506617650 04/19/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6664457

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------------------|----------------|
| KUO-CHUN LEE | 03/25/2021 |
| ARVIND VARDARAJAN SANTHANAM | 03/24/2021 |
| BRIAN CLARKE BANISTER | 03/24/2021 |
| RAGHU NARAYAN CHALLA | 03/25/2021 |
| RUHUA HE | 03/25/2021 |
| DANIEL AMERGA | 10/22/2020 |
| SUBASHINI KRISHNAMURTHY | 03/29/2021 |
| SCOTT HOOVER | 03/25/2021 |
| SANDEEP RAO | 03/28/2021 |
| ZHANG ZHOU | 03/24/2021 |

RECEIVING PARTY DATA

| Name: | QUALCOMM INCORPORATED |
|-----------------|-----------------------|
| Street Address: | 5775 MOREHOUSE DRIVE |
| City: | SAN DIEGO |
| State/Country: | CALIFORNIA |
| Postal Code: | 92121-1714 |

PROPERTY NUMBERS Total: 2

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16986135 |
| Application Number: | 62883565 |

CORRESPONDENCE DATA

Fax Number: (202)857-6395

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.

Phone: 213-629-7400

Email: rachele.wittwer@arentfox.com, patentdocket@arentfox.com

Correspondent Name: ARENT FOX AND QUALCOMM INCORPORATED

Address Line 1: 1717 K STREET, NW

Address Line 4: WASHINGTON, D.C. 20006-5344

PATENT REEL: 055963 FRAME: 0929

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| ATTORNEY DOCKET NUMBER: | 030284.18715/194111 | | |
|--|---|--|--|
| NAME OF SUBMITTER: | RACHELE WITTWER | | |
| SIGNATURE: | /Rachele Wittwer/ | | |
| DATE SIGNED: | 04/19/2021 | | |
| Total Attachments: 12 | | | |
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ASSIGNMENT

WHEREAS, WE,

- 1. **Kuo-Chun LEE,** having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 2. **Arvind Vardarajan SANTHANAM,** having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 3. **Brian Clarke BANISTER,** having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 4. **Raghu Narayan CHALLA,** having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 5. **Ruhua HE,** having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 6. **Daniel AMERGA**, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 7. **Subashini KRISHNAMURTHY,** having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 8. **Scott HOOVER,** having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714.
- 9. **Sandeep RAO**, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714,
- 10. **Zhang ZHOU,** 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 **UPDATE MMW CODEBOOK FOR SMART PHONE COVER CHANGE** (collectively the "**INVENTIONS**") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, QUALCOMM Incorporated (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications

therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

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). 16/986,135 filed August 5, 2020, Qualcomm Reference No. 194111, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 62/883,565, filed August 6, 2019, Qualcomm Reference No. 194111P1, (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

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;

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

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| Done at | City, State | Date | Kuo-Chun LEE |
| Done at | | _, on | |
| | City, State | Date | Arvind Vardarajan SANTHANAM |
| Done at | Marian | , on | |
| | City, State | Date | Brian Clarke BANISTER |
| Done at | | | |
| | City, State | Date | Raghu Narayan CHALLA |
| Done at | | , on | |
| | City, State | Date | Ruhua HE |
| Done at | | | |
| | City, State | Date | Daniel AMERGA |
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| | City, State | Date | Subashini KRISHNAMURTHY |
| Done at | · · | | |
| | City, State | Date | Scott HOOVER |
| Done at | | | |
| | City, State | Date | Sandeep RAO |
| Done at | L | | |
| | City, State | Date | Zhang ZHOU |

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| Done at | | , On | |
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| | City, State | Date | Kuo-Chup LEE |
| Done at \$ | ANDLEGO, W SA. | on 03/24/2021 | Kuo-Chup LEE |
| | City, State | Date | Arvfod Vardarajan SANTHANAM |
| Done at _ | | , 08 | |
| | City, State | Date | Brian Clarke BANISTER |
| Done at | | , on no | |
| | | Date | Raghu Narayan CHALLA |
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| Done at | , on | |
|----------------------|----------------|-----------------------------|
| City, State | Date | Kuo-Chun LEE |
| Done at | , on | |
| City, State | Date | Arvind Vardarajan SANTHANAM |
| Done at San Diego CA | on 24-mar-2021 | |
| City, State | Date | Brian Clarke BANISTER |
| Done at | on | |
| City, State | Date | Raghu Narayan CHALLA |
| Done at | , on: | |
| City, State | Date | Ruhua HE |
| Done at | ., 08 | |
| City, State | Date | Daniel AMERGA |
| Done at | , on | |
| City, State | Date | Subashini KRISHNAMURTHY |
| Done at | on | |
| City, State | Date | Scott HOOVER |
| Done at | • on | |
| City, State | Date | Sandeep RAO |
| Done at | , on | |
| City, State | Date | Zhang ZHOU |

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| City, State | Date | Kuo-Chun LEE |
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| City, State | Date | Brian Clarke BANISTER |
| $_{ m Done~at}$ San diego, CA, l | JSA _{on} 3/25/2021 | Thaptering |
| City, State | Date | Raghu Narayan CHALLA |
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| City, State | Date | Subashini KRISHNAMURTHY |
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| Done at | , on | |
| City State | Date | Zhang ZHOU |

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| Name of | , on | | |
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| | City, State | Date | Kuo-Chun LEE |
| Mineral | City State | Date | Arvind Vardarajan SANTHANAM |
| Description | City, State | Date | Brian Clarke BANISTER |
| Process. | City, State | Date | Raghu Narayan CHALLA |
| Description (| City State | Date | Ruhua HF |
| Direct | City, State | Date | Daniel AMERGA |
| Descrip | City State | Date | Subashini KRISHNAMURTHY |
| Description | Capy, State | Date | Scott HOOVER |
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| City, State | Date | Kuo-Chun LEE |
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| City, State | Date | Arvind Vardarajan SANTHANAM |
| Done at | , on | |
| City, State | Date | Brian Clarke BANISTER |
| Done at | , on | |
| City, State | Date | Raghu Narayan CHALLA |
| Done at | , 03 | |
| City, State | Date | Ruhua HE |
| Done at Sau Dieso, CA | , on 10 22 2020 | |
| City, State | Date | Daniel AMERGA |
| Done at | ., 00 | |
| City, State | Date | Subashini KRISHNAMURTHY |
| Done at | | |
| City, State | Date | Scott HOOVER |
| Done at | | |
| City, State | Date | Sandeep RAO |
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| Done at | *************************************** | , on | |
| | City, State | Date | Brian Clarke BANISTER |
| Done at | | , on | |
| | City, State | Date | Raghu Narayan CHALLA |
| Done at | ~~~~~ | , on | |
| | City, State | Date | Ruhua HE |
| Done at | *************************************** | , on | |
| | City, State | Date | Daniel AMERGA |
| Done at | SAN DIEGO, C | <u>A</u> , on <u>3/29/2024</u> | _ Sabashin K |
| | City, State | Date | Subashini KRISHNAMURTHY |
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| | City, State | Date | Scott HOOVER |
| Done at | | , on | |
| | City, State | Date | Sandeep RAO |
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| | City, State | Date | Zhang ZHOU |

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| City, State | Date | Kuo-Chun LEE |
| Done at | .011 | |
| City, State | Date | Arvind Vardarajan SANTHANAM |
| Done at | ,00 | |
| City, State | Date | Brian Clarke BANISTER |
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| City, State | Date | Raghu Narayan CHALLA |
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| City, State | Date | Daniel AMERGA |
| Done at | 000 | |
| City, State | Date | Subashini KRISHNAMURTHY |
| Done at | , 001 | |
| City, State | Date | Scott HOOVER |
| Done at SAN DIEGO, CA | on 02/28/2021 | Jacob 19 B. S. Sam |
| City, State | Date | Sandeep RAO |
| Done at | , on | |
| City, State | Date | Zhane ZHOU |

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| Done at | , on | |
| City, State | Date | Scott HOOVER |
| Done at | _, on | |
| City, State | Date | Sandeep RAO |
| Done at Sin Diego, Coliforni | a, on <u>3/24/2021 </u> | Sandeep RAO |
| City, State | Date | Zhang ZHOU |

PATENT REEL: 055963 FRAME: 0942

RECORDED: 04/19/2021