504211300 02/03/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4257977

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MICHAEL W. CHYNOWETH	01/12/2017
JONATHAN D. COMBS	01/04/2017
JOSEPH K. OLIVAS	12/27/2016
BEEMAN C. STRONG	01/20/2017
RAJSHREE A. CHABUKSWAR	01/31/2017
AHMAD YASIN	01/18/2017
JASON W. BRANDT	01/04/2017
OFER LEVY	01/27/2017
JOHN M. ESPER	01/04/2017
ANDREAS KLEEN	01/06/2017
CHRISTOPHER M. CHRULSKI	01/12/2017

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:	15423143

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.

Email: mkrueger@lowenstein.com
Correspondent Name: LOWENSTEIN SANDLER LLP

Address Line 1: 900 2ND AVENUE SOUTH SUITE 600

Address Line 2: C/O CPA GLOBAL

Address Line 4: MINNEAPOLIS, MINNESOTA 55402

PATENT REEL: 041164 FRAME: 0922

504211300

ATTORNEY DOCKET NUMBER:	P110611	
NAME OF SUBMITTER:	DEVIN W. MILLER	
SIGNATURE:	/Devin W. Miller/	
DATE SIGNED:	02/03/2017	
Total Attachments: 11		
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PATENT REEL: 041164 FRAME: 0923

Attorney Docket No.: P110611

ASSIGNMENT

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

MICHAEL W. CHYNOWETH; JONATHAN D. COMBS; JOSEPH K. OLIVAS; BEEMAN C. STRONG; RAJSHREE A. CHABUKSWAR; AHMAD YASIN; JASON W. BRANDT; OFER LEVY; JOHN M. ESPER; ANDREAS KLEEN; CHRIS CHRULSKI

hereby sell, assign, and transfer to:

COUNTRY or International Office

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:

BRANCH TYPE LOGGING IN LAST BRANCH REGISTERS

designated lines below, the fil	ling date and application number of sa	aid application when known.)	
which was filed on _	February 2, 2017	as	
U.S.	Application Number	15/423,143	and

(I hereby authorize and request any attorney having appropriate authority from the assignee to insert on the

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

PATENT REEL: 041164 FRAME: 0924 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

Michael W. Chynoweth	Date signed
Jonathan D. Combs	Date signed
Joseph K. Olivas	Date signed
Beeman C. Strong	Date signed
D 1 4 (1 1 1	
Rajshree A. Chabukswar	Date signed
Ahmad Yasin	Date signed
Am not	1-4-2017
U Jason W. Brandt	Date signed
Ofer Levy	Date signed
John M. Eye	(/4)17
John M. Esper	Date signed

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Michael W. Chynoweth	Date signed
Jonathan D. Combs	Date signed
(all)	12/27/2016
Joseph K. Olivas	Date signed
Beeman C. Strong	Date signed
Rajshree A. Chabukswar	Date signed
Ahmad Yasin	Date signed
Jason W. Brandt	Date signed
Ofer Levy	Date signed
John M. Esper	Date signed

	Attorney Docket No.: P110611
/ Andreas Kleen	Date signed
Chris Chrulski	Date signed

Attorney Docket No.: P110611

ASSIGNMENT

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

MICHAEL W. CHYNOWETH; JONATHAN D. COMBS; JOSEPH K. OLIVAS; BEEMAN C. STRONG; RAJSHREE A. CHABUKSWAR; AHMAD YASIN; JASON W. BRANDT; OFER LEVY; JOHN M. ESPER; ANDREAS KLEEN; CHRISTOPHER M. CHRULSKI

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:

BRANCH TYPE LOGGING IN LAST BRANCH REGISTERS

(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.)

wnich was filed on	February 2, 20	01 /	:	as
	•			
U.S.		Application Number	15/423,143	and
COUNTRY or Intern	ational 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 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.

	1/12/2017
Michael W. Chynoweth	Date signed
Jonathan D. Combs	Date signed
Joseph K. Olivas	Date signed
Beeman C. Strong	Date signed
Rajshree A. Chabukswar	Date signed
Ahmad Yasin	Date signed
Jason W. Brandt	Date signed
Ofer Levy	Date signed
John M. Esper	Date signed

Page 2 of 3

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

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Michael W. Chynoweth	Date signed
Jonathan D. Combs	Date signed
Joseph K. Olivas	Date signed
Pale	<u> /20/17</u> Date signed
Beeman C. Strong	Date signed
Rajshree A. Chabukswar	Date signed
Ahmad Yasin	Date signed
Jason W. Brandt	Date signed
Ofer Levy	Date signed
John M. Esper	Date signed

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PATENT REEL: 041164 FRAME: 0930

REEL: 041164 FRAME: 0931

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Michael W. Chynoweth	Date signed
Jonathan D. Combs	Date signed
Joseph K. Olivas	Date signed
Beeman C. Strong	Date signed
Raishree A. Chabukswar	O / 31 / 17 Date signed
Ahmad Yasin	Date signed
Jason W. Brandt	Date signed
Ofer i.ev:	Date signed
John M. Esper	Date PASENT

the history thereof; and generally assist said Assigner, 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 Assigner, 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.

Michael W. Chynoweth	Date signed
Jonathan D. Combs	Date signed
Joseph K. Olivas	Date signed
Beeman C. Strong	Date signed
Rajshree A. Chabukswar	Date signed
	<u> 17 Jan 2014 - </u>
Ahmad Yasin	Date signed
Jason W. Brandt	Date signed
Ofer Levy	Date signed
John M. Esper	Date signed

Page 2 of 3

Attorney Docket No.: P110611

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

Michael W. Chynoweth	Date signed
Jonathan D. Combs	Date signed
Joseph K. Olivas	Date signed
Beeman C. Strong	Date signed
Rajshree A. Chabukswar	Date signed
Ahmad Yasin	Date signed
Jason W. Brandt	Date signed
	74772
Ofer Levy	Date signed
John M. Esper	Date signed

	Attorney Docket No.: P110611
Andreas Kleen	Date signed
Christopher M. Chriski	Date signed

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