PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Mariam Motamed	09/06/2011
Alexei Yurievitch Gorokhov	09/02/2011
Mike L. Mccloud	09/12/2011
Parvathanathan Subrahmanya	09/16/2011

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:	13237868

CORRESPONDENCE DATA

 Fax Number:
 (213)687-0498

 Phone:
 (213) 787-2500

 Email:
 jjaech@cblh.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

Correspondent Name: QUALCOMM Incorporated

Address Line 1: c/o Connolly Bove Lodge & Hutz LLP

Address Line 2: P.O. Box 2207

Address Line 4: Wilmington, DELAWARE 19899

ATTORNEY DOCKET NUMBER: 32716-00007/110754

NAME OF SUBMITTER: Jonathan A. Jaech

PATENT

REEL: 026938 FRAME: 0071

JP \$40.00 1323/868

Total Attachments: 7 source=Assignment_Signed_110754_As-filed#page1.tif source=Assignment_Signed_110754_As-filed#page2.tif source=Assignment_Signed_110754_As-filed#page3.tif source=Assignment_Signed_110754_As-filed#page4.tif source=Assignment_Signed_110754_As-filed#page5.tif source=Assignment_Signed_110754_As-filed#page6.tif source=Assignment_Signed_110754_As-filed#page7.tif

ASSIGNMENT

WHEREAS, WE,

- 1. **Mariam Motamed**, 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. **Alexei Yurievitch Gorokhov**, 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. **Mike L. Mccloud,** 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,
- 4. **Parvathanathan Subrahmanya**, a citizen of United States of America, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of Sunnyvale, 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 **CHANNEL IMPULSE RESPONSE ESTIMATION FOR WIRELESS RECEIVER** (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). 13/237,868 filed 09/20/2011, Qualcomm Reference No. 110754, and all provisional applications relating thereto, (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 Santa Clara, on 9/6/2011 SM Mariam Motamed

PATENT QUALCOMM Ref. No. 110754 Page 3 of 3

Done at ⊆	Dego LOCATION	on <u>09/02/2011</u>	M. 1s. aprovina
·	LOCATION	DATE	Alexei Yurievitch Gorokhov
Done at_		, on	
	LOCATION	DATE	Mike L. Mccloud
Done at _		, on	
	LOCATION	DATE	Parvathanathan Subrahmanya

ASSIGNMENT

WHEREAS, WE,

- 1. **Mariam Motamed,** 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,
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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 **CHANNEL IMPULSE RESPONSE ESTIMATION FOR WIRELESS RECEIVER** (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). 13/237,868 filed 09/20/2011, Qualcomm Reference No. 110754, and all provisional applications relating thereto, (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 _		, on _			
	LOCATION	, –	DATE	Mariam Motamed	

PATENT QUALCOMM Ref. No. 110754 Page 3 of 3

Done at _	, on		
	LOCATION	DATE	Alexei Yurievitch Gorokhov
Done at <u>≤</u>	LOCATION On	9/12/201	Mike L. Mecloud
Done at _	, on	DATE	Parvathanathan Subrahmanya

PATENT QUALCOMM Ref. No. 110754 Page 3 of 3

, on	
ON DATE	Alexei Yurievitch Gorokhov
, on	
ON DATE	Mike L. Mccloud
(m. 4/14/11	Alikahmagy,
	Parvathanathan Subrahmanya
	ON DATE ON DATE ON 7/16/11

PATENT REEL: 026938 FRAME: 0079

RECORDED: 09/20/2011