

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5639591

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
SANJAY KUMAR	03/01/2017
RAJESH M. SANKARAN	03/01/2017
GILBERT NEIGER	03/02/2017
PHILIP R. LANTZ	03/01/2017
JASON W. BRANDT	03/03/2017
VEDVYAS SHANBHOGUE	02/20/2017
UTKARSH Y. KAKAIYA	03/02/2017
KUN TIAN	02/20/2017
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:	16481441
CORRESPONDENCE DATA	
Fax Number:	(973)597-2400
<i>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.</i>	
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Correspondent Name:	PATENT DOCKET ADMINISTRATOR
Address Line 1:	LOWENSTEIN SANDLER LLP
Address Line 2:	ONE LOWENSTEIN DRIVE
Address Line 4:	ROSELAND, NEW JERSEY 07068
ATTORNEY DOCKET NUMBER:	P110584PCT-US (L0747US)
NAME OF SUBMITTER:	MARINA PORTNOVA (REG. NO. 45750)
SIGNATURE:	/Marina Portnova/

PATENT

DATE SIGNED:	07/26/2019
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Total Attachments: 6

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ASSIGNMENT

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

**SANJAY KUMAR; RAJESH M. SANKARAN; GILBERT NEIGER; PHILIP R. LANTZ;
JASON W. BRANDT; VEDVYAS SHANBHOGUE; UTKARSH Y. KAKAIYA; KUN TIAN**

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:

**VIRTUALIZATION OF PROCESS ADDRESS SPACE IDENTIFIERS FOR SCALABLE
VIRTUALIZATION OF INPUT/OUTPUT DEVICES**

(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 22, 2017 as
International Application Number PCT/CN2017/074370 and
COUNTRY or International Office

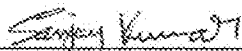

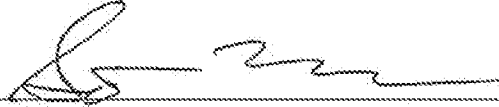
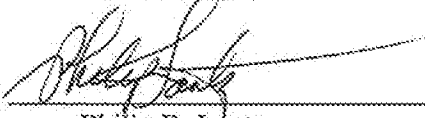
which has been executed by the undersigned prior hereto or concurrently herewith on the date(s) indicated below,

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,

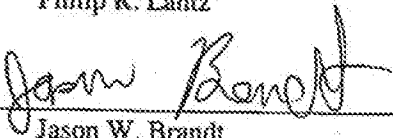
assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and 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

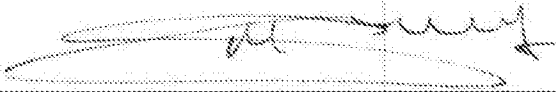
covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is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

 Sanjay Kumar	03/01/2017 Date signed
 Rajesh M. Sankaran	03/01/2017 Date signed
 Gilbert Neiger	3/2/2017 Date signed
 Philip R. Lantz	3/1/2017 Date signed
Jason W. Brandt	Date signed
Vedvyas Shanbhogue	Date signed
Utkarsh Y. Kakaiya	Date signed
Kun Tian	Date signed

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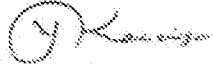
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Sanjay Kumar	Date signed
Rajesh M. Sankaran	Date signed
Gilbert Neiger	Date signed
Philip R. Lantz	Date signed
 Jason W. Brandt	3-3-2017 Date signed
Vedvyas Shanbhogue	Date signed
Utkarsh Y. Kakaiya	Date signed
Kun Tian	Date signed

Sanjay Kumar	Date signed
Rajesh M. Sankaran	Date signed
Gilbert Neiger	Date signed
Philip R. Lantz	Date signed
Jason W. Brandt	Date signed
	2/20/2017
Vedvyas Shanbhogue	Date signed
Utkarsh Y. Kakaiya	Date signed

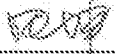
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_____ Rajesh M. Sankaran	_____ Date signed
_____ Gilbert Neiger	_____ Date signed
_____ Philip R. Lantz	_____ Date signed
_____ Jason W. Brandt	_____ Date signed
_____ Vedvyas Shanbhogue	_____ Date signed
_____  Utkarsh Y. Kakaiya	_____ 03/02/2017 Date signed
_____ Kun Tian	_____ Date signed

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Gilbert Neiger	Date signed
Philip R. Lantz	Date signed
Jason W. Brandt	Date signed
Vedvya Shanbhogue	Date signed
Utkarsh Y. Kakaiya	Date signed
 Kun Tian	2017-02-24 Date signed