

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT6069580

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
PIYUSH GUPTA	03/01/2017
CHONG LI	03/01/2017
SHAILESH PATIL	03/01/2017
JUNYI LI	03/01/2017
TINGFANG JI	03/08/2017
JOSEPH BINAMIRA SORIAGA	03/28/2017
JING JIANG	03/02/2017
WEI ZENG	03/24/2017
ALEXEI YURIEVITCH GOROKHOV	03/27/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	QUALCOMM INCORPORATED
<b>Street Address:</b>	5775 MOREHOUSE DRIVE
<b>City:</b>	SAN DIEGO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	92121-1714
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16853086
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(214)855-8200
<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>	
<b>Phone:</b>	2148558133
<b>Email:</b>	mitzi.booth@nortonrosefulbright.com
<b>Correspondent Name:</b>	J. YAQUIAN/NORTON ROSE FULBRIGHT US LLP
<b>Address Line 1:</b>	2200 ROSS AVE SUITE 3600
<b>Address Line 4:</b>	DALLAS, TEXAS 75201-7932
<b>ATTORNEY DOCKET NUMBER:</b>	QLXX.P1121USC1/1001120473
<b>NAME OF SUBMITTER:</b>	JUAN C. YAQUIAN

<b>SIGNATURE:</b>	/JUAN C. YAQUIAN/
<b>DATE SIGNED:</b>	04/20/2020
<b>Total Attachments: 12</b> source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif source=Assignment#page4.tif source=Assignment#page5.tif source=Assignment#page6.tif source=Assignment#page7.tif source=Assignment#page8.tif source=Assignment#page9.tif source=Assignment#page10.tif source=Assignment#page11.tif source=Assignment#page12.tif	

ASSIGNMENT

WHEREAS, WE,

1. Piyush Gupta, a citizen of India, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Bridgewater, New Jersey
2. Tingfang Ji, a citizen of People's Republic of China, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
3. Chong Li, a citizen of People's Republic of China, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Weehawken, New Jersey
4. Shailesh Patil, a citizen of India, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Raritan, New Jersey
5. Joseph Binamira Soriaga, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
6. Jing Jiang, a citizen of People's Republic of China, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
7. Wei Zeng, a citizen of People's Republic of China, having a mailing address located at 10262 Cassia Glen Drive; San Diego, California 92127, and a resident of San Diego, California
8. Alexei Yurievitch Gorokhov, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
9. Junyi Li, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Chester, New Jersey

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 DEVICE DETECTION IN MIXED STATIC AND MOBILE DEVICE NETWORKS (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

QXX.P1121US

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). 15/386114, filed December 21, 2016, Qualcomm Reference No. 163503, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 62/347973, filed June 9, 2016, Qualcomm Reference No. 163503P1 (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 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;

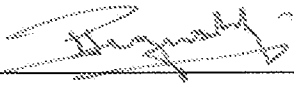

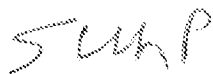
AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may

QXX.P1121US

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 <u>Bridgewater NJ</u> , on <u>03-01-2017</u>		
LOCATION	DATE	Piyush Gupta
Done at _____, on _____	_____	_____
LOCATION	DATE	Tingfang Ji
Done at <u>Bridgewater NJ</u> , on <u>3-1-17</u>		
LOCATION	DATE	Chong Li
Done at <u>Bridgewater NJ</u> , on <u>3-1-2017</u>		
LOCATION	DATE	Shailesh Patil
Done at _____, on _____	_____	_____
LOCATION	DATE	Joseph Binamira Soriaga
Done at _____, on _____	_____	_____
LOCATION	DATE	Jing Jiang
Done at _____, on _____	_____	_____
LOCATION	DATE	Wei Zeng

QXX.P1121US

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	Alexei Yurievitch Gorokhov
Done at <u>Bridgewater NJ</u> , on <u>3-1-17</u>	_____	_____
LOCATION	DATE	<u>Junyi Li</u>

QXX.P1121US

ASSIGNMENT

WHEREAS, WE,

1. Piyush Gupta, a citizen of India, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Bridgewater, New Jersey
2. Tingfang Ji, a citizen of People's Republic of China, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
3. Chong Li, a citizen of People's Republic of China, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Weehawken, New Jersey
4. Shailesh Patil, a citizen of India, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Raritan, New Jersey
5. Joseph Binamira Soriaga, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
6. Jing Jiang, a citizen of People's Republic of China, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
7. Wei Zeng, a citizen of People's Republic of China, having a mailing address located at 10262 Cassia Glen Drive; San Diego, California 92127, and a resident of San Diego, California
8. Alexei Yurievitch Gorokhov, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
9. Junyi Li, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Chester, New Jersey

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 DEVICE DETECTION IN MIXED STATIC AND MOBILE DEVICE NETWORKS (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

QXX.P1121US

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). 15/386114, filed December 21, 2016, Qualcomm Reference No. 163503, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 62/347973, filed June 9, 2016, Qualcomm Reference No. 163503P1 (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 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

QXX.P1121US



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.

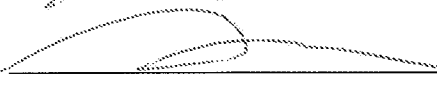
Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Piyush Gupta

Done at San Diego, on 3/8/2017  
LOCATION DATE   
Tingfang Ji

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Chong Li

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Shailesh Patil

Done at San Diego, on 2/28/17  
LOCATION DATE   
Joseph Binamira Soriaga

Done at San Diego, on 3/2/17  
LOCATION DATE   
Jing Jiang

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Wei Zeng

QXX.P1121US

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                                    Alexei Yurievitch Gorokhov

Done at \_\_\_\_\_, on \_\_\_\_\_  
                    LOCATION                                    DATE                                    Junyi Li

ASSIGNMENT

WHEREAS, WE,

1. Piyush Gupta, a citizen of India, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Bridgewater, New Jersey
2. Tingfang Ji, a citizen of People's Republic of China, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
3. Chong Li, a citizen of People's Republic of China, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Weehawken, New Jersey
4. Shailesh Patil, a citizen of India, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Raritan, New Jersey
5. Joseph Binamira Soriaga, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
6. Jing Jiang, a citizen of People's Republic of China, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
7. Wei Zeng, a citizen of People's Republic of China, having a mailing address located at 10262 Cassia Glen Drive; San Diego, California 92127, and a resident of San Diego, California
8. Alexei Yurievitch Gorokhov, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
9. Junyi Li, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Chester, New Jersey

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 DEVICE DETECTION IN MIXED STATIC AND MOBILE DEVICE NETWORKS (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

QXX.P1121US

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). 15/386114, filed December 21, 2016, Qualcomm Reference No. 163503, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 62/347973, filed June 9, 2016, Qualcomm Reference No. 163503P1 (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 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

QXX.P1121US

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 \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Piyush Gupta

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Tingfang Ji

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Chong Li

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Shailesh Patil

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Joseph Binamira Soriaga


Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Jing Jiang

Done at Cupertino, on 03/24/2017  
LOCATION DATE  Wei Zeng

QXX.P1121US

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	<u>SAN DIEGO</u>	, on	<u>03/23/2017</u>	
	LOCATION		DATE	Alexei Yurievitch Gorokhov
Done at	_____	, on	_____	_____
	LOCATION		DATE	Junyi Li

QXX.P1121US