10/16/2017 504595227

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RENQIU WANG	09/28/2017
YI HUANG	09/25/2017
WANSHI CHEN	09/26/2017
PETER GAAL	10/02/2017
WEI ZENG	10/05/2017
HAO XU	08/18/2017

RECEIVING PARTY DATA

Name:	QUALCOMM INCORPORATED
Street Address:	5775 MOREHOUSE DRIVE
City:	SAN DIEGO
State/Country:	CALIFORNIA
Postal Code:	92121

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15685778

CORRESPONDENCE DATA

Fax Number: (571)432-0808

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: 5714320800

Email: Jcato@harrityllp.com

HARRITY AND HARRITY, LLP **Correspondent Name:** 11350 RANDOM HILLS ROAD Address Line 1:

Address Line 2: SUITE 600

Address Line 4: FAIRFAX, VIRGINIA 22030

ATTORNEY DOCKET NUMBER: 0097-0195/170632	
NAME OF SUBMITTER:	NEIL R. KARDOS
SIGNATURE:	/Neil R. Kardos, Reg. No. 67,238/
DATE SIGNED:	10/16/2017

Total Attachments: 6 source=170632_ASG_2017-10-12_Signed_18608997_1#page1.tif source=170632_ASG_2017-10-12_Signed_18608997_1#page2.tif source=170632_ASG_2017-10-12_Signed_18608997_1#page3.tif source=170632_ASG_2017-10-12_Signed_18608997_1#page4.tif

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source=170632_ASG_2017-10-12_Signed_18608997_1#page6.tif

ASSIGNMENT

WHEREAS, WE,

- 1. Renqiu WANG, a citizen of the People's Republic of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 US and a resident of San Diego, CA,
- 2. Yi HUANG, a citizen of the People's Republic of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 US and a resident of San Diego, CA,
- 3. Wanshi CHEN, a citizen of the People's Republic of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 US and a resident of San Diego, CA,
- 4. Peter GAAL, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 US and a resident of San Diego, CA,
- 5. Wei ZENG, a citizen of the People's Republic of China, having a mailing address located at 10262 Cassia Glen Drive, San Diego, CA 92127 US and a resident of San Diego, CA.
- 6. Hao XU, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 US and a resident of Beijing, China

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 TECHNIQUES AND APPARATUSES FOR COMMON UPLINK BURST (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). 15/685,778 filed August 24, 2017, Qualcomm Reference No. 170632, and all provisional applications relating thereto, together

with U.S. Provisional Application No(s). 62/417,106, filed November 3, 2016, Qualcomm Reference No. 170632P1, (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	CAN Viego, on LOCATION	07/28/w1)	Renqiu WANG
Done at	LOCATION, on	9(25/2×) DATE	YI HUANG
Done at	San Ago of on LOCATION	0 9/24/2-/) DATE	Wanshi CHEN
Done at	Com Diago, on LOCATION	10/62/2017	Peter GAAL
Done at	, on LOCATION	DATE	Wei ZENG
Done at	San Ologo, on	_9//9/2019 _	Hao XU

ASSIGNMENT

WHEREAS, WE,

- 1. Renqiu WANG, a citizen of the People's Republic of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 US and a resident of San Diego, CA,
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- 4. Peter GAAL, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 US and a resident of San Diego, CA.
- 5. Wei ZENG, a citizen of the People's Republic of China, having a mailing address located at 10262 Cassia Glen Drive, San Diego, CA 92127 US and a resident of San Diego, CA.
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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 TECHNIQUES AND APPARATUSES FOR COMMON UPLINK BURST (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). 15/685,778 filed August 24, 2017, Qualcomm Reference No. 170632, and all provisional applications relating thereto, together

with U.S. Provisional Application No(s). 62/417,106, filed November 3, 2016, Qualcomm Reference No. 170632P1, (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		, on	
_	LOCATION	DATE	Renqiu WANG
Done at	LOCATION	_, on	Yi HUANG
Done at _	LOCATION	on DATE	Wanshi CHEN
Done at_	LOCATION	on	Peter GAAL
Done at	LOCATION	Ω on <u>⟨∂</u> /∂∫∕∂₹ DATE	9 - Wei ZENG
Done at _	LOCATION	_, on	Han XII

PATENT REEL: 043872 FRAME: 0019

RECORDED: 10/16/2017