505395138 03/26/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5441932

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

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------------|----------------|
| ZHIBIN WU | 03/18/2019 |
| SUDHIR KUMAR BAGHEL | 03/19/2019 |
| JUNYI LI | 03/19/2019 |
| LIBIN JIANG | 03/18/2019 |
| KAPIL GULATI | 03/19/2019 |
| SHAILESH PATIL | 03/26/2019 |
| TIEN VIET NGUYEN | 03/19/2019 |

RECEIVING PARTY DATA

| Name: | QUALCOMM Incorporated | |
|-----------------|-----------------------|--|
| Street Address: | 5775 Morehouse Drive | |
| City: | San Diego | |
| State/Country: | CALIFORNIA | |
| Postal Code: | Postal Code: 92121 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number | |
|---------------------|----------|--|
| Application Number: | 16259878 | |

CORRESPONDENCE DATA

Fax Number: (858)658-2502

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.

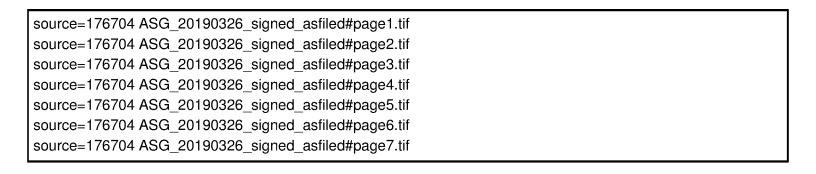
Email: us-docketing@qualcomm.com
Correspondent Name: QUALCOMM INCORPORATED
Address Line 1: 5775 MOREHOUSE DRIVE
Address Line 4: SAN DIEGO, CALIFORNIA 92121

| ATTORNEY DOCKET NUMBER: | 176704 |
|--------------------------------------|------------|
| NAME OF SUBMITTER: JACQUELINE DUENAS | |
| SIGNATURE: /Jacqueline Duenas/ | |
| DATE SIGNED: | 03/26/2019 |
| , | |

Total Attachments: 7

PATENT REEL: 048706 FRAME: 0572

505395138



ASSIGNMENT

WHEREAS, WE,

- 1. **Zhibin WU**, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714.
- 2. **Sudhir Kumar BAGHEL**, having a mailing address located at 5775 **Morehouse Drive, San Diego, CA 92121-1714**,
- 3. Junyi LI, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 4. Libin JIANG, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 5. **Kapil GULATI**, having a mailing address located at **5775 Morehouse Drive**, **San Diego**, **CA 92121-1714**,
- 6. Shailesh PATIL, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 7. **Tien Viet NGUYEN**, having a mailing address located at 5775 **Morehouse Drive**, **San Diego**, **CA 92121-1714**,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **TECHNIQUES FOR INTERFERENCE MANAGEMENT IN MILLIMETER WAVE COMMUNICATIONS SYSTEMS** (collectively the "**INVENTIONS**") for which WE have executed and/or may execute one or more patent applications therefor; and

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). 16/259,878 filed January 28, 2019, Qualcomm Reference No. 176704 and all provisional applications relating thereto, together with, U.S. Provisional Application No(s). 62/623,444 filed January 29, 2018, Qualcomm Reference No. 176704P1 (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

whatsoever conflicting with these presents. Done at Santa Clara, CA, on 3/18/19 Thim We LOCATION DATE Zhibin WU Done at ______, on ______ LOCATION DATE Sudhir Kumar BAGHEL Junyi LI Done at ______, on ___ Libin JIANG Kapil GULATI Done at ______, on _____
LOCATION DATE Shailesh PATIL Done at ______, on _____ LOCATION DATE

AND WE HEREBY covenant that WE will not execute any writing or do any act

PATENT **REEL: 048706 FRAME: 0577**

Tien Viet NGUYEN

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

| Done at | * (33) | | 3 |
|---------------------------------------|---|--------------------------|---------------------|
| · · · · · · · · · · · · · · · · · · · | LOCATION | DATE | Zhibin WU |
| Done at 2 | //J ////////////////////////////////// | 3-19-2019 | K. |
| | LOCATION | DATE. | Sudhir Kumar BAGHEL |
| Done at E | OCCUPATE ON L | <u>3-74-2074</u> Date | Junyi I.I |
| | | | |
| Done at _ | LOCATION | DATE | Libin JIANG |
| | | | 9768,865 3887.802.8 |
| Done at 🖹 | CIESTON : | 3-19-2019 | Kapil GULATI |
| | LÓCATION | DATE | Kapil CULATI |
| Done at | , on | | |
| | LOCATION | DATE | Shailesh PATIL |
| Done at 🕻 | 304 <u>98604784</u> , on . | 3-19-2019 | |
| DE COME 1981 - 1994 | LOCATION | DATE | Tien Viet NGUYEN |

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

| Done at | | , on | |
|---------|----------|---------|---------------------|
| | LOCATION | on DATE | Zhibin WU |
| Done at | LOCATION | on | Sudhir Kumar BAGHEL |
| Done at | LOCATION | , on | Tunyi I I |
| | | | |
| Done at | LOCATION | DATE | Libin JIANG |
| Done at | LOCATION | , on | Kapil GULATI |
| Done at | LOCATION | on | Shailesh PATIL |
| Done at | LOCATION | , on | Tien Viet NGUYEN |

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

| Done at | , on | | |
|---------|------------------------|-----------------|---------------------|
| | LOCATION , on | DATE | Zhibin WU |
| Done at | , on | DATE | Sudhir Kumar BAGHEL |
| Done at | , on LOCATION | DATE | Junyi LI |
| Done at | , on | DATE | Libin JIANG |
| Done at | , on | DATE | Kapil GULATI |
| Done at | SAN DIEGO, on LOCATION | 3/26/19 DATE | Shailesh PATIL |
| Done at | , on | DATE | Tien Viet NGUYEN |

PATENT REEL: 048706 FRAME: 0580

RECORDED: 03/26/2019