

PATENT ASSIGNMENT

Electronic Version v1.1
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SUBMISSION TYPE:	NEW ASSIGNMENT																										
NATURE OF CONVEYANCE:	ASSIGNMENT																										
CONVEYING PARTY DATA																											
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RECEIVING PARTY DATA																											
<table border="1"> <tr><td>Name:</td><td>QUALCOMM Incorporated</td></tr> <tr><td>Street Address:</td><td>5775 Morehouse Drive</td></tr> <tr><td>City:</td><td>San Diego</td></tr> <tr><td>State/Country:</td><td>CALIFORNIA</td></tr> <tr><td>Postal Code:</td><td>92121-1714</td></tr> </table>		Name:	QUALCOMM Incorporated	Street Address:	5775 Morehouse Drive	City:	San Diego	State/Country:	CALIFORNIA	Postal Code:	92121-1714																
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CORRESPONDENCE DATA																											

OP \$160.00 13886246

Fax Number: 2136870498

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Correspondent Name: Grant T. Langton

Address Line 1: 333 S. Grand Ave.

Address Line 2: Suite 2300

Address Line 4: Los Angeles, CALIFORNIA 90071

ATTORNEY DOCKET NUMBER:	32716-00186/122260
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NAME OF SUBMITTER:	Grant T. Langton
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Signature:	/Grant T. Langton/
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Date:	06/05/2013
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Total Attachments: 13

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ASSIGNMENT

WHEREAS, WE,

1. **Jun Wang**, a citizen of **United States of America**, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of **San Diego, CA**,
2. **George Cherian**, a citizen of **United States of America**, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of **San Diego, CA**,
3. **Nagaraju Naik**, a citizen of **India**, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of **San Diego, CA**,
4. **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**,
5. **Edward Robert Hall**, a citizen of **United Kingdom**, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of **Bristol, United Kingdom**,
6. **Arungundram Chandrasekaran Mahendran**, a citizen of **India**, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of **San Diego, CA**,
7. **Gordon Kent Walker**, a citizen of **United States of America**, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of **Poway, CA**,
8. **Charles N. Lo**, a citizen of **United States of America**, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of **San Diego, CA**,
9. **Carlos Marcelo Dias Pazos**, a citizen of **United States of America**, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of **San Diego, CA**,
10. **Kuo-Chun Lee**, a citizen of **United States of America**, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of **San Diego, CA**,
11. **Jack Shyh-Hurng Shauh**, a citizen of **United States of America**, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of **San Diego, CA**,
12. **Gang Bao**, a citizen of **United States of America**, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of **San Diego, CA**,

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

SMOOTH TRANSITION BETWEEN MULTIMEDIA BROADCAST MULTICAST SERVICE (MBMS) AND UNICAST SERVICE BY DEMAND (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). 13/886,246 filed May 02, 2013 Qualcomm Reference No. 122260, and all provisional applications relating thereto, together with U.S. Provisional Application No(s).61/643,128 filed May 04, 2012 Qualcomm Reference No. 122260P1, together with U.S. Provisional Application No(s).61/661,764 filed June 19, 2012, Qualcomm Reference No. 122260P2, together with U.S. Provisional Application No(s).61/801,279 filed March 15, 2013 Qualcomm Reference No. 122260P3, (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;

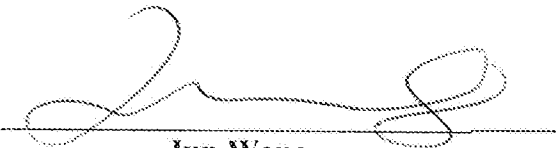
AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, 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 5/7/2013
LOCATION DATE


Jun Wang

Done at _____, on _____
LOCATION DATE

George Cherian

Done at _____, on _____
LOCATION DATE

Nagaraju Naik

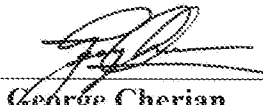
AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors,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

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Done at _____, on _____
LOCATION DATE Jun Wang

Done at San Diego, on May 06, 2013
LOCATION DATE 
George Cherian

Done at _____, on _____
LOCATION DATE Nagaraju Naik

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;

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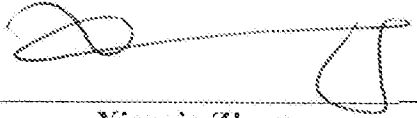
Done at _____, on _____
LOCATION DATE **Jun Wang**

Done at _____, on _____
LOCATION DATE **George Cherian**

Done at San Diego, on 05/10/13
LOCATION DATE **Nagaraju Naik**

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 05/06/2013
LOCATION DATE


Xiaoxia Zhang

Done at _____, on _____
LOCATION DATE

Edward Robert Hall

Done at _____, on _____
LOCATION DATE

Arungundram Chandrasekaran Mahendran

Done at _____, on _____
LOCATION DATE

Gordon Kent Walker

Done at _____, on _____
LOCATION DATE

Charles N. Lo

Done at _____, on _____
LOCATION DATE

Carlos Marcelo Dias Pazos


PATENT

QUALCOMM Ref. No. **122260**

Page 4 of 5

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 Xiaoxia Zhang

Done at BRISTOL, UK, on 15/05/13
LOCATION DATE 
Edward Robert Hall

Done at _____, on _____
LOCATION DATE Arungundram Chandrasekaran Mahendran

Done at _____, on _____
LOCATION DATE Gordon Kent Walker

Done at _____, on _____
LOCATION DATE Charles N. Lo

Done at _____, on _____
LOCATION DATE Carlos Marcelo Dias Pazos

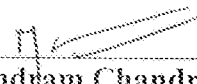
PATENT

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Done at _____, on _____
LOCATION DATE Xiaoxia Zhang

Done at _____, on _____
LOCATION DATE Edward Robert Hall

Done at San Diego, on 05/02/13
LOCATION DATE 
Arungundram Chandrasekaran Mahendran

Done at _____, on _____
LOCATION DATE Gordon Kent Walker

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LOCATION DATE Carlos Marcelo Dias Pazos

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LOCATION DATE Edward Robert Hall

Done at _____, on _____
LOCATION DATE Arungundram Chandrasekaran Mahendran

Done at _____, on _____
LOCATION DATE Gordon Kent Walker

Done at San Diego, CA, on 5/24/13
LOCATION DATE Charles N. Lo

Done at _____, on _____
LOCATION DATE Carlos Marcelo Dias Pazos

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Done at _____, on _____
LOCATION DATE Arungundram Chandrasekaran Mahendran

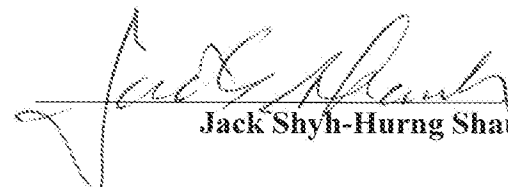
Done at _____, on _____
LOCATION DATE Gordon Kent Walker

Done at _____, on _____
LOCATION DATE Charles N. Lo

Done at San Diego, on 05/10/13
LOCATION DATE Carlos Marcelo Dias Pazos
Carlos Marcelo Dias Pazos

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Done at San Diego, on 5/6/2013 
LOCATION DATE **Kuo-Chun Lee**

Done at San Diego, on 5/8/2013 
LOCATION DATE **Jack Shyh-Hung Shaub**

Done at _____, on _____
LOCATION DATE **Gang Bao**

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Done at _____, on _____
LOCATION DATE **Kuo-Chun Lee**

Done at _____, on _____
LOCATION DATE **Jack Shyh-Hung Shauh**

Done at San Diego, on 05/13/2013
LOCATION DATE **Gang Bao**