

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT7751223

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
XIAOXIA ZHANG	12/13/2020
XIPENG ZHU	12/16/2020
LE LIU	12/09/2020
ALBERTO RICO ALVARINO	01/18/2021
KAZUKI TAKEDA	12/11/2020
PRASAD REDDY KADIRI	12/29/2020
UMESH PHUYAL	12/09/2020
WANSHI CHEN	12/10/2020
RECEIVING PARTY DATA	
Name:	QUALCOMM INCORPORATED
Street Address:	5775 MOREHOUSE DRIVE
City:	SAN DIEGO
State/Country:	CALIFORNIA
Postal Code:	92121-1714
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	18156831
CORRESPONDENCE DATA	
Fax Number:	
<i>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.</i>	
Email:	us-docketing@qualcomm.com
Correspondent Name:	QUALCOMM INCORPORATED
Address Line 1:	5775 MOREHOUSE DRIVE
Address Line 4:	SAN DIEGO, CALIFORNIA 92121-1714
ATTORNEY DOCKET NUMBER:	201160C1
NAME OF SUBMITTER:	REBECCA MEERBERGEN
SIGNATURE:	/Rebecca Meerbergen/
DATE SIGNED:	01/19/2023

Total Attachments: 10

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ASSIGNMENT

WHEREAS, WE,

1. Xiaoxia ZHANG, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121, US,
2. Xipeng ZHU, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121, US,
3. Le LIU, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121, US,
4. Alberto RICO ALVARINO, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121, US,
5. Kazuki TAKEDA, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121, US,
6. Prasad Reddy KADIRI, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121, US,
7. Umesh PHUYAL, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121, US,
8. Wanshi CHEN, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121, US,

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 **MONITORING MULTICAST BROADCAST CONTROL INFORMATION** (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). 17/107,171 filed November 30, 2020, Qualcomm Reference Number 201160, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 62/954,829, filed December 30, 2019, Qualcomm Reference Number 201160P1, (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

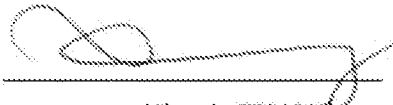
PATENTQualcomm Reference Number: **201160**

Page 3 of 3

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, on 12/13/2020
City, State, Country Date


Xiaoxia ZHANG

Done at _____, on _____
City, State, Country Date

Xipeng ZHU

Done at _____, on _____
City, State, Country Date

Le LIU

Done at _____, on _____
City, State, Country Date

Alberto RICO ALVARINO

Done at _____, on _____
City, State, Country Date

Kazuki TAKEDA

Done at _____, on _____
City, State, Country Date

Prasad Reddy KADIRI

Done at _____, on _____
City, State, Country Date

Umesh PHUYAL

Done at _____, on _____
City, State, Country Date

Wanshi CHEN

PATENT**REEL: 062426 FRAME: 0886**

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 _____
City, State, Country Date Xiaoxia ZHANG

Done at San Diego, CA, on 12/16/2020
City, State, Country Date Xipeng ZHU

Done at _____, on _____
City, State, Country Date Le LIU

Done at _____, on _____
City, State, Country Date Alberto RICO ALVARINO

Done at _____, on _____
City, State, Country Date Kazuki TAKEDA

Done at _____, on _____
City, State, Country Date Prasad Reddy KADIRI

Done at _____, on _____
City, State, Country Date Umesh PHUYAL

Done at _____, on _____
City, State, Country Date Wanshi CHEN

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 _____ City, State, Country	Date	_____
		Xiaoxia ZHANG
Done at _____, on _____ City, State, Country	Date	_____
		Xipeng ZHU
Done at <u>Santa Clara, CA</u> , on <u>12/9/2020</u> City, State, Country	Date	<u>Le Liu</u> Le LIU
Done at _____, on _____ City, State, Country	Date	_____
		Alberto RICO ALVARINO
Done at _____, on _____ City, State, Country	Date	_____
		Kazuki TAKEDA
Done at _____, on _____ City, State, Country	Date	_____
		Prasad Reddy KADIRI
Done at _____, on _____ City, State, Country	Date	_____
		Umesh PHUYAL
Done at _____, on _____ City, State, Country	Date	_____
		Wanshi CHEN


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 _____
City, State, Country Date Xiaoxia ZHANG

Done at _____, on _____
City, State, Country Date Xipeng ZHU

Done at _____, on _____
City, State, Country Date Le LIU

Done at San Diego, CA, US, on 1/18/21
City, State, Country Date 
Alberto RICO ALVARINO

Done at _____, on _____
City, State, Country Date Kazuki TAKEDA

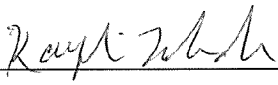
Done at _____, on _____
City, State, Country Date Prasad Reddy KADIRI

Done at _____, on _____
City, State, Country Date Umesh PHUYAL

Done at _____, on _____
City, State, Country Date Wanshi CHEN

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

Done at _____,	on _____	
City, State, Country	Date	Xiaoxia ZHANG
Done at _____,	on _____	
City, State, Country	Date	Xipeng ZHU
Done at _____,	on _____	
City, State, Country	Date	Le LIU
Done at _____,	on _____	
City, State, Country	Date	Alberto RICO ALVARINO
Done at <u>Tokyo, Japan</u> ,	on <u>Dec. 11, 2020</u>	
City, State, Country	Date	Kazuki TAKEDA
Done at _____,	on _____	
City, State, Country	Date	Prasad Reddy KADIRI
Done at _____,	on _____	
City, State, Country	Date	Umesh PHUYAL
Done at _____,	on _____	
City, State, Country	Date	Wanshi CHEN

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 _____
City, State, Country Date Xiaoxia ZHANG

Done at _____, on _____
City, State, Country Date Xipeng ZHU

Done at _____, on _____
City, State, Country Date Le LIU

Done at _____, on _____
City, State, Country Date Alberto RICO ALVARINO

Done at _____, on _____
City, State, Country Date Kazuki TAKEDA

Done at San Diego, CA, on 12/29/2020 
City, State, Country Date Prasad Reddy KADIRI

Done at _____, on _____
City, State, Country Date Umesh PHUYAL

Done at _____, on _____
City, State, Country Date Wanshi CHEN

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;

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Done at _____, on _____
City, State, Country Date Xiaoxia ZHANG

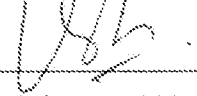
Done at _____, on _____
City, State, Country Date Xipeng ZHU

Done at _____, on _____
City, State, Country Date Le LIU

Done at _____, on _____
City, State, Country Date Alberto RICO ALVARINO

Done at _____, on _____
City, State, Country Date Kazuki TAKEDA

Done at _____, on _____
City, State, Country Date Prasad Reddy KADIRI

Done at San Diego, CA, on 12/9/2020
City, State, Country Date  Umesh PHUYAL

Done at _____, on _____
City, State, Country Date Wanshi CHEN

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 _____
City, State, Country Date Xiaoxia ZHANG

Done at _____, on _____
City, State, Country Date Xipeng ZHU


Done at _____, on _____
City, State, Country Date Le LIU

Done at _____, on _____
City, State, Country Date Alberto RICO ALVARINO

Done at _____, on _____
City, State, Country Date Kazuki TAKEDA

Done at _____, on _____
City, State, Country Date Prasad Reddy KADIRI

Done at _____, on _____
City, State, Country Date Umesh PHUYAL

Done at San Diego, CA, USA, on 12/10/2011
City, State, Country Date  Wanshi CHEN