506788677 07/28/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6835496

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JOSEPH BINAMIRA SORIAGA	09/20/2020
PAVAN KUMAR VITTHALADEVUNI	10/08/2020
BO CHEN	06/02/2020
RUIFENG MA	06/02/2020
YU ZHANG	06/03/2020
ALEXANDROS MANOLAKOS	06/03/2020
TINGFANG JI	07/21/2020

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:	CN2020074054

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.comCorrespondent Name:HOLLAND & HART LLPAddress Line 1:222 SOUTH MAIN STREET

Address Line 2: SUITE 2200

Address Line 4: SALT LAKE CITY, UTAH 84147

ATTORNEY DOCKET NUMBER:	PR307WO.US (103038.2842)2	
NAME OF SUBMITTER:	NATHAN J. MUTTER	
SIGNATURE:	/Nathan J. Mutter/	
DATE SIGNED:	07/28/2021	

506788677 REEL: 057003 FRAME: 0273

Total Attachments: 9 source=191264WO2 Assignment#page1.tif source=191264WO2 Assignment#page2.tif source=191264WO2 Assignment#page3.tif source=191264WO2 Assignment#page4.tif source=191264WO2 Assignment#page5.tif source=191264WO2 Assignment#page6.tif source=191264WO2 Assignment#page7.tif source=191264WO2 Assignment#page8.tif source=191264WO2 Assignment#page8.tif source=191264WO2 Assignment#page9.tif

PATENT REEL: 057003 FRAME: 0274

ASSIGNMENT

WHEREAS, WE

- 1. **SORIAGA, Joseph Binamira**, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A.,
- 2. <u>VITTHALADEVUNI, Pavan Kumar</u>, having a mailing address located at <u>5775 Morehouse</u> Drive, San Diego, California 92121-1714, U.S.A.,
- 3. <u>CHEN, Bo</u>, having a mailing address located at <u>5775 Morehouse Drive</u>, <u>San Diego</u>, <u>California 92121-1714</u>, 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. **ZHANG, Yu**, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A.,
- 6. MANOLAKOS, Alexandros, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A.,
- 7. **JI, Tingfang**, having a mailing address located at 5775 Morehouse Drive, 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 HYBRID CHANNEL STATE FEEDBACK (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

转让协议

鉴于,我们

- 2. **P•K•维特哈拉德夫尤尼**, 邮寄地址_<u>美国加利福尼亚州圣地亚哥摩</u>尔豪斯道 5775 号,
- 3. **陈波**,邮寄地址_美国加利福尼亚州圣地亚哥摩尔豪斯道 5775 号,
- 4. <u>马瑞丰</u>,邮寄地址<u>美国加利</u>福尼亚州圣地亚哥摩尔豪斯道 5775 号,
- 5. <u>张煜</u>,邮寄地址_美国加利福尼亚州圣地亚哥摩尔豪斯道 5775 号,
- 6. **A•马诺拉科斯**, 邮寄地址_ 美国加利福尼亚州圣地亚哥摩尔豪斯道 5775 号,
- 7. **季庭方** ,邮寄地址_美国加 利福尼亚州圣地亚哥摩尔豪斯道 5775 号,

产生了一个或多个与 HYBRID CHANNEL STATE FEEDBACK 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摩尔豪斯 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 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/CN2020/074054, filed on January 28, 2020, Docket No. 191264WO2, which claims priority to International Application No. PCT/CN2019/073361 filed on January 28, 2019, Docket No. 191264WO1 (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, 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 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 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:

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 2020年1月28日 的,编号为_

PCT/CN2020/074054 的国际专利合作 条约申请,案卷号: 191264WO2,其 优先权为申请于2019年1月28日的, 编号为 PCT/CN2019/073361 的国际专利 合作条约申请,案卷号: 191264WO1 (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的可 饭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. 191264WO2

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 English version and the Chinese version of this agreement, the English version shall prevail. 1. SORIAGA, Joseph Binamira Signature Son Digo, CA Done at ____ [City, State] this _____ day of ______ 2. VITTHALADEVUNI, Pavan Kumar Signature 于_____年___月___日签署于____ (州,市)。 Done at ____ [City, State] this ____ day of 3. CHEN, Bo Signature Done at ____ [City, State] this ____ day of (州,市)。 4. MA, Ruifeng Signature

Done at ____ (City, State) this ____ day of

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 English version and the Chinese version of this agreement, the English version shall prevail.

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,以英文文本为准。

1. SUKIAGA, Joseph Binamira	
	Signature
Done at [City, State] this day of	
*	(州,市)。
2. VITTHALADEVUNI, Pavan Kumar	1 Davantina
O Ninos IA	Simplura
Done at Som [City, State] this 8th day of 2020.	于年月日签署于
	(州,市)。
3. CHEN, Bo	
	Signature
Done at [City, State] this day of	于年月目签署于 (州,市)。
4. MA, Ruifeng	
	Signature
Done at [City, State] this day of	于年月日签署于 (州,市)。

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 English version and the Chinese version of this agreement, the English version shall prevail.

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,以英文文本为准。

1. SORIAGA, Joseph Binamira	
	Signature
Done at [City, State] this day of	于年月日签署于 (州,市)。
	(71) (47)
2. VITTHALADEVUNI, Pavan Kumar	
	Signature
Done at [City, State] this day of	于年月日签署于
·	(州, 市)。
 अप्रतिकारका के 	CHEN, BD
3. CHEN, Bo	
	Signature
Done at Beijng [City, State] this 2nd day of	于2020年6月2日签署于北了
June, 2020.	(州,市)。
	*
4. MA, Ruifeng	3%丰
7. 112/2, Runcing	Signature
Done at heiry scity stated this 2rd day of	于 1020 年 6 月 2 日签署于北本
Done at Beijry [City, State] this 1rd day of	(州,市)。

4

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	
interpreted under the laws of the State of California,	利福尼亚州法律解释。如果本协议的中
and that in case of a discrepancy between the	英文文本内容不一致, 以英文文本为
English version and the Chinese version of this	准。
agreement, the English version shall prevail.	
	<i>*</i>
	1442
5. ZHANG, Yu	
	Signature
Done at Access City State this Str. I day of	于 <u>2000年</u> 月 <u>3</u> 日签署于 <u>化</u> 多
Done at City, State this May of	(州,市)。
	(3.11) 1/17 0
6. MANOLAKOS, Alexandros	
	Signature
Done at [City, State] this day of	于年月日签署于
	(州, 市)。
	✓/ (1 + 1 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 +
7. JI, Tingfang	· · · · · · · · · · · · · · · · · · ·
	Signature
Done at [City, State] this day of	子
	于年月日签署于 (州,市)。
*	5月1) 担フ 。

AND WE HEREBY covenant that WE will WE will WE CHANGE AND Writing or do any act whatsoever Change with these presents;

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

S ZHANG, Vu	
	Signature
Done as [City, State] this day of	于年月日签署于 (州,市)。
6. MANOLAKOS, Alexandros	Ada
- Diens (A	Signature
Dome # [City, State] this 03 day of	于年月日签署于 (州,市)。
7. Jl. Timefang	
	Signature
Done as [City, State] this day of	于年月日签署于 (州、市)

Docket No. 191264WO2

AND WE HEREBY covenant that WE will not execute any writing or do any act whatspever 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 English version and the Chinese version of this agreement, the English version shall prevail.

5. ZHANG, Yu	Signature
Done at [City, State] this day of	于年
6. MANOLAKOS, Alexandros	Signature
Done at [City, State] this day of	于
7. JI, Tinglang	Signature
Done at City, State this 2 day of	于 <u>年</u> 月 日後署于 <u></u> (州,市)。

S