

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5350837

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|------------------------------|----------------|
| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| VAN H. LE | 07/18/2018 |
| SEUNG HOON SUNG | 07/24/2018 |
| BENJAMIN CHU-KUNG | 07/23/2018 |
| MIRIAM RESHOTKO | 07/24/2018 |
| MATTHEW METZ | 09/24/2018 |
| YIH WANG | 08/19/2018 |
| GILBERT DEWEY | 07/18/2018 |
| JACK KAVALIEROS | 07/18/2018 |
| TAHIR GHANI | 07/18/2018 |
| NAZILA HARATIPOUR | 07/24/2018 |
| ABHISHEK SHARMA | 07/18/2018 |
| SHRIRAM SHIVARAMAN | 07/24/2018 |

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: | 16016381 |

CORRESPONDENCE DATA

Fax Number: (503)796-2900

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: JUSTIN K. BRASK

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Address Line 4: PORTLAND, OREGON 97204

PATENT

| | |
|---|-------------------------|
| ATTORNEY DOCKET NUMBER: | AA8440-US 111548-239027 |
| NAME OF SUBMITTER: | JUSTIN K. BRASK |
| SIGNATURE: | /Justin K. Brask/ |
| DATE SIGNED: | 01/30/2019 |
| Total Attachments: 6 source=AA8440-US_Assign_signed#page1.tif source=AA8440-US_Assign_signed#page2.tif source=AA8440-US_Assign_signed#page3.tif source=AA8440-US_Assign_signed#page4.tif source=AA8440-US_Assign_signed#page5.tif source=AA8440-US_Assign_signed#page6.tif | |

ASSIGNMENT

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

Van H. LE, Seung Hoon SUNG, Benjamin CHU-KUNG, Miriam RESHOTKO, Matthew METZ, Yih WANG, Gilbert DEWEY, Jack KAVALEROS, Tahir GHANI, Nazila HARATIPOUR Abhishek SHARMA, Shriram SHIVARAMAN

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 foreign countries, in and to any and all inventions or improvements that are disclosed in the application (provisional or non-provisional) for the United States patent which may have a declaration executed by the undersigned prior hereto or concurrently herewith and is entitled

VERTICAL ARCHITECTURE OF THIN FILM TRANSISTORS

said patent application also identified as follows (when known):

[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]

US or International Application Number 16/016,381 filed June 22, 2018,

and in and to said application (provisional or non-provisional) and all provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application;

agree that said Assignee may apply for and receive a patent or patents for said inventions or 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 provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications on any and all said inventions or 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 or 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 or improvements and for vesting title to said inventions or improvements, and all applications for patents and all patents on said inventions or 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.

Each Inventor: Please Sign and Date Below:

7/18/18
Date


Name: **Van H. LE**

7/24/18
Date


Name: **Seung Hoon SUNG**

7/23/18
Date


Name: **Benjamin CHU-KUNG**

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7/18/18
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Name: **Tanir GHANI**

7/24/18
Date


Name: **Nazila HARATIPOUR**

7/18/18
Date


Name: **Abhishek SHARMA**

7/24/2018
Date


Name: **Shriram SHIVARAMAN**

Assignment Document Return Address:
Schwabe, Williamson & Wyatt P.C.
1211 SW 5th Avenue, Suite 1900
Portland, OR 97204
Telephone: (503) 222-9981

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