

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6692001

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	JIAN LIANG	08/18/2020
	ANDREW EVAN GRUBER	08/20/2020
	TAO WANG	08/20/2020
	SRIHARI BABU ALLA	09/12/2020
	KALYAN KUMAR BHIRAVABHATLA	11/20/2020
	JONNALA GADDA NAGENDRA KUMAR	04/28/2021
	WILLIAM LICEA-KANE	10/18/2020
	FREDRICK ALAN HICKMAN	04/28/2021
RECEIVING PARTY DATA		
Name:	QUALCOMM INCORPORATED	
Street Address:	5775 MOREHOUSE DRIVE	
City:	SAN DIEGO	
State/Country:	CALIFORNIA	
Postal Code:	92121-1714	
PROPERTY NUMBERS Total: 1		
Property Type	Number	
Application Number:	16892096	
CORRESPONDENCE DATA		
Fax Number:	(303)473-2720	
<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>		
Phone:	3034732700	
Email:	eajuntunen@hollandhart.com	
Correspondent Name:	MICHAEL DRAPKIN	
Address Line 1:	P.O. BOX 11583	
Address Line 4:	SALT LAKE CITY, UTAH 84147	
ATTORNEY DOCKET NUMBER:	FDM145 (101357.0147)	
NAME OF SUBMITTER:	MICHAEL L. DRAPKIN	
SIGNATURE:	/Michael L. Drapkin/	

DATE SIGNED:	05/04/2021
Total Attachments: 10 source=202338_Assignment#page1.tif source=202338_Assignment#page2.tif source=202338_Assignment#page3.tif source=202338_Assignment#page4.tif source=202338_Assignment#page5.tif source=202338_Assignment#page6.tif source=202338_Assignment#page7.tif source=202338_Assignment#page8.tif source=202338_Assignment#page9.tif source=202338_Assignment#page10.tif	

ASSIGNMENT

WHEREAS, WE,

1. **Jian LIANG**, having a mailing address located at **5775 Morehouse Drive, San Diego, California 92121-1714**,
2. **Andrew Evan GRUBER**, having a mailing address located at **5775 Morehouse Drive, San Diego, California 92121-1714**,
3. **Tao WANG**, having a mailing address located at **5775 Morehouse Drive, San Diego, California 92121-1714**,
4. **Srihari Babu ALLA**, having a mailing address located at **5775 Morehouse Drive, San Diego, California 92121-1714**,
5. **Kalyan Kumar BHIRAVABHATLA**, having a mailing address located at **5775 Morehouse Drive, San Diego, California 92121-1714**,
6. **Jonnala Gadda NAGENDRA KUMAR**, having a mailing address located at **5775 Morehouse Drive, San Diego, California 92121-1714**,
7. **William LICEA-KANE**, having a mailing address located at **5775 Morehouse Drive, San Diego, California 92121-1714**,
8. **Fredrick Alan HICKMAN**, having a mailing address located at **5775 Morehouse Drive, San Diego, California 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 **BIN FILTERING** (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). **16/892,096** filed **June 3, 2020**, Qualcomm Reference Number **202338**, (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 8-18-2010
City, State Date

Jian Liang
Jian LIANG

Done at _____, on _____
City, State Date

Andrew Evan GRUBER

Done at _____, on _____
City, State Date

Tao WANG

Done at _____, on _____
City, State Date

Srihari Babu ALLA

Done at _____, on _____
City, State Date

Kalyan Kumar BHIRAVABHATLA

Done at _____, on _____
City, State Date

Jonnala Gadda NAGENDRA KUMAR

Done at _____, on _____
City, State Date

William LICEA-KANE

Done at _____, on _____
City, State Date

Fredrick Alan HICKMAN

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 Date

Jian LIANG

Done at Arlington, MA, on 8/20/20
City, State Date

Andrew Evan GRUBER

Done at _____, on _____
City, State Date

Tao WANG

Done at _____, on _____
City, State Date

Srihari Babu ALLA

Done at _____, on _____
City, State Date

Kalyan Kumar BHIRAVABHATLA

Done at _____, on _____
City, State Date

Jonnala Gadda NAGENDRA KUMAR

Done at _____, on _____
City, State Date

William LICEA-KANE

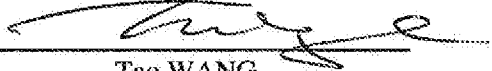
Done at _____, on _____
City, State Date

Fredrick Alan HICKMAN

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 Date
Jian LIANG

Done at _____, on _____
City, State Date
Andrew Evan GRUBER

Done at Santa Clara, CA, on 08/20/2020
City, State Date

Tao WANG

Done at _____, on _____
City, State Date
Srihari Babu ALLA

Done at _____, on _____
City, State Date
Kalyan Kumar BHIRAVABHATLA

Done at _____, on _____
City, State Date
Jonnala Gadda NAGENDRA KUMAR

Done at _____, on _____
City, State Date
William LICEA-KANE

Done at _____, on _____
City, State Date
Fredrick Alan HICKMAN

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 Date Jian LIANG

Done at _____, on _____
City, State Date Andrew Evan GRUBER

Done at _____, on _____
City, State Date Tao WANG

Done at San Diego, U.S.A on 9/12/2020
City, State Date A. Sriharibabu
Srihari Babu ALLA

Done at _____, on _____
City, State Date Kalyan Kumar BHIRAVABHATLA

Done at _____, on _____
City, State Date Jonnala Gadda NAGENDRA KUMAR

Done at _____, on _____
City, State Date William LICEA-KANE

Done at _____, on _____
City, State Date Fredrick Alan HICKMAN

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 Date Jian LIANG

Done at _____, on _____
City, State Date Andrew Evan GRUBER

Done at _____, on _____
City, State Date Tao WANG

Done at _____, on _____
City, State Date Srihari Babu ALLA

Done at Bangalore, on 11/26/20
City, State Date D. Kalyan Kumar
Kalyan Kumar BHIRAVABHATLA

Done at _____, on _____
City, State Date Jonnala Gadda NAGENDRA KUMAR

Done at _____, on _____
City, State Date William LICEA-KANE

Done at _____, on _____
City, State Date Fredrick Alan HICKMAN

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

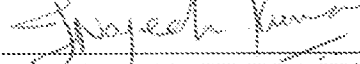
Done at _____, on _____
City, State Date
Jian LIANG

Done at _____, on _____
City, State Date
Andrew Evan GRUBER

Done at _____, on _____
City, State Date
Tao WANG

Done at _____, on _____
City, State Date
Srihari Babu ALLA

Done at _____, on _____
City, State Date
Kalyan Kumar BHIRAVABHATLA

Done at SAN DIEGO, CA, on 04/28/2021
City, State Date

Jonnata Gadga NAGENDRA KUMAR

Done at _____, on _____
City, State Date
William LICEA-KANE

Done at _____, on _____
City, State Date
Fredrick Alan HICKMAN

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 Date Jian LIANG

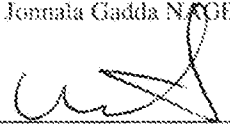
Done at _____, on _____
City, State Date Andrew Evan GRUBER

Done at _____, on _____
City, State Date Tao WANG

Done at _____, on _____
City, State Date Srihari Babu ALLA

Done at _____, on _____
City, State Date Kalyan Kumar BHIRAVABHATLA

Done at _____, on _____
City, State Date Jonnala Gadda NAGENDRA KUMAR

Done at ARLINGTON MA, on 2020-10-18
City, State Date 
William LICEA-KANE

Done at _____, on _____
City, State Date Fredrick Alan HICKMAN

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 _____ Date _____
Jian LIANG

Done at _____, on _____
City, State _____ Date _____
Andrew Evan GRUBER

Done at _____, on _____
City, State _____ Date _____
Tao WANG

Done at _____, on _____
City, State _____ Date _____
Srihari Babu ALLA

Done at _____, on _____
City, State _____ Date _____
Kalyan Kumar BHIRAVABHATLA

Done at _____, on _____
City, State _____ Date _____
Jonnala Gadde NAGENDRA KUMAR

Done at _____, on _____
City, State _____ Date _____
William LICEA-KANE

Done at San Diego, CA, on 9/28/21
City, State _____ Date _____
Frederick Alan HICKMAN