

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT2675454

SUBMISSION TYPE:	NEW ASSIGNMENT														
NATURE OF CONVEYANCE:	ASSIGNMENT														
CONVEYING PARTY DATA															
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>HAO XU</td> <td>01/06/2014</td> </tr> <tr> <td>TINGFANG JI</td> <td>01/06/2014</td> </tr> <tr> <td>PETER GAAL</td> <td>01/06/2014</td> </tr> <tr> <td>WANSHI CHEN</td> <td>01/06/2014</td> </tr> <tr> <td>ZHIFEI FAN</td> <td>01/06/2014</td> </tr> <tr> <td>YONGBIN WEI</td> <td>01/06/2014</td> </tr> </tbody> </table>		Name	Execution Date	HAO XU	01/06/2014	TINGFANG JI	01/06/2014	PETER GAAL	01/06/2014	WANSHI CHEN	01/06/2014	ZHIFEI FAN	01/06/2014	YONGBIN WEI	01/06/2014
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YONGBIN WEI	01/06/2014														
RECEIVING PARTY DATA															
Name:	QUALCOMM INCORPORATED														
Street Address:	5775 MOREHOUSE DRIVE														
City:	SAN DIEGO														
State/Country:	CALIFORNIA														
Postal Code:	92121-1714														
PROPERTY NUMBERS Total: 2															
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>14133062</td> </tr> <tr> <td>Application Number:</td> <td>61753395</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	14133062	Application Number:	61753395								
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Application Number:	14133062														
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CORRESPONDENCE DATA															
Fax Number:	(202)857-6395														
Phone:	213-629-7400														
Email:	dcipdocket@arentfox.com														
<i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i>															
Correspondent Name:	ARENT FOX, LLP														
Address Line 1:	1717 K STREET, NW														
Address Line 4:	WASHINGTON, DISTRICT OF COLUMBIA 20036-5342														
NAME OF SUBMITTER:	RACHELE WITTWER														

Signature:	/Rachele Wittwer/
Date:	01/09/2014
Total Attachments: 3 source=131232 Signed Assignment#page1.tif source=131232 Signed Assignment#page2.tif source=131232 Signed Assignment#page3.tif	

ASSIGNMENT

WHEREAS, WE,

1. **Hao XU**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California
2. **Tingfang JI**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California
3. **Peter GAAL**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California
4. **Wanshi CHEN**, a citizen of the People's Republic of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California
5. **Zhifei FAN**, a citizen of the People's Republic of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California
6. **Yongbin Wei**, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California

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 **CHANNEL STATE INFORMATION AND ADAPTIVE MODULATION AND CODING DESIGN FOR LONG-TERM EVOLUTION MACHINE TYPE COMMUNICATIONS** (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 INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, 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 in the United States, including but not limited to U.S. Application No(s). 14/133,062 filed December 18, 2013, Qualcomm Reference No. 131232, and all provisional applications relating thereto, together

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with U.S. Provisional Application No(s). 61/753,395 , filed January 16, 2013, Qualcomm Reference No. 131232P1 (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 divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States 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 in the United States;

AND WE further do acknowledge and agree 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, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, 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;

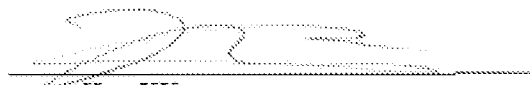
AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date 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;

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;

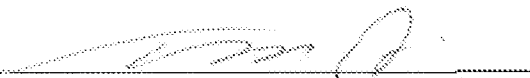
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AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at San Diego, on 1/6/14
LOCATION DATE


Hao XU

Done at San Diego, on 1/6/14
LOCATION DATE


Tingfang JI

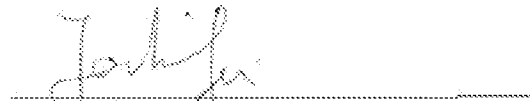
Done at San Diego, on 01/06/2014
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Peter GAAL


Done at San Diego, on 1/6/2014
LOCATION DATE


Wanshi CHEN

Done at San Diego, on 1/6/2014
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Zhifei FAN

Done at San Diego, on 1/6/2014
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Yongbin WEI

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