506547820 03/10/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT6594599

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BO CHEN	11/26/2019
PAVAN KUMAR VITTHALADEVUNI	12/09/2019
YU ZHANG	11/26/2019
RUIFENG MA	11/26/2019
JOSEPH BINAMIRA SORIAGA	12/03/2019
YELIZ TOKGOZ	12/09/2019
TINGFANG LI	12/17/2019
ALEXANDROS MANOLAKOS	12/04/2019

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:	17275128

CORRESPONDENCE DATA

(713)623-4846 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: 713-623-4844

Email: psdocketing@pattersonsheridan.com,sdominguez@pattersonsheridan.com

PATTERSON + SHERIDAN, LLP **Correspondent Name:**

Address Line 1: 24 GREENWAY PLAZA

Address Line 2: **SUITE 1600**

Address Line 4: HOUSTON, TEXAS 77046

ATTORNEY DOCKET NUMBER:	185007USP
NAME OF SUBMITTER:	STEVEN E. ROBERTS
SIGNATURE:	/Stevem E. ROBERTS/

REEL: 055557 FRAME: 0512 506547820

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DATE SIGNED:	03/10/2021
Total Attachments: 10	
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ASSIGNMENT

WHEREAS, WE

- 1. <u>CHEN, Bo</u>, having a mailing address located at <u>5775 Morehouse Drive</u>, San Diego, California 92121-1714, U.S.A.,
- 2. <u>VITTHALADEVUNI</u>, <u>Pavan Kumar</u>, having a mailing address located at <u>5775 Morehouse</u> <u>Drive</u>, San Diego, California 92121-1714, U.S.A.,
- 3. **ZHANG, Yu**, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A.,
- 4. <u>MA. Ruifeng</u>, having a mailing address located at <u>5775 Morehouse Drive</u>, <u>San Diego</u>, California 92121-1714, U.S.A.,
- 5. SORIAGA, Joseph Binamira having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A.,
- 6. <u>TOKGOZ, Yeliz</u>, having a mailing address located at <u>5775 Morehouse Drive</u>, San Diego, California 92121-1714, U.S.A.,
- 7. <u>JI, Tingfang</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>,
- 8. <u>MANOLAKOS</u>, <u>Alexandros</u>, having a mailing address located at <u>5775 Morehouse Drive</u>, San Diego, California 92121-1714, U.S.A.

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 SOUNDING REFERENCE SIGNAL (SRS) GUIDED DOWNLINK CHANNEL STATE INFORMATION-REFERENCE SIGNAL (CSI-RS) SCAN (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, OUALCOMM Incorporated

转让协议

鉴于,我们

- 1. **陈波**, 邮寄地址 <u>美国加</u> 利福尼亚州圣地亚哥魔豪斯道 5775 号,
- 2. **P·K·维特哈拉德夫尤尼**, 邮 寄地址 美国加利福尼亚州圣地亚哥魔豪 斯道 5775 号,
- 3. <u>**张煜**</u>,邮寄地址<u>美国加利</u> 福尼亚州圣地亚哥魔豪斯道 5775 号,
- 4. **马瑞丰**,邮寄地址<u>美国加</u> 利福尼亚州圣地亚哥废豪斯道 5775 号,
- 6. **Y 托克格兹**, 邮寄地址 美国加利福尼亚州圣地亚哥魔豪斯道 5775 号,
- 7. <u>季庭方</u>,邮寄地址<u>美国加</u>利福尼亚州圣地亚哥魔豪斯道 5775 号,
- 8. **A 马诺拉科斯** , 邮寄地址 美国加利福尼亚州圣地亚哥廉豪斯道 5775 号,

产生了一个或多个与 <u>SOUNDING</u>
REFERENCE SIGNAL (SRS) GUIDED DOWNLINK CHANNEL STATE INFORMATION-REFERENCE
SIGNAL (CSI-RS) SCAN 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

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(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 patent applications therefore, 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 including but not limited to International Patent Cooperation Treaty Application No(s). PCT/CN2019/108090, filed on September 26, 2019 , Docket No. 185007WO2 . which claims priority to International Application No. PCT/CN2018/108110, filed on September 27, 2018, Docket No. 185007WO1 (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. continuation-in-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:

AND WE DO HEREBY authorize and request any Official of any country or countries whose duty it is to issue patents on applications or

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 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 所有已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。

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、其维任者、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_2019年9月26日_的,编号为_

PCT/CN2019/108090 的国际专利合作 条约申请,案卷号: 185007WO2,其 优先权为申请于2018年9月27日的, 编号为PCT/CN2018/108110 的国际专利 合作条约申请,案参号: 185007WOI (**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:

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

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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;

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;

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;

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为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。

AND WE HEREBY covenant that WE will 我们在此承诺, 我们不会签署任何 not execute any writing or do any act whatsoever 与这些陈述相冲突的书面文件或有任何 conflicting with these presents; 与这些陈述相冲突的行为: 我们同意,本转让协议依据美国加 AND WE agree this ASSIGNMENT shall be 利福尼亚州法律解释。如果本协议的中 interpreted under the laws of the State of California, 英文文本内容不一致, 以英文文本为 and that in case of a discrepancy between the 准。 English version and the Chinese version of this agreement, the English version shall prevail. 1. CHEN, Bo Done at Reigins [City, State] this 26th day of 2. VITTHALADEVUNI, Payan Kumar Signature Done at [City, State] this day of (州, 市)。 3. ZHANG, Yu Signature Done at Mujor (City, State) this 26th day of 4. MA, Ruifeng Signature チ<u>zの作作1(月 2</u>6日答署于<u>4</u>2 Done at Leng [City, State] this 26th day of 5. SORIAGA, Joseph Binamira Signature Done at ____ [City, State] this ____ day of 于_____年___月___日签署于____ (州,市)。

Docket No. <u>185007WO2</u>

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 that in case of a discrepancy between the	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。

0. TONGUZ, YERZ	
	Signature
Done at [City, State] this day of	于年月日签署于 (州,市)。
7. JI, Tingfang	
	Signature
Done at [City, State] this day of	于年月日签署于 (州,市)。
8. MANOLAKOS, Alexandros	
	Signature
Done at [City, State] this day of	于年月日签署于

转让协议 ASSIGNMENT 鉴于,我们 WHEREAS, WE 陈波 , 邮寄地址 美国加 1 CHEN, Bo , having a mailing address 利福尼亚州圣地亚哥魔聚斯道 5775号。 located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., P·K·维特哈拉德夫尤尼,邮 VITTHALADEVUNI, Pavan Kumar, 寄地址 美国加利福尼亚州圣地亚哥魔蒙 having a mailing address located at 5775 Morehouse Drive. San Diego, California 92121-1714, U.S.A., 期道 5775 号。 张煜 , 邮寄地址 美国加利 ZHANG, Yu, having a mailing address 福尼亚州圣地亚哥魔豪斯道 5775 号, located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., 马瑞丰 , 邮寄地址 美国加 MA, Ruifeng, having a mailing address 利福尼亚州圣地亚哥豫豪斯道 5775 号。 located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., J·B·索里阿加 , 邮寄地址 SORIAGA, Joseph Binamira, having a 美国加利福尼亚州圣地亚哥魔豪斯道 mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., 5775号, Y·托克格兹 , 邮寄地址__ TOKGOZ, Yeliz, having a mailing 美国加利福尼亚州圣地亚哥魔豪斯道 address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., 5775号。 季庭方 ,邮寄地址_美国加 7. JI, Tingfang, having a mailing address 利福尼亚州圣地亚哥魔豪斯道 5775号, located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., A · 马诺拉科斯 , 邮寄地址 美国加利福尼亚州圣地亚哥魔豪斯道 MANOLAKOS, Alexandros, having a 5775 号。 mailing address located at 5775 Morehouse Drive. San Diego, California 92121-1714, U.S.A., 产生了一个或多个与 SOUNDING REFERENCE SIGNAL (SRS) GUIDED have conceived of one or more processes, methods. DOWNLINK CHANNEL STATE machines, articles of manufacture, designs, INFORMATION-REFERENCE compositions of matter, inventions, discoveries or or useful improvements relating SIGNAL (CSI-RS) SCAN 有关的过程。 SOUNDING REFERENCE SIGNAL (SRS) 方法、机器、制品、设计、物质成分、 GUIDED DOWNLINK CHANNEL STATE 发明、发现、或者新的或有用的改进。 INFORMATION-REFERENCE SIGNAL (CSI-(统称"发明"),我们对这种发明提 RS) SCAN (collectively the "INVENTIONS") for which WE have executed and/or may execute one or 出和/或可能提出一个或多个专利申请:

PATENT REEL: 055557 FRAME: 0519

鉴于,高通公司(以下简称"受让

及

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 patent applications therefore, 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 self, 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/CN2019/108090 , filed on September 26, 2019 , Docket No. 185007WO2 , which claims priority to International Application No. PCT/CN2018/108110, filed on September 27, 2018, Docket No. 185007WO1 (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. applications, applications. renewal divisional applications. continuation-in-part continuation 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

AND WE DO HEREBY authorize and request any Official of any country or countries whose duty it is to issue patents on applications or

foregoing and all patents issuing thereon;

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已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。

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、所有权和权益予受让人、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 2019年9月26日 的,编号为

PCT/CN2019/108090 的国际专利合作 条约申请,案卷号: 185007WO2,其 优先权为申请于2018年9月27日。的。 编号为 PCT/CN2018/108110 的国际专利 合作条约申请、案卷号: 185007WO1 (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:

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

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;

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:

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;

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)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的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。

Docket No. 185007WO2

我们在此承诺, 我们不会签署任何

not execute any writing or do any act whatsoever conflicting with these presents;	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. CHEN, Bo	Signature
Done at [City, State] this day of	于年月日签署于
1000 at 1000, county and way or	(州, 市)。
2. VITTHALADEVUNI, Payan Kumar	
()(a. (A a a	Signature
Done at (City, State) this day of	于年月日签署于 (州,市)。
3. ZHANG, Yu	
27, 224207, 102, 4.2	Signature
Done at [City, State] this day of	于年月日签署于
	(州,市)。
4. MA, Ruifeng	Canalysia
Done at [City, State] this day of	Signature 于年月日签署于
projet at tens, share; this day or	(州, 市)。
w commence of the commence of	the state of the s
5. SORIAGA, Joseph Binamira	Signature
5. No. 1	
Done at (City, State) this day of	于年月日签署于
<u> </u>	(州,市)。

AND WE HEREBY covenant that WE will

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Docket No. 185007WO2

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

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 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。

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

English version and the Chinese version of this

雅。

A MANOLAKOS, Alexandros

Bone at [City, State] this day of 于 年 月 日签署于 (州, 市)。

8. MANOLAKOS, Alexandros

Done at [City, State] this day of 于 年 月 日签署于 (州, 市)。

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