PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
XIANG YANG	01/30/2020
TAREK AHMED AMEEN BESHARI	01/30/2020
NARAYANAN RAMANAN	01/30/2020
ARUN THATHACHARY	01/30/2020
SHANTANU RAJWADE	01/31/2020
MATIN AMANI	01/30/2020

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:	16790074

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: GREEN, HOWARD, & MUGHAL LLP

Address Line 1: 5 CENTERPOINTE DR.

Address Line 4: LAKE OSWEGO, OREGON 97035

ATTORNEY DOCKET NUMBER:	01.AC4468-US
NAME OF SUBMITTER:	ADAM SAHAGIAN
SIGNATURE:	/Adam Sahagian/
DATE SIGNED:	02/13/2020

Total Attachments: 4

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PATENT REEL: 051816 FRAME: 0856

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> PATENT REEL: 051816 FRAME: 0857

ASSIGNMENT

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

Xiang Yang Tarek Ahmed Ameen Beshari Narayanan Ramanan Arun Thathachary Shantanu Rajwade Matin Amani

hereby sell, assign, and transfer to:

Intel Corporation

a corporation of Delaware, having a principal place of business at 2200 Mission College Blvd. Santa Clara, CA. 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:

DEVICE, SYSTEM, AND METHOD TO VERIFY DATA PROGRAMMING OF A MULTI-LEVEL CELL MEMORY

(I bereby authorize and request any at	torney having app	propriate authority fre	on the assigner to	insert on the
designated lines below, the filing date:	ind application m	umber of said applicat	ion when known.)	

which was filed on February 13, 2020				
Linded States Application Number	16/790,074	and		

which has been executed by the undersigned prior horstoox 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 filled in the United States and all other countries and international filling 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 filling offices on said inventions and improvements; and in and to all rights of priority resulting from the filling of said applications: as used herein "Additional Applications" includes but is not limited to design, utility, utility model, divisional, communing, continuation-in-part, substitute, renewal, reissue, and national phase applications on said inventions and improvements:

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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 logal 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 all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and logal 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.

14,411	01/30/2020
Xiang Yang	Date signed
Torek Ahmed Ameda Beshan	<u> </u>
	¥30/2020
Narayanan Ramanan	Date signed 0 //30/2328
Arun Thathachary	Date signed
Shantamu Rajwade	Date signed 1/30/2020
Main Anani	Date signed

Attorney Docket No.: 01.AC4468-US

ASSIGNMENT

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

Xiang Yang
Tarek Ahmed Ameen Beshari
Narayanan Ramanan
Arun Thathachary
Shantanu Rajwade
Matin Amani

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DEVICE, SYSTEM, AND METHOD TO VERIFY DATA PROGRAMMING OF A MULTI-LEVEL CELL MEMORY

(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	February 13.	, 2020	as
United States Applica	tion Number	16/790,074	and

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;

Page 1 of 2

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, usigns, 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 ouths, assignments, powers of anomey, 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 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 berein expressed is possessed by the undersigned.

Xiang Yang	Date signed	
Tarek Ahmed Ameen Beshari	Date signed	
Narayanan Kamanan	Date signed	*****
Arun Thathachary	Date signed	إمعند
	01/31/2020	
Shantami Rajwade	Date signed	energy (
Matin Amani	Date signed	.ccc.:

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