505982141 03/24/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
LIANGMING WU	01/31/2019
YU ZHANG	01/31/2019
CHENXI HAO	01/31/2019
CHAO WEI	01/31/2019
WANSHI CHEN	02/08/2019

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:	16650171

CORRESPONDENCE DATA

Fax Number: (713)623-4846

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

Correspondent Name: PATTERSON + SHERIDAN, LLP

Address Line 1: 24 GREENWAY PLAZA

Address Line 2: SUITE 1600

Address Line 4: HOUSTON, TEXAS 77046

Tatal Attachments 0	
DATE SIGNED:	03/24/2020
SIGNATURE:	/Randol W. READ/
NAME OF SUBMITTER:	RANDOL W. READ
ATTORNEY DOCKET NUMBER:	176789USP

Total Attachments: 8

PATENT REEL: 052211 FRAME: 0842

EPAS ID: PAT6028849



PATENT REEL: 052211 FRAME: 0843

ASSIGNMENT

转让协议

WHEREAS, WE

WU, Liangming, a citizen of CN, 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 **CN**,
- 2. ZHANG, Yu 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,
- 3. <u>HAO, Chenxi</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 **CN**.
- 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 **CN**.
- 5. <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.

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 SUBBAND CHANNEL STATE INFORMATION (CSI) OMISSION FOR TYPE-II CSI (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

鉴于,我们

- 1. <u>武良明</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廉黎</u> 斯道 5775 号 和 中国 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陵豢</u> 斯道 5775 号 和 **中国** 的居民,
- 3. **郝辰曦**, 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,
- 4. **魏超 , 中国**的公民,邮 寄地址 <u>美国加利福尼亚州圣地亚哥魔豪</u> 斯道 5775 号 和 **中国** 的居民,

产生了一个或多个与 <u>SUBBAND</u> <u>CHANNEL STATE INFORMATION</u> (CSI) OMISSION FOR TYPE-II CSI 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黎斯道 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、

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PATENT REEL: 052211 FRAME: 0844 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.

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。

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/CN2018/108593 , filed on September 29, 2018 Docket No. 176789WO2. which claims priority to International Application No. _PCT/CN2017/105238 , filed on October 2, 2017. Docket No. 176789WO1 (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:

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 9 月29 日的,编号为

<u>PCT/CN2018/108593</u> 的国际专利合作条约申请,案卷号: <u>176789WO2</u>, 其优先权为申请于 <u>2017年10月2日</u>的,编号为<u>PCT/CN2017/105238</u>的国际专利合作条约申请,案卷号:

176789WO1 (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、复申、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

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

accordance with the terms of this instrument:

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己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额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。

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PATENT REEL: 052211 FRAME: 0846

1. WU, Liangming	一社古州
	Signature
Done at Berjing [City, State] this 31 day of 100 day.	于 <u>2019</u> 年 <u>1月31</u> 日签署于 <u>北</u> 3 (州、市)。
2. ZHANG, Yu	Signature A
Done at Feight City, State] this 31st day of	于 2018年 1月 31日签署于 2123 (州, 市)。
fam.	(州, 市)。
3. HAO, Chenxi	- 3 7 Rush
	Signature *
Done at Cajjung [City, State] this 31st day of	于2019年1月31日签署于2015(州,市)。
4. WEI, Chao	Chas Uler
	Signature
Done at Lije HCity, State] this 21th day of Jan, 201	于 <u>201</u> 年 /月 <u>31</u> 日签署于 上 6子 (州,市)。
5. CHEN, Wanshi	
	Signature
Done at [City, State] this day of	于年月日签署于 (州,市)。

ASSIGNMENT

WHEREAS, WE

- 1. <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 **CN**.
- 2. ZHANG, Yu 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,
- 3. <u>HAO, Chenxi</u>, a citizen of <u>CN</u>, having a mailing address located at <u>5775 Morehouse Drive</u>, <u>San Diego, California 92121-1714</u>, <u>U.S.A.</u>; and a resident of <u>CN</u>,
- 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, California 92121-1714, U.S.A.</u>; and a resident of <u>CN</u>,
- 5. <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 <u>US</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 to SUBBAND CHANNEL STATE INFORMATION (CSI) OMISSION FOR TYPE-II CSI (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

- 1. <u>武良期</u>, 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,
- 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隆豪</u> <u>斯道 5775 号</u>和<u>中国</u>的居民,
- 3. <u>郝辰曦</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家</u> <u>斯道 5775 号 和 中国</u> 的居民,
- 4. **魏超** , <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 中国 的居民,
- 5. <u>陈万士</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</u> 豪斯道 5775 号 和 美国 的居民,

产生了一个或多个与 SUBBAND CHANNEL STATE INFORMATION (CSI) OMISSION FOR TYPE-II CSI 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 以其他方式取得所述发明的所有权利、

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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.

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,包括但不限于下而确定的那些专 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/CN2018/108593 , filed on September 29, 2018 , Docket No. 176789WO2 , which claims priority to International Application No. PCT/CN2017/105238, filed on October 2, 2017, Docket No. 176789WO1 (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;

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 2018 年 9 月 29 日 的,编号为

<u>PCT/CN2018/108593</u> 的国际专利合作 条约申请,案卷号: <u>176789WO2</u>, 其 优先权为申请于<u>2017年10月2日</u>的, 编号为<u>PCT/CN2017/105238</u>的国际 专利合作条约申请,案卷号:

176789WO1 (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

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

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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;

让老:

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.

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Docket No. <u>176789WO2</u>

1. WU, Liangming	
	Signature
Done at [City, State] this day of	于
· · · · · · · · · · · · · · · · · · ·	\$75 14.7 a
2. ZHANG, Yu	
	Signature
Done at [City, State] this day of	于年月日签署于
······································	(州、市)。
3. HAO, Chenxi	
	Signature
Done at [City, State] this day of	于 年 月 日祭聚于
	(州,市)。
4. WEI, Chao	
	Signature
Done at [City, State] this day of	于年月日签署于 (州,市)。
5. CHEN, Wanshi	Connection
	Signature
Done at [City, State] this 8 day of	于年月日签署于
-fe/4, -2019.	(州,市)。