PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3956559

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT	
NATURE OF CONVEYANCE:	Corrective Assignment to correct the TITLE OF THE APPLICATION previously recorded on Reel 031460 Frame 0157. Assignor(s) hereby confirms the ASSIGNMENT OF THE ENTIRE INTEREST.	

CONVEYING PARTY DATA

Name	Execution Date
KIRAN PANGAL	09/19/2013
RAJ K. RAMANUJAN	09/26/2013
ROBERT W. FABER	09/19/2013
RAJESH SUNDARAM	09/19/2013

RECEIVING PARTY DATA

Name:	INTEL CORPORATION
Street Address:	2200 MISSION COLLEGE BOULEVARD
City:	SANTA CLARA
State/Country:	CALIFORNIA
Postal Code:	95054

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14038165

CORRESPONDENCE DATA

Fax Number: (206)622-1711

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.

Email: osharma@schwabe.com

Correspondent Name: SCHWABE, WILLIAMSON & WYATT, P.C.

Address Line 1: 1211 SW 5TH AVENUE, SUITE 160

Address Line 4: PORTLAND, OREGON 97204

ATTORNEY DOCKET NUMBER:	P60520 (110578-192269)
NAME OF SUBMITTER:	OLGA V. SHARMA
SIGNATURE:	/Olga V. Sharma/
DATE SIGNED:	07/11/2016

Total Attachments: 6

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> **PATENT** REEL: 039309 FRAME: 0031

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PATENT REEL: 039309 FRAME: 0032 502542594 10/23/2013

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2588051

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KIRAN PANGAL	09/19/2013
RAJ K. RAMANUJAN	09/26/2013
ROBERT W. FABER	09/19/2013
RAJESH SUNDARAM	09/19/2013

RECEIVING PARTY DATA

Name:	Intel Corporation
Street Address:	2200 Mission College Boulevard
City:	Santa Clara
State/Country:	CALIFORNIA
Postal Code:	95054

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14038165

CORRESPONDENCE DATA

 Fax Number:
 (206)292-0460

 Phone:
 2066221711

Email: kspringer@schwabe.com

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

Correspondent Name: SCHWABE, WILLIAMSON & WYATT, P.C.

Address Line 1: 1211 SW 5TH AVENUE

Address Line 2: SUITE 1900

Address Line 4: PORTLAND, OREGON 97204

ATTORNEY DOCKET NUMBER:	P60520/110578-192269
NAME OF SUBMITTER:	KRISTINE SPRINGER

PATENT REEL: 039309 FRAME: 0033

ASSIGNMENT

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned inventor(s):

KIRAN PANGAL; RAJ K. RAMANUJAN; ROBERT W. FABER; RAJESH SUNDARAM

hereby sell, assign, and transfer to:

Intel Corporation

a corporation of Delaware, having a principal place of business at 2200 Mission College Boulevard, Santa Clara, California, 95054 USA ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all other countries, in and to any and all inventions and improvements that are disclosed in the application for the patent entitled:

REFRESH OF DATA STORED IN A CROSS-POINT NON-VOLATILE MEMORY

READ AND WRITE REFRESH OF MEMORY 4/11/16

(I hereby authorize and request any attorney having appropriate authority from the assignee to insert on the designated lines below, the filing date and application number of said application when known.)

which was filed on Septemb	er 26, 2013	as	
US	_ Application Number	14/038,165	anc
COLINTRY or International Office			

which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below,

and in and to said application and all Additional Applications, and all other patent applications that have been or shall be filed in the United States and all other countries and international filing offices on any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all other countries and international filing offices on said inventions and improvements; and in and to all rights of priority resulting from the filing of said applications; as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements;

and agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all Additional Applications, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and

improvements, and all applications for patents and all patents on said improvements, in said Assignce, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Kiran Pangal	Date signed
Raj K. Ramanujan	Date signed
Robert W. Faber	Date signed
Rajesh Sundaram	Date signed

improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Kiran Pangal	Date signed
/Raj K Ramanujan/	26-Sep-2013
Raj K. Ramanujan	Date signed
Robert W. Faber	Date signed
Rajesh Sundaram	Date signed

Date signed

improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successor assigns, and legal representatives; and		
covenant with said Assignee, its successors, assigns, and legal repres- license, or other agreement affecting the rights and property berein c		
dersigned, and that full right to convey the same as herein expressed		
Kiran Pangul	Date signed	
Raj K. Ramanujan	Date signed	
S Z Z	<u> </u>	
	, **	

Rajesh Sundaram

improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignce, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

	Kiran Pangal	Date signed
***************************************	Raj K. Ramanujan	Date signed
	Robert W. Faber	
520.5222222000		9 19 293
	Rajesh Sundaram	Date signed

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