

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT																
NATURE OF CONVEYANCE:	ASSIGNMENT																
<b>CONVEYING PARTY DATA</b>																	
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Xiliang Luo</td> <td>01/13/2012</td> </tr> <tr> <td>Peter Gaal</td> <td>01/17/2012</td> </tr> <tr> <td>Wanshi Chen</td> <td>01/16/2012</td> </tr> <tr> <td>Hao Xu</td> <td>01/16/2012</td> </tr> <tr> <td>Tao Luo</td> <td>01/17/2012</td> </tr> <tr> <td>Kapil Bhattad</td> <td>02/09/2012</td> </tr> <tr> <td>Xiaoxia Zhang</td> <td>01/16/2012</td> </tr> </tbody> </table>		Name	Execution Date	Xiliang Luo	01/13/2012	Peter Gaal	01/17/2012	Wanshi Chen	01/16/2012	Hao Xu	01/16/2012	Tao Luo	01/17/2012	Kapil Bhattad	02/09/2012	Xiaoxia Zhang	01/16/2012
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Xiaoxia Zhang	01/16/2012																
<b>RECEIVING PARTY DATA</b>																	
Name:	QUALCOMM Incorporated																
Street Address:	5775 Morehouse Drive																
City:	San Diego																
State/Country:	CALIFORNIA																
Postal Code:	92121-1714																
<b>PROPERTY NUMBERS Total: 2</b>																	
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13332701</td> </tr> <tr> <td>Application Number:</td> <td>61426631</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13332701	Application Number:	61426631										
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<b>CORRESPONDENCE DATA</b>																	
Fax Number:	(801)606-2774																
Phone:	801-537-1700																
Email:	wla-admin@austin-rapp.com																
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>																	
Correspondent Name:	Wesley L. Austin																
Address Line 1:	170 S. Main St., Ste. 735																
Address Line 4:	Salt Lake City, UTAH 84101																

OP \$80.00 13332701

ATTORNEY DOCKET NUMBER:	110632; 110632P1
NAME OF SUBMITTER:	Wesley L. Austin
Total Attachments: 6 source=Assignment_110632#page1.tif source=Assignment_110632#page2.tif source=Assignment_110632#page3.tif source=Assignment_110632#page4.tif source=Assignment_110632#page5.tif source=Assignment_110632#page6.tif	

## ASSIGNMENT

WHEREAS, WE,

1. **Xiliang Luo** a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121 and a resident of Cardiff, CA, US,
2. **Peter Gaal**, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121 and a resident of San Diego, CA, US,
3. **Wanshi Chen**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121 and a resident of San Diego, CA, US,
4. **Hao Xu**, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121 and a resident of San Diego, CA, US,
5. **Tao Luo**, a citizen of Canada, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121 and a resident of San Diego, CA, US,
6. **Kapil Bhattad**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121 and a resident of San Diego, CA, US,
7. **Xiaoxia Zhang**, a citizen of China, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121 and a resident of San Diego, CA, 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 **INTERFERENCE RANDOMIZATION FOR UPLINK SIGNALING** (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). **13/332,701** filed December 21, 2011,

Qualcomm Reference No. 110632, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). **61/426,631**, filed December 23, 2010, Qualcomm Reference No. 110632P1, (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;

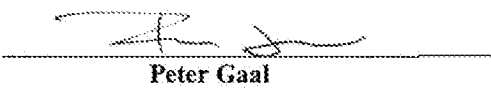
AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, 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;

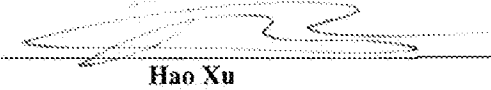
AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, 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;

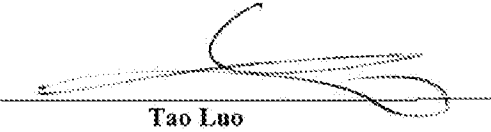
AND WE HEREBY represent that WE have full and exclusive, unencumbered right to sell, assign, convey and transfer all subject matter herein, and hereby covenant that WE have not and will not execute any writing or do any act whatsoever conflicting with these presents.

Done at San Diego, on 1/13/2012  
LOCATION DATE  
  
Xiliang Luo

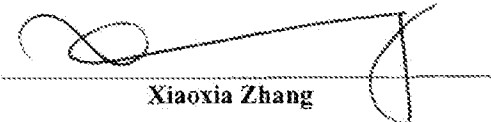
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*Bangalore, India KB*
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have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **INTERFERENCE RANDOMIZATION FOR UPLINK SIGNALING** (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). **13/332,701** filed December 21, 2011,

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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;

AND WE HEREBY represent that WE have full and exclusive, unencumbered right to sell, assign, convey and transfer all subject matter herein, and hereby covenant that WE have not and will not execute any writing or do any act whatsoever conflicting with these presents.

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Xiliang Luo**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Peter Gaal**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Wanshi Chen**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Hao Xu**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Tao Luo**

Done at Bangalore, India, on 2/9/2012  
LOCATION DATE **Kapil Bhattad**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Xiaoxia Zhang**