

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5206470

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the CORRECTING THE CITIZENSHIP ON THE FIRST PAGE AND THE NEW SIGNING DATE FOR THE 2ND INVENTOR CHEN, WANSHI previously recorded on Reel 044577 Frame 0556. Assignor(s) hereby confirms the CITIZENSHIP OF THE 2ND INVENTOR CHEN, WANSHI IS CORRECTED TO READ CN. AND NEW SIGNING DATE AS 16 AUGUST 2018.

CONVEYING PARTY DATA

Name	Execution Date
CHAO WEI	02/04/2016
WANSHI CHEN	08/16/2018
PETER GAAL	02/04/2016
YU ZHANG	02/04/2016

RECEIVING PARTY DATA

Name:	QUALCOMM INCORPORATED
Street Address:	5775 MOREHOUSE DRIVE
Internal Address:	ATTN: INTERNATIONAL IP ADMINISTRATION
City:	SAN DIEGO
State/Country:	CALIFORNIA
Postal Code:	92121-1714

PROPERTY NUMBERS Total: 1

Property Type	Number
PCT Number:	CN2016070387

CORRESPONDENCE DATA

Fax Number: (214)855-8200
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: 214 855 8278
Email: john.pallivathukal@nortonrosefulbright.com
Correspondent Name: THOMAS J. MEANEY/NORTON ROSE FULBRIGHT US LLP
Address Line 1: 2200 ROSS AVENUE, SUITE 3600
Address Line 4: DALLAS, CALIFORNIA 75201-7932

ATTORNEY DOCKET NUMBER:	QLXX.P1060WO.B/151134WO2
NAME OF SUBMITTER:	THOMAS J. MEANEY
SIGNATURE:	/Thomas J. MEANEY/

DATE SIGNED:	10/25/2018
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Total Attachments: 13
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ASSIGNMENT	转让协议
<p>WHEREAS, WE</p> <ol style="list-style-type: none"> 1. WEI, CHAO, a citizen of China, having a mailing address located at <u>5775 Morehouse Drive, San Diego, CA, 92121-1714, United States</u>; and a resident of <u>Beijing, China</u>. 2. CHEN, Wanshi, a citizen of China, having a mailing address located at <u>5775 Morehouse Drive, San Diego, CA, 92121-1714, United States</u>; and a resident of <u>California, United States</u>. 3. GAAL, Peter, a citizen of U.S.A., having a mailing address located at <u>5775 Morehouse Drive, San Diego, CA, 92121-1714, United States</u>; and a resident of <u>California, United States</u>. 4. ZHANG, Yu, a citizen of China, having a mailing address located at <u>5775 Morehouse Drive, San Diego, CA, 92121-1714, United States</u>; and a resident of <u>Beijing, China</u>. <p>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 <u>ENHANCED CSI FEEDBACK FOR FD-MIMO</u>(collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and</p>	<p>鉴于，我们，</p> <ol style="list-style-type: none"> 1. <u>魏超</u>，<u>中国</u>公民，邮箱地址<u>美国加利福尼亚州圣地亚哥莫尔豪斯路 5775 号 92121-1714</u>，也是<u>中国</u>，<u>北京</u>的居民， 2. <u>陈万世</u>，<u>中国</u>公民，邮箱地址<u>美国加利福尼亚州圣地亚哥莫尔豪斯路 5775 号 92121-1714</u>，也是<u>美国</u>，<u>加利福尼亚州</u>的居民， 3. <u>彼得·加尔</u>，<u>美国</u>公民，邮箱地址<u>美国加利福尼亚州圣地亚哥莫尔豪斯路 5775 号 92121-1714</u>，也是<u>美国</u>，<u>加利福尼亚州</u>的居民， 4. <u>张煜</u>，<u>中国</u>公民，邮箱地址<u>美国加利福尼亚州圣地亚哥莫尔豪斯路 5775 号 92121-1714</u>，也是<u>中国</u>，<u>北京</u>的居民， <p>产生了一个或多个与 <u>ENHANCED CSI FEEDBACK FOR FD-MIMO</u> 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</p>
<p>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.</p>	<p>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莫尔豪斯路 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</p>

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/CN2016/070387, filed on 7 January 2016 Docket No. 151134WO2, (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 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

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 2016年1月7日 的，编号为 PCT/CN2016/070387 的国际专利合作条约申请，案卷号：151134WO2，（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；

我们在此授权并要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

instrument;	让者;
<p>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;</p>	<p>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的权利, 这些损害赔偿及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;</p>
<p>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;</p>	<p>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、及其受让人及时沟通, 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、及其受让人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;</p>
<p>AND WE HEREBY covenant that WE have not and will not execute any writing or do any act whatsoever conflicting with these presents;</p>	<p>我们在此承诺, 我们没有、将来也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;</p>
<p>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.</p>	<p>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。</p>

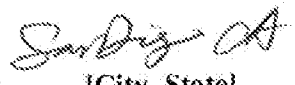
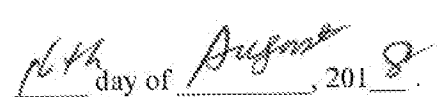
Done at _____ [City, State] _____ this
_____ day of _____, 201____.

于 201__年__月__日签署于 (____州,
市)。

WEI, Chao

Name of Inventor

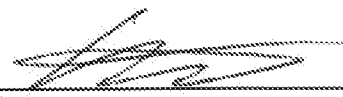
(签字)

Done at  [City, State] _____ this
 day of _____, 201__.

于 201__年__月__日签署于 (____州,
市)。

CHIEN, Wanshi

Name of Inventor



(签字)

Done at _____ [City, State] _____ this
_____ day of _____, 201____.

于 201__年__月__日签署于
(____州, 市)

GAAL, Peter

Name of Inventor

(签字)

Done at _____ [City, State] _____ this
_____ day of _____, 201____.

于 201__年__月__日签署于
(____州, 市)

ZHANG, Yu

Name of Inventor

(签字)

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
CHAO WEI	02/04/2016
WANSHI CHEN	02/04/2016
PETER GAAL	02/04/2016
YU ZHANG	02/04/2016
RECEIVING PARTY DATA	
Name:	QUALCOMM INCORPORATED
Street Address:	5775 MOREHOUSE DRIVE
Internal Address:	ATTN: INTERNATIONAL IP ADMINISTRATION
City:	SAN DIEGO
State/Country:	CALIFORNIA
Postal Code:	92121-1714
PROPERTY NUMBERS Total: 1	
Property Type	Number
PCT Number:	CN2016070387
CORRESPONDENCE DATA	
Fax Number:	(214)855-8200
Phone:	214 855 8278
Email:	john.pallivathukal@nortonrosefulbright.com
<i>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.</i>	
Correspondent Name:	THOMAS J. MEANEY/NORTON ROSE FULBRIGHT US LLP
Address Line 1:	2200 ROSS AVENUE, SUITE 3600
Address Line 4:	DALLAS, TEXAS 75201-7932
ATTORNEY DOCKET NUMBER:	QLXX.P1060WO.B
NAME OF SUBMITTER:	THOMAS J. MEANEY
Signature:	/Thomas J. MEANEY/

PATENT

Date:	01/09/2018
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Total Attachments: 5

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RECEIPT INFORMATION**EPAS ID:** PAT4767872**Receipt Date:** 01/09/2018**PATENT**

ASSIGNMENT	转让协议
<p>WHEREAS, WE</p> <ol style="list-style-type: none"> 1. <u>WEI, CHAO</u>, a citizen of <u>China</u>, having a mailing address located at <u>5775 Morehouse Drive, San Diego, CA, 92121-1714, United States</u>; and a resident of <u>Beijing, China</u>, 2. <u>CHEN, Wanshi</u>, a citizen of <u>U.S.A.</u>, having a mailing address located at <u>5775 Morehouse Drive, San Diego, CA, 92121-1714, United States</u>; and a resident of <u>California, United States</u>, 3. <u>GAAL, Peter</u>, a citizen of <u>U.S.A.</u>, having a mailing address located at <u>5775 Morehouse Drive, San Diego, CA, 92121-1714, United States</u>; and a resident of <u>California, United States</u>, 4. <u>ZHANG, Yu</u>, a citizen of <u>China</u>, having a mailing address located at <u>5775 Morehouse Drive, San Diego, CA, 92121-1714, United States</u>; and a resident of <u>Beijing, China</u>, <p>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 <u>ENHANCED CSI FEEDBACK FOR FD-MIMO</u>(collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and</p>	<p>鉴于，我们，</p> <ol style="list-style-type: none"> 1. <u>魏超</u>，<u>中国</u>公民，邮箱地址<u>美国加利福尼亚州圣地亚哥莫尔豪斯路 5775 号 92121-1714</u>，也是<u>中国，北京</u>的居民， 2. <u>陈万世</u>，<u>美国</u>公民，邮箱地址<u>美国加利福尼亚州圣地亚哥莫尔豪斯路 5775 号 92121-1714</u>，也是<u>美国，加利福尼亚州</u>的居民， 3. <u>彼得·加尔</u>，<u>美国</u>公民，邮箱地址<u>美国加利福尼亚州圣地亚哥莫尔豪斯路 5775 号 92121-1714</u>，也是<u>美国，加利福尼亚州</u>的居民， 4. <u>张煜</u>，<u>中国</u>公民，邮箱地址<u>美国加利福尼亚州圣地亚哥莫尔豪斯路 5775 号 92121-1714</u>，也是<u>中国，北京</u>的居民， <p>产生了一个或多个与 <u>ENHANCED CSI FEEDBACK FOR FD-MIMO</u> 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</p>
<p>WHEREAS, <u>QUALCOMM Incorporated</u> (hereinafter "<u>ASSIGNEE</u>"), a Delaware corporation, having a place of business at <u>5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A.</u>, desires to acquire or otherwise obtain the entire right, title, and interest in and to said <u>INVENTIONS</u>,</p>	<p>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莫尔豪斯路 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</p>

<p>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.</p>	<p>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。</p>
<p>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) <u>PCT/CN2016/070387</u>, filed on <u>7 January 2016</u> Docket No. <u>151134WO2</u>, (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;</p>	<p>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 <u>2016年1月7日</u> 的，编号为 <u>PCT/CN2016/070387</u> 的国际专利合作条约申请，案卷号：<u>151134WO2</u>，（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；</p>
<p>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</p>	<p>我们在此授权并要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</p>

<p>successors, its legal representatives and its assigns, in accordance with the terms of this instrument;</p>	<p>让人、其继任者、其合法代表人及其受让人；</p>
<p>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;</p>	<p>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的权利，这些损害赔偿及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；</p>
<p>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;</p>	<p>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、及其受让人及时沟通，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、及其受让人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；</p>
<p>AND WE HEREBY covenant that WE have not and will not execute any writing or do any act whatsoever conflicting with these presents;</p>	<p>我们在此承诺，我们没有，将来也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；</p>
<p>AND WE agree this ASSIGNMENT shall be interpreted under the laws of the State</p>	<p>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</p>

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.

英文文本内容不一致，以英文文本为准。

Done at Beijing [City, State] _____ this
4 day of Feb, 2016.

于 2016 年 2 月 4 日签署于 (北京 市)。

WEI, Chao
Name of Inventor

Chao Wei
(签字)

Done at _____ [City, State] _____ this
_____ day of _____, 201____.

于 201__ 年 __ 月 __ 日签署于 (____ 州, 市)。

CHEN, Wanshi
Name of Inventor

(签字)

Done at _____ [City, State] _____ this
_____ day of _____, 201____.

于 201__ 年 __ 月 __ 日签署于 (____ 州, 市)

GAAL, Peter
Name of Inventor

(签字)

Done at Beijing [City, State] _____ this
4 day of Feb, 2016.

于 2016 年 2 月 4 日签署于 (北京 州, 市)

ZHANG, Yu
Name of Inventor

Yu Zhang
(签字)

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.	英文文本内容不一致，以英文文本为准。
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Done at _____ [City, State] _____ this _____ day of _____, 201__.

于 201__年__月__日签署于 (____州, 市)。

WEI, Chao

Name of Inventor

(签字)

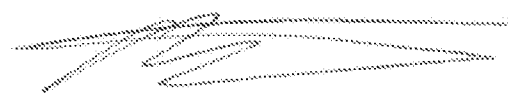
San Diego, CA

Done at _____ [City, State] _____ this

于 201__年__月__日签署于 (____州,

4th day of *Feb.*, 201__ *6*.

市)。



CHEN, Wanshi

Name of Inventor

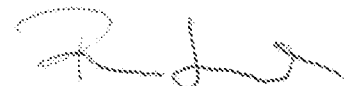
(签字)

Done at *San Diego, CA* _____ [City, State] _____ this

于 201__年__月__日签署于

9th day of *February*, 201__ *6*.

(____州, 市)



GAAL, Peter

Name of Inventor

(签字)

Done at _____ [City, State] _____ this

于 201__年__月__日签署于

_____ day of _____, 201__

(____州, 市)

ZHANG, Yu

Name of Inventor

(签字)