504456722 07/14/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

Version v1.1 EPAS ID: PAT4503423

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HONGBIN ZHU	09/30/2014
GORDON A. HALLER	09/30/2014
FATMA A. SIMSEK-EGE	11/17/2014

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15418618

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.

Phone: 503-730-8937

Email: annie@compassiplaw.com, bob@compassiplaw.com

Correspondent Name: VINCENT H. ANDERSON

Address Line 1: 4804 NW BETHANY BLVD, STE. I-2 #237

Address Line 4: PORTLAND, OREGON 97229

ATTORNEY DOCKET NUMBER:	P65116D	
NAME OF SUBMITTER:	ANNIE PEARSON	
SIGNATURE:	/Annie Pearson/	
DATE SIGNED:	07/14/2017	

Total Attachments: 4

source=P65116D_Executed_Assignments#page1.tif source=P65116D_Executed_Assignments#page2.tif source=P65116D_Executed_Assignments#page3.tif source=P65116D_Executed_Assignments#page4.tif

PATENT 504456722 REEL: 043004 FRAME: 0291

Attorney Docket No.: P65116

ASSIGNMENT

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

HONGBIN ZHU; GORDON A HALLER; FATMA A. SIMSEK-EGE

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:

ALUMINUM OXIDE LANDING LAYER FOR CONDUCTIVE CHANNELS FOR A THREE DIMENSIONAL CIRCUIT DEVICE

(I hereby authorize and requ	est any attorney hav	ing appropriate authority	from the assignee t	to insert on the
designated lines below, the fi	ling date and applica	tion number of said appli	ication when known	i.)
nhigh was filed on	KINC II old		200	

with who there our				Q.S.	
	Application Nuc	nber l	4/329,644		and
COUNTRY 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

Page 1 of 2

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 berein 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.

4434C	9/30/2014
Hongbin Zhu	Date signed
Sode a Hell	9-30-2014
Gordon À Haller	Date signed
	<u>.</u>
Fatma A. Simsek-Ege	Date signed

Attorney Docket No.: P65116

ASSIGNMENT

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

HONGBIN ZHU; GORDON A HALLER; FATMA A. SIMSEK-EGE

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:

ALUMINUM OXIDE LANDING LAYER FOR CONDUCTIVE CHANNELS FOR A THREE DIMENSIONAL CIRCUIT DEVICE

(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 July 11.	2014	as		
United States of America COUNTRY or International (r <u>14/329,644</u>	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;

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

Page 1 of 2

Attorney Docket No.: P65116

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 herein expressed is possessed by the undersigned.

Hongbin Zhu	Date signed
Gordon A Haller	Date signed
44-2	11 / 17 / 2014
V Fathna A. Simsek-Ege	Date signed