PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHENXI HAO	08/21/2018
YU ZHANG	08/28/2018
WANSHI CHEN	08/27/2018
CHAO WEI	08/28/2018
LIANGMING WU	08/21/2018

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
PCT Number:	CN2018090989

CORRESPONDENCE DATA

Fax Number: (303)473-2720

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: 3034732700

Email: wcnishida@hollandhart.com
Correspondent Name: HOLLAND & HART LLP
Address Line 1: 222 SOUTH MAIN STREET

Address Line 2: SUITE 2200

Address Line 4: SALT LAKE CITY, UTAH 84147

ATTORNEY DOCKET NUMBER:	PN365WO.US (93519.2876)	
NAME OF SUBMITTER:	CHRISTOPHER M. SWICKHAMER	
SIGNATURE:	/Christopher M. Swickhamer/	
DATE SIGNED:	E SIGNED: 02/04/2020	

Total Attachments: 5

PATENT REEL: 051708 FRAME: 0444

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PATENT REEL: 051708 FRAME: 0445

ASSIGNMENT

转让协议

WHEREAS, WE

1. HAO, Chenxi, a citizen of CN, having a mailing address located at 5775 Morehouse Drive,

San Diego, California 92121-1714, U.S.A.; and a resident of CN,

- 2. ZHANG, YB a citizen of <u>CN</u>, having a mailing address located at <u>5775 Morehouse Drive</u>, <u>San Diego</u>, <u>California 92121-1714</u>, <u>U.S.A.</u>; and a resident of <u>CN</u>,
- 3. <u>CHEN, Wanshi</u>, a citizen of <u>CN</u>, having a mailing address located at <u>5775 Morehouse Drive</u>, <u>San Diego</u>, <u>California 92121-1714</u>, <u>U.S.A.</u>; and a resident of US,
- 4. <u>WEI, Chao</u>, a citizen of <u>CN</u>, having a mailing address located at <u>5775 Morehouse Drive</u>, <u>San Diego</u>, <u>California 92121-1714</u>, <u>U.S.A.</u>; and a resident of <u>CN</u>,
- 5. <u>WU, Liangming</u>, a citizen of <u>CN</u>, having a mailing address located at <u>5775 Morehouse Drive</u>, <u>San Diego</u>, <u>California 92121-1714</u>, <u>U.S.A.</u>; and a resident of <u>CN</u>.

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating PHYSICAL RESOURCE GROUP SIZE FOR PRECODED CHANNEL STATE REFERENCE **SIGNALS** INFORMATION (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

鉴于,我们

- 1. <u>C.郝</u>, <u>中国</u>的公民, 邮寄 地址 <u>美国加利福尼亚州圣地亚哥魔豪斯</u> 道 5775 号 和 <u>中国</u>的居民,
- 2. <u>Y.张</u>, <u>中国</u>的公民, 邮寄地址 <u>美国加利福尼亚州圣地亚哥魔豪斯</u>道 5775 号 和 中国 的居民,
- 3. <u>陈万士</u>, <u>中国</u>的公民, 邮 寄地址_美国加利福尼亚州圣地亚哥魔豪 斯道 5775 号 和 **美国**的居民,
- 4. **魏超**, 中国的公民,邮寄地址 美国加利福尼亚州圣地亚哥魔豪斯道 5775 号和 中国 的居民,

产生了一个或多个与 PHYSICAL RESOURCE GROUP SIZE FOR PRECODED CHANNEL STATE INFORMATION REFERENCE SIGNALS 有关的过程、方法、机器、制品、设计、物质成分、发明、发现,或者新的或有用的改进(统称"发明"),我们对这种发明提出和/或可能提出一个或多个专利申请;及

鉴于,高通公司(以下简称"受让人"),一家特拉华州的公司,营业地在美国加利福尼亚州圣地亚哥魔豪斯道5775号,邮编92121 1714,希望获得或

the entire right, title, and interest in and to said INVENTIONS, including all patent applications therefore, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

以其他方式取得所述发明的所有权利、 所有权和权益,包括其所有专利申请和 所有己授权或此后由其可能被授权的专 利,包括但不限于下面确定的那些专 利。

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 including but not limited to International Patent Cooperation Treaty Application No(s). PCT/CN2018/090989 , filed on June 13, 2018 , Docket No. 174831WO2 , (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 rights of priority under International Conventions, Treaties, and Agreements, all utility applications, national phase applications, utility model applications, divisional applications, renewal applications, continuation applications, continuationin-part applications, patent of addition applications, confirmation applications, validation applications, and design applications thereof, and all issued patents 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;

因此,基于我们确认收到的有价值的对价,我们在此认可,我们已经出售、转让、转送、转移,以及据此陈述确实出售、转让、转送以及转移所述发明的在全世界的所有权利、所有权和权益于受让人、其继任者、其合法代表人、及其受让者,包括所有基于所述发明可能已提交或随后可能提交的专利申请,包括但不限于申请于 2018年6月13日的,编号为

<u>PCT/CN2018/090989</u> 的国际专利合作 条约申请,案卷号: 174831WO2,

(我们并在此授权受让人及其代表在此后知道有关该发明的申请时,添加这些申请号和/申请时间;以及根据国际公约、条约和协定,所有的实用申请、国家阶段的申请、实用新型申请、分案申请、续展申请、继续申请、部分继续申请、附属申请专利、证实申请、有效申请和外观设计申请,以及所有已颁专利及随后所有可能的就此发明的再颁、更新、复审、以及对上述所有此类专利的任何续展的所有优先权;

AND WE DO HEREBY authorize and request any Official of any country or countries 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:

我们在此授权并请求任何国家的任何公务人员,其职责是对提交的申请颁发专利或注册的,基于本法律文书的条款,颁发所述发明的所有专利给所述受让人、其继任者、其合法代表人及其受让者;

Docket No. 174831WO2

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 suc 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;

我们在此出售、转让、转送、并转 移给所述受让人、其继任者、其合法代 表人及其受让人,由于妨碍在此转让的 权利(在转让给所述受让人日之前已产 生的或可能已产生的、或可能随后所产 生的或可能已产生的、或可能随后所产 生的)而产生的或与其有关的,要求全 部损害的赔偿或补偿的权利,包括但不 限于起诉寻求、获取、收集、恢复、持 有损害赔偿及任何正在进行或预期的许 可使用费是我们可能有权或我们可能收取 的与任何所述专利有关的在其颁发前或 颁发后由于侵权或来自任何调解或和解 的损害赔偿及许可使用费;

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:

我们在此承诺并同意,我们将就我 们所知的关于所述发明的任何事实与所 述受让人、其继任者、其合法代表人、 及其受让者及时沟通,并在任何需要的 法律程序中作证、签署全部合法文件、 签署所有申请书和证书、做出所有正确 的声明和/或宣誓、并向所述受让人、其 继任者、其合法代表人、及其受让者提 供一切合法的援助,以在所有国家获得 和实施所述发明的专利保护:

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

我们在此承诺,我们不会签署任何 与这些陈述相冲突的书面文件或有任何 与这些陈述相冲突的行为;

AND WE agree this ASSIGNMENT shall be interpreted under the laws of the State of California, and that in case of a discrepancy between the English version and the Chinese version of this agreement, the English version shall prevail.

我们同意,本转让协议依据美国加利福尼亚州法律解释。如果本协议的中英文文本内容不一致,以英文文本为准。

1. HAO, Chenxi	Signature
Done at Compact, State] this state day of August.	于 <u>》//《</u> 年 <u>》</u> 月 <u>》</u> 日签署于 <u>》</u> 》。 (州,市)。
2. ZHANG, Yu	Signature Signature
Done at Regun City, State this Wilday of Organia. 2018	于 <u>2018</u> 年8月28日签署于128
3. CHEN, Wanshi	Signature
Done at [City, State] this day of	于年月日签署于 (州,市)。
4. WEI, Chao	Ches Wei
Done at Being [City, State] this 28th day of	于 <u>2018年8</u> 月28日签署于225 (州,市)。
5. WU, Liangming	Signature
Done at Profession, State this 2 day of	于 <u>20%</u> 年 <u>6</u> 月 <u>2(</u> 日签署于 <u>20%</u> (州,市)。

Docket No. <u>174831WO2</u>

1. HAO, Chenxi	
	Signature
Done at [City, State] this day of	于年月日签署于
	(州,市)。
2. ZHANG, Yu	
	Signature
Done at [City, State] this day of	于年月日签署于
	(州,市)。
3. CHEN, Wanshi	
	Signature
Surpoy A 2719	
Done at [City, State] this day of	于年月日签署于
4ngus - 29 8	(州, 市)。
4. WEI, Chao	
	Signature
Done at [City, State] this day of	于年月日签署于
	(州,市)。
5. WU, Liangming	
	Signature
Done at [City, State] this day of	于年月日签署于
	(州, 市)。