PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2690506

SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVE	YANCE:	ASSIGNMENT		
CONVEYING PARTY	DATA			
		Name Execution	Date	
LURGA PRASAD MA		11/02/2012		
ALEKSANDAR DAM		10/02/2012		
JUAN MONTOJO		10/02/2012		
RECEIVING PARTY D	ΟΑΤΑ			
Name:		INCORPORATED		
Street Address:	5775 MOREH	OUSE DRIVE		
Internal Address:	PATENT DEF	ARTMENT		
City:	SAN DIEGO			
State/Country:	CALIFORNIA			
Postal Code:	92121			
	RS Total: 1			
Property Ty	уре	Number		
[уре	Number 14159853		
Property Ty Application Number:	ype			
Property Ty Application Number: CORRESPONDENCE	ype	658-2502		
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Property Ty Application Number: CORRESPONDENCE Fax Number: Phone: Email:	ype	14159853 658-2502 358-4351 ocketing@qualcomm.com		
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Signature:	/Marion Comer De Yoe/
Date:	01/21/2014
Total Attachments: 6 source=061744C1C1_Assignment#page1.ti source=061744C1C1_Assignment#page2.ti source=061744C1C1_Assignment#page3.ti source=061744C1C1_Assignment#page5.ti source=061744C1C1_Assignment#page6.ti	f f f f

PATENT QUALCOMM Ref. No. 061744C1 Page 1 of 2

ASSIGNMENT

WHEREAS, WE.

1. Durga Prasad Mailadi, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of San Diego, CA,

2. Alekaandar Dmanjanovic, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of Bel Mar, CA,

3. Juan Montojo, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of Nuremberg, DE,

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 METHOD AND APPARATUS FOR RANDOM ACCESS IN AN ORTHOGONAL MULTIPLE-ACCESS COMMUNICATION SYSTEM (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 manaferred, 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 petent 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). 13/622,990, filed September 19, 2012, Qualcomm Reference No. 061744C1, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 60/839,220, filed August 21, 2005, Qualcomm Reference No. 061744P1, and together with U.S. Provisional Application No. 60/828,058, filed October 3, 2006, Qualcomm Reference No. 970046P1, and together with U.S. Provisional Application No(s). 60/863,610, filed October 31, 2006, Qualcomin Reference No. 061744P2, including U.S. Application No. 11/841,609, filed August 20, 2007, Qualcomm Reference No. 061744, (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, this, 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;

PATENT REEL: 032009 FRAME: 0700 Nov-02-2012 11:08 AM Qualcomm 858-845-1127

PATENT QUALCOMM Ref. No. 061744C1 Page 2 of 2

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 ASSIGNEB, 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 WB 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 co any act whatsoever conflicting with these presents.

*

Done at	LOCATION IN	12/12 DATB	Durge Prasad Maliadi
Done at	LOCATION	DATE	Aleksandar Damnjanovic
Done at	LOCATION	DATE	Juan Montojo

ASSIGNMENT

WHEREAS, WE,

1. Durga Prasad Malladi, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of San Diego, CA,

2. Aleksandar Dmanjanovic, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of Del Mar, CA,

3. Juan Montojo, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of Nuremberg, DE,

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 METHOD AND APPARATUS FOR RANDOM ACCESS IN AN ORTHOGONAL MULTIPLE-ACCESS COMMUNICATION SYSTEM (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). 13/622,990, filed September 19, 2012, Qualcomm Reference No. 061744C1, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 60/839,220, filed August 21, 2006, Qualcomm Reference No. 061744P1, and together with U.S. Provisional Application No. 60/828,058, filed October 3, 2006, Qualcomm Reference No. 070046P1, and together with U.S. Provisional Application No(s). 60/863,610, filed October 31, 2006, Qualcomm Reference No. 061744P2, including U.S. Application No. 11/841,609, filed August 20, 2007, Qualcomm Reference No. 061744, (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	Durga Prasad Malladi
Done at _	<u>San (Teqo</u> , on LOCATION	10/2/12 DATE	Aleksandar Damnjanovic
Done at _	, on		
LÇ	CATION .	DATE	Juan Montojo

ASSIGNMENT

WHEREAS, WE,

1. Durga Prasad Malladi, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of San Diego, CA.

2. Aleksandar Dmanjanovic, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of Del Mar, CA,

3. Juan Montojo, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of Nuremberg, DE,

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 METHOD AND APPARATUS FOR RANDOM ACCESS IN AN ORTHOGONAL MULTIPLE-ACCESS COMMUNICATION SYSTEM (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). 13/622,990, filed September 19, 2012, Qualcomm Reference No. 061744C1, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 60/839,220, filed August 21, 2006, Qualcomm Reference No. 061744P1, and together with U.S. Provisional Application No. 60/828,058, filed October 3, 2006, Qualcomm Reference No. 070046P1, and together with U.S. Provisional Application No(s). 60/863,610, filed October 31, 2006, Qualcomm Reference No. 061744P2, including U.S. Application No. 11/841,609, filed August 20, 2007, Qualcomm Reference No. 061744, (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	* OD		
	LOCATION	DATE	Durga Prasad Malladi
Done at _	LOCATION	DATE	Aleksandar Damnjanovic
Done at	Muluberg, on 10/:		janen 5. H
	LOCATION	DATE	Juan Montojo