

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5965089

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PETER PUI LOK ANG	11/15/2019
TINGFANG JI	12/17/2019
JOHN EDWARD SMEE	11/22/2019
MASATO KITAZOE	11/12/2019
KEIICHI KUBOTA	01/26/2020
PETER GAAL	11/11/2019
JOSEPH BINAMIRA SORIAGA	12/03/2019
HUNG DINH LY	11/11/2019
VALENTIN ALEXANDRU GHEORGHIU	11/14/2019
RENQIU WANG	12/02/2019

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:	16534694
Application Number:	62716917

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: bmssoares@hollandhart.com

Correspondent Name: MICHAEL DRAPKIN

Address Line 1: P.O. BOX 11583

Address Line 4: SALT LAKE CITY, UTAH 84147

ATTORNEY DOCKET NUMBER:	PR055.01 (103038.0556)
NAME OF SUBMITTER:	MICHAEL L. DRAPKIN
SIGNATURE:	/Michael L. Drapkin/
DATE SIGNED:	02/14/2020

Total Attachments: 7

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ASSIGNMENT

WHEREAS, WE,

1. **Peter Pui Lok ANG**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**,
2. **Tingfang JI**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**,
3. **John Edward SMEE**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**,
4. **Masato KITAZOE**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**,
5. **Keiichi KUBOTA**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**,
6. **Peter GAAL**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**,
7. **Joseph Binamira SORIAGA**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**,
8. **Hung Dinh LY**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**,
9. **Valentin Alexandru GHEORGHIU**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA, 92121-1714**,
10. **Renqiu WANG**, 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 **BANDWIDTH CONFIGURATION TECHNIQUES IN WIRELESS COMMUNICATIONS** (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. **16/534,694** filed **August 07, 2019**, Qualcomm Reference No. **184574**, and all provisional applications relating thereto, together with U.S. Provisional Application No. **62/716,917** filed **August 9, 2018**, Qualcomm Reference No. **184574P1**, (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;

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

Done at San Diego CA, on 11/15/2019
LOCATION DATE

Peter Pui Lok ANG

Done at San Diego CA, on 12/17/2019
LOCATION DATE

Tingfang JI

Done at SAN DIEGO CA, on 11/22/19
LOCATION DATE

John Edward SMEE

Done at _____, on _____
LOCATION DATE

Masato KITAZOE

Done at _____, on _____
LOCATION DATE

Keiichi KUBOTA

Done at San Diego, on 11/11/2019
LOCATION DATE

Peter GAAL

Done at San Diego CA, on 12/3/2019
LOCATION DATE

Joseph Binamira SORIAGA

Done at San Diego, on 11/11/2019
LOCATION DATE


Hung Dinh LY

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

Done at _____, on _____
 LOCATION DATE
GHEORGHIU

Valentin Alexandru

Done at San Diego CA, on 12/19
 LOCATION DATE



Renqiu WANG

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;

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

Done at _____, on _____
LOCATION DATE Peter Pui Lok ANG

Done at _____, on _____
LOCATION DATE Tingfang JI

Done at _____, on _____
LOCATION DATE John Edward SMEE

Done at Tokyo, on November 12, 2019
LOCATION DATE  Masato KITAZOE

Done at _____, on _____
LOCATION DATE Keiichi KUBOTA

Done at _____, on _____
LOCATION DATE Peter GAAL

Done at _____, on _____
LOCATION DATE Joseph Binamira SORIAGA

Done at _____, on _____
LOCATION DATE Hung Dinh LY

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

Done at San Diego, CA, on November 14, 2019
LOCATION DATE
GHEORGHIU



Valentin Alexandru

Done at _____, on _____
LOCATION DATE

Renqiu WANG

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;

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

Done at _____, on _____
 LOCATION DATE Peter Pui Lok ANG

Done at _____, on _____
 LOCATION DATE Tingfang JI

Done at _____, on _____
 LOCATION DATE John Edward SMEE

Done at _____, on _____
 LOCATION DATE Masato KITAZOE

Done at Katayama, Tokyo, Japan, on Jan 26-2020
 LOCATION DATE Keiichi KUBOTA

Done at _____, on _____
 LOCATION DATE Peter GAAL

Done at _____, on _____
 LOCATION DATE Joseph Binamira SORIAGA

Done at _____, on _____
 LOCATION DATE Hung Dinh LY