505793334 11/26/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5840162

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the CORRECTION TO DOC DATE FOR ASSIGNOR NUMBER TWO, HAO XU previously recorded on Reel 050854 Frame 0661. Assignor(s) hereby confirms the DOC DATE FOR ASSIGNOR NUMBER TWO, HAO XU, SHOULD READ: 08/29/2017.

CONVEYING PARTY DATA

Name	Execution Date
KAPIL BHATTAD	08/29/2017
HAO XU	08/29/2017
ALBERTO RICO ALVARINO	09/05/2017
PETER GAAL	09/05/2017
MASATO KITAZOE	09/08/2017
SHARAD SAMBHWANI	10/02/2017

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:	16562930

CORRESPONDENCE DATA

Fax Number:

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.

Email: tamerie.ballance@nortonrosefulbright.com

Correspondent Name: QUALCOMM/NORTON ROSE FULBRIGHT US LLP

Address Line 1: 2200 ROSS AVE Address Line 2: SUITE 3600

Address Line 4: DALLAS, TEXAS 75201

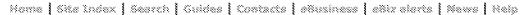
ATTORNEY DOCKET NUMBER:	QLXX.P1144US.C1
NAME OF SUBMITTER:	THOMAS J. MEANEY
SIGNATURE:	/THOMAS J. MEANEY/

PATENT 505793334 REEL: 051136 FRAME: 0086

DATE SIGNED:	11/26/2019		
Total Attachments: 8			
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United States Patent and Trademark Office





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Confirmation Receipt

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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KAPIL BHATTAD	08/29/2017
HAO XU	08/21/2017
ALBERTO RICO ALVARINO	09/05/2017
PETER GAAL	09/05/2017
MASATO KITAZOE	09/08/2017
SHARAD SAMBHWANI	10/02/2017

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:	16562930	

CORRESPONDENCE DATA

Fax Number:

Phone: 214-855-8000

Email: tamerie.ballance@nortonrosefulbright.com

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.

Correspondent Name: QUALCOMM/NORTON ROSE FULBRIGHT US LLP

Address Line 1: 2200 ROSS AVE
Address Line 2: SUITE 3600

Address Line 4: DALLAS, TEXAS 75201

ATTORNEY DOCKET NUMBER:	QLXX.P1144US.C1	
NAME OF SUBMITTER:	THOMAS J. MEANEY	
Signature:	/THOMAS J. MEANEY/	
Date:	10/29/2019	

Total Attachments: 6

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RECEIPT INFORMATION

EPAS ID: PAT 5793656 **Receipt Date:** 10/29/2019

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ASSIGNMENT

WHEREAS, WE,

- 1. Kapil BHATTAD, a citizen of India, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Bangalore, India
- 2. Hao XU, 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 Beijing, China
- 3. Alberto RICO ALVARINO, a citizen of Spain, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of San Diego, California
- 4. Peter GAAL, 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
- 5. Masato KITAZOE, a citizen of Japan, having a mailing address located at 5775 Morehouse Drive; San Diego, California 92121-1714 and a resident of Hachiouji-shi, Japan
- 6. Sharad SAMBHWANI, 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

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 COVERAGE ENHANCEMENT AND NORMAL MODES SWITCHING RELATED OPTIMIZATION (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, I do hereby acknowledge that I 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). 15/670,697, filed August 7, 2017, Qualcomm Reference

No. 165439, and all provisional applications relating thereto, together with Indian Provisional Application No(s). 201641033860, filed October 4, 2016, Qualcomm Reference No. 165439IN1, (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 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	Bangalore	, on	08/29/2017	Kapil
_	LOCATION	 ·	DATE	Kapii BHATTAD
Done at _		, on		
	LOCATION		DATE	Hao XU
Done at _		, on		
	LOCATION		DATE	Alberto RICO ALVARINO
Done at _		, on		
	LOCATION		DATE	Peter GAAL
Done at		, on		
	LOCATION		DATE	Masato KITAZOE
Done at _		, on		
_	LOCATION		DATE	Sharad SAMBHWANI

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	Kapil BHATTAD
Done at _	U U	, on	8/29/2017	23
	LOCATION		DATE	Hao XU
Done at _		, on		
_	LOCATION		DATE	Alberto RICO ALVARINO
Done at _		, on		
_	LOCATION		DATE	Peter GAAL
Done at		, on		
	LOCATION		DATE	Masato KITAZOE
Done at _		, on		
	LOCATION		DATE	Sharad SAMBHWANI

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	Kapil BHATTAD
Done at _		_ , on		
	LOCATION		DATE	Hao XU
Done at	San Divio	_ , on	415/2014	TIP
-	LOCATION	_	DATE	Alberto RICO ALVARINO
Done at	San Ding	_ , on	09/05/2017	7-5
_	LOCATION		DATE	Peter GAAL
Done at		_ , on		
	LOCATION		DATE	Masato KITAZOE
Done at	SAN DIEJE	_ , on	10/02/2017	Shound for the m
	LOCATION		DATE	Sharad SAMBHWANI

PATENT QUALCOMM Ref. No. 165439 Page 3 of 3

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	Kapil BHATTAD
Done at		, on		
	LOCATION		DATE	Hao XU
Done at		, on		
	LOCATION		DATE	Alberto RICO ALVARINO
Done at	-	, on		
	LOCATION		DATE	Peter GAAL
Done at _	Tokyo	, on	September 8,20/x	m Hazar
	LOCATION		DATE	Masato KITAZOE
Done at		, on		
	LOCATION		DATE	Sharad SAMBHWANI

PATENT REEL: 051136 FRAME: 0095

RECORDED: 11/26/2019