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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4532923

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WANSHI CHEN	09/18/2014
PETER GAAL	09/30/2014
DURGA PRASAD MALLADI	10/08/2014
TAO LUO	09/30/2014
TINGFANG JI	10/17/2014
NAGA BHUSHAN	09/30/2014
YONGBIN WEI	10/17/2014
ALEKSANDAR DAMNJANOVIC	09/19/2014

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:	15658160

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.

Phone: 214-855-8000

Email: tamerie.ballance@nortonrosefulbright.com

Correspondent Name: QUALCOMM / NORTON ROSE FULBRIGHT US LLP

Address Line 1: 2200 ROSS AVENUE

Address Line 2: SUITE 3600

Address Line 4: DALLAS, TEXAS 75201-7932

ATTORNEY DOCKET NUMBER:	QLXX.P0425US.C1
NAME OF SUBMITTER:	THOMAS J. MEANEY
SIGNATURE:	/THOMAS J. MEANEY/

DATE SIGNED:	08/02/2017
Total Attachments: 10	
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ASSIGNMENT

WHEREAS, WE.

- 1. Wanshi Chen, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
- 2. Peter Gaal, a citizen of United States, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
- 3. Durga Prasad Malladi, a citizen of United States, having a mailing address located at 5775. Morehouse Drive. San Diego, CA 92121-1714 and a resident of San Diego, CA,
- 4. Tao Luo, a citizen of United States, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
- 5. Tingfang Ji, a citizen of United States, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
- 6. Naga Bhushan, a citizen of United States, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
- 7. Yongbin Wei, a citizen of United States, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
- 8. Aleksandar Damnjanovic, a citizen of United States, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Del Mar, CA,

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 UPLINK PROCEDURES FOR LTE/LTE-A COMMUNICATION SYSTEMS WITH UNLICENSED SPECTRUM (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

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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). 14/459,676 filed August 14, 2014, Qualcomm Reference No. 134205, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 61/866,925, filed August 16, 2013, Qualcomm Reference No. 134205P1, (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

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

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Done at _	LOCATION	DATE	Wanshi Chen
Done at _	LOCATION	on	Peter Gaal
_	LOCATION	DATE	Durga Prasad Malladi
Done at _	LOCATION	on	Tao Luo
Done at _	LOCATION	on	Tingfang Ji
Done at _		on	
			Naga Bhushan
Lone at _	LOCATION	DATE	Yongbin Wei
Done at _	LOCATION	, on	Aleksandar Damnianovic

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LOCATION	DATE	Peter Gaal
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LOCATION	DATE	Durga Prasad Malladi
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LOCATION	DATE	Tao Luo
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LOCATION	DATE	Yongbin Wei
Done at	, on	
LOCATION	DATE	Aleksandar Damnjanovic

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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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D 0110 at	LOCATION	DATE	Durga Prasad Malladi
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	LOCATION	DATE	Aleksandar Damnjanovic

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Done at	_, on	Aleksandar Damnjanovic

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	LOCATION	on	Yongbin Wei
Done at _		, on	
	LOCATION	DATE	Aleksandar Damnjanovic

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Done at	_, on	Durga Prasad Malladi
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Done at SAN DIEGO	on 9-30-14	T. S. WagaBhushan
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Done at	DATE	Yongbin Wei
Done at	, on	Aleksandar Damnjanovic

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LOC	ATION	DATE	Yongbin Wei
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LOC	ATION	DATE	Aleksandar Damnjanovic

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_	LOCATION		DATE	Tingfang Ji
Done at	LOCATION	on		
	LOCATION		DATE	Naga Bhushan
Done at		on		
	LOCATION	_	DATE	Yongbin Wei
Done at	San Dies. CA	on	9/19/W14 DATE	Marsh
_	LOCATION		DATE /	Aleksandar Daninjanovic

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PATENT REEL: 043175 FRAME: 0177

RECORDED: 08/02/2017