inventor: DHARMENDRA S. MODHA	
	Signature:	Date:
	Page 3 of 4	
	~	Atty. Docket No. (BI-1500)

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PATENT REEL: 046102 FRAME: 0819

(9) Logal Name of Inventor: STEVEN K. ESSER	
Signature:	Date:
(10) Legal Name of Inventor; BRIAN TABA	
Signature:	
(11) Legal Name of Inventor: JENNIFER KLAMO	
Signsture:	Bara

Page 4 of 4

Atty, Docket No. IBI-15001

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Atty. Docket No. IBI-15001

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Signature:	Date;
) Legal Name of Inventor: MYRON D. FLICKNER	
Signature:	Date:
Legal Name of Inventor: PALLAB DATTA	
Signature:	Date:

Page 2 of 4

Atty. Docket No. IBI-15001

1

(4)	Legal Name of Inventor: HARTMUT PENNER	
	Signature:	Date:
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	Signature:	Date:
(6)	Legal Name of Inventor: JUN SAWADA	
	Signature: And	
(7)	Legal Name of Inventor: JOHN V. ARTHUR	
	Signature:	Date:
(8)	Legal Name of Inventor: DHARMENDRA S. MODHA	
	Signature:	Date:
	Page 3 of 4	

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**PATENT** 

Atty, Docket No. IBI-15001

REEL: 046102 FRAME: 0823

(9) Legal Name of Inventor: STEVEN K. ESSER	
Signature:	Date:
(10) Legal Name of Inventor: BRIAN TABA	
Signature:	Date:
(11) Legal Name of Inventor: JENNIFER KLAMO	
Signature <sup>,</sup>	Parke.

Page 4 of 4

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Atty. Docket No. IBI-15001

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**PATENT** 

REEL: 046102 FRAME: 0824