502312315 04/16/2013

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Krishna K. Parat	02/01/2013
Pranav Kalavade	02/10/2013
Koichi Kawai	04/10/2013
Akira Goda	02/19/2013

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13719558

CORRESPONDENCE DATA

Fax Number: 6123328352

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

Email: jmundt@cpaglobal.com
Correspondent Name: Cool Patent, P.C.
Address Line 1: c/o CPA Global
Address Line 2: PO Box 52050

Address Line 4: Minneapolis, MINNESOTA 55402

ATTORNEY DOCKET NUMBER:	P47525
NAME OF SUBMITTER:	Kenneth J. Cool
Signature:	/Kenneth J. Cool - Reg. No. 40,570/
	PATENT

REEL: 030223 FRAME: 0066

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Date:	04/16/2013
Total Attachments: 5 source=P47525_ASSIGN_EXECUTED#pag source=P47525_ASSIGN_EXECUTED#pag source=P47525_ASSIGN_EXECUTED#pag source=P47525_ASSIGN_EXECUTED#pag source=P47525_ASSIGN_EXECUTED#pag	e2.tif e3.tif e4.tif

PATENT REEL: 030223 FRAME: 0067 2-11-27-610, Shin-yamashita,
Naka-ku, Yokohama,
Kanagawa 231,0801, Japan

WHEREAS, We, Krishna K. Parat, residing at 4177 Hubbartt Drive, Palo Alto, CA 94306, US and Pranav Kalavade, residing at 6385 Slida Drive, San Jose, CA 95129, US and Koichi Kawai residing at 6719-E Pinnacle Pointe, Orange, CA 92869, US and Akira Goda, residing at 1818 E. Monterey Dr., Boise, ID 83706, US made certain new and useful inventions and improvements for which we filed an application for Letters Patent of the United States on December 19, 2012, which application was assigned U.S. patent application serial number 13/719,558, and is entitled ERASE AND SOFT PROGRAM FOR VERTICAL NAND FLASH;

AND WHEREAS, <u>Intel Corporation</u>, a corporation organized and existing under and by virtue of the laws of the State of <u>Delaware</u>, and having an office and place of business at <u>2200 Mission College Blvd.</u>, <u>Santa Clara, CA 95052</u> (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefore;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted there from, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted there from; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

PATENT REEL: 030223 FRAME: 0068 AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to me relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

Krishna K. Parat		, VD,
IN TESTIMONY WHEREOF, I have hereunto set my hand this _	day of	, 2013
Pranav Kalavade		
IN TESTIMONY WHEREOF, I have hereunto set my hand this _	day of	, 2013
Koichi Kawai		
IN TESTIMONY WHEREOF, I have hereunto set my hand this _	day of	, 2013
IN TESTIMONY WHEREOF, I have hereunto set my hand this	day of	,2

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to me relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications. Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

IN TESTIMONY WHEREOF, I have hereunto set my hand this day of	2013.
Krishna K. Parat	
IN TESTIMONY WHEREOF, I have hereunto set my hand this 💆 day of 🗜 🕫 🙏 🔈	, 2013.
Pranav Kalavade	
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of	, 2013.
Koichí Kawai	***************************************
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of	, 2013.
Akira Goda	

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IN TESTIMONY WHEREOF, I have hereunto set my hand this day of	, 2013.
Krishna K. Parat	
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of	, 2013.
Pranav Kalavade	
IN TESTIMONY WHEREOF, I have hereunto set my hand this of April Koichi Kawai	, 2013. —
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of	, 2013.
Akira Goda	

Docket	No:	P47525
Page 2	of 2	

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to me relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

IN TESTIMONY WHEREOF, I have hereunto set my hand this day of, 2013.
Krishna K. Parat
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of, 2013.
Pranav Kalavade
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of, 2013.
Koichi Kawai
IN TESTIMONY WHEREOF, I have hereunto set my hand this 19 day of February, 2013.
Akira Goda

PATENT REEL: 030223 FRAME: 0072

RECORDED: 04/16/2013