PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT5412003

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MAKESH PRAVIN JOHN WILSON	01/18/2018
TAO LUO	01/23/2019
XIAO FENG WANG	02/13/2019
SONY AKKARAKARAN	01/18/2019
SUMEETH NAGARAJA	12/01/2018
YAN ZHOU	01/18/2019
SHENGBO CHEN	02/20/2019
JUAN MONTOJO	02/02/2019
WOOSEOK NAM	01/18/2019

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:	16128355
Application Number:	62558187

CORRESPONDENCE DATA

Fax Number: (303)473-2720

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: 303-473-2700
Email: bfmohler@hollandhart.com
Correspondent Name: MICHAEL DRAPKIN
Address Line 1: P.O. BOX 11583
Address Line 4: SALT LAKE CITY, UTAH 84147

ATTORNEY DOCKET NUMBER:	PN499.01 (93519.1760)

NAME OF SUBMITTER:	MICHAEL L. DRAPKIN
SIGNATURE:	/Michael L. Drapkin/
DATE SIGNED:	03/08/2019

Total Attachments: 4
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ASSIGNMENT

WHEREAS, I/WE,

1. **Makesh Pravin JOHN WILSON**, a citizen of **India**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**, and a resident of **San Diego, California**,

2. **Tao LUO**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**, and a resident of **San Diego, California**,

3. **Xiao Feng WANG**, a citizen of **Canada**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**, and a resident of **San Diego, California**,

4. **Sony AKKARAKARAN**, a citizen of **India**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**, and a resident of **Poway, California**,

5. **Sumeeth NAGARAJA**, a citizen of **India**, having a mailing address located at **4441 Calle Mar De Armonia, San Diego, CA, 92130**, and a resident of **San Diego, California**,

6. **Yan ZHOU**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**, and a resident of **San Diego, California**,

7. **Shengbo CHEN**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**, and a resident of **San Diego, California**,

8. **Juan MONTOJO**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**, and a resident of **San Diego, California**,

9. **Wooseok NAM**, a citizen of the **Republic of Korea**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**, and a resident of **San Diego, California**,

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 ESTABLISHING A BEAM PAIR LINK** (collectively the "**INVENTIONS**") for which I/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, I/WE do hereby acknowledge that I/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. **16/128,355** filed **September 11, 2018**, Qualcomm Reference No. **176241**, and all provisional applications relating thereto, together with U.S. Provisional Application No. **62/558,187** filed **September 13, 2017**, Qualcomm Reference No. **176241P1**, (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 I/WE further do acknowledge and agree that I/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 I/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 I/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 I/WE may be entitled, or that I/WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

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

Done at San Diego, on 01/18/2018
LOCATION DATE
Makesh Pravin JOHN WILSON

Done at San Diego, on 01/18/2019
LOCATION DATE
Tao LUO

Done at San Diego, on 02/13/2019
LOCATION DATE
Xiao Feng WANG

Done at San Diego, on 1/18/2019
LOCATION DATE
Sony AKKARAKARAN

Done at __________, on __________
LOCATION DATE
Sumeeth NAGARAJA

Done at San Diego, on 01/18/2019
LOCATION DATE
Yan ZHOU

Done at San Diego, on 2/20/19
LOCATION DATE
Shengbo CHEN

Done at San Diego, on 2/2/19
LOCATION DATE
Juan MONTOJO

Done at San Diego, on 01/18/2019
LOCATION DATE
Wooseok NAM

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

Done at ________________, on ________________ ________________________
LOCATION DATE **Makesh Pravin JOHN WILSON**

Done at ________________, on ________________ ________________________
LOCATION DATE **Tao LUO**

Done at ________________, on ________________ ________________________
LOCATION DATE **Xiao Feng WANG**

Done at ________________, on ________________ ________________________
LOCATION DATE **Sony AKKARAKARAN**

Done at San Diego, on Dec|01|18 ________________________
LOCATION DATE **Sumeeth NAGARAJA**

Done at ________________, on ________________ ________________________
LOCATION DATE **Yan ZHOU**

Done at ________________, on ________________ ________________________
LOCATION DATE **Shengbo CHEN**

Done at ________________, on ________________ ________________________
LOCATION DATE **Juan MONTOJO**

Done at ________________, on ________________ ________________________
LOCATION DATE **Wooseok NAM**