505287586 01/21/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 EPAS ID: PAT5334361 Stylesheet Version v1.2

 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------|----------------|
| TINGQIAN LI | 02/04/2016 |
| ZHAOHUI MENG | 02/04/2016 |
| JINKUI REN | 02/04/2016 |

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: | 16061616 |

CORRESPONDENCE DATA

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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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ATTORNEY DOCKET NUMBER: (P92393PCT-US) 884.U47US1

NAME OF SUBMITTER: BRENDA KOWALKE

SIGNATURE: /Brenda Kowalke/

DATE SIGNED: 01/21/2019

Total Attachments: 3

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PATENT 505287586 REEL: 048066 FRAME: 0098

Atty Ref/Docket No.: (P92393PCT-US) 884.U47US1 Patent and Trademark Office

| Mail documents to be recorded with required cover sheet information to: | | | |
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| Tot | tal number of pages including cover sheet: 3 | | |
| Name of Person Signing | Trey Cobia / January 18, 2019 Signature Date | | |
| 9. Statement and signature. To the best of my knowledge and belief, the foregoing inform of the original document. | nation is true and correct and any attached copy is a true copy | | |
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| 4. Application number(s) or patent number(s): If this document is being filed together with a new application A. Patent Application No.(s) Serial No. 16/061,616 Additional numbers attached? []Yes [X]No 5. Name and address of party to whom correspondence concerning document should be mailed: Name: Jeffrey P. Cobia Address: Schwegman Lundberg & Woessner, P.A. P.O. Box 2938 Minneapolis, Minnesota 55402 | B. Patent No.(s) 6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41):\$ 0.00 []Enclosed []Authorized to be charged to deposit account 190743 8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 190743 | | |
| Execution Date: February 4, 2016, February 4, 2016, February 4, 2016 | | | |
| [X] Assignment [] Merger [] Security Agreement [] Change of Name [] Other | | | |
| 3. Nature of conveyance: | Additional name(s) & address(es) attached? []Yes [X]No | | |
| []Yes [X]No | City: <u>Santa Clara</u> State: <u>CA</u> Zip: <u>95054</u> Country: <u>United States of America</u> | | |
| Additional name(s) of conveying party(ies) attached? | Street Address: 2200 Mission College Blvd. | | |
| Tingqian Li, Zhaohui Meng, Jinkui Ren | Name: Intel Corporation | | |
| Name of conveying party(ies): | 2. Name and address of receiving party(ies): | | |
| To the Director of the U.S. Patent and Trademark Office: Ple | ase record the attached original documents or copy thereof | | |

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> **PATENT** REEL: 048066 FRAME: 0099

Intel Docket No.: P92393PCT SLW Reference No.: 884.U47WO1

ASSIGNMENT

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

<Tingqian Li, Zhaohui Meng, Jinkui Ren>

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:

HMM-BASED ADAPTIVE SPECTROGRAM TRACK METHOD

(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 December 23, 2015 as

PCT Application Number PCT/CN2015/098377

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

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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.

Tinggian Li

Zhaohui Meng

Jinkui Ren

2016.2.4 Date Signed

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Date Signed