PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Alan Barbieri	05/11/2011
Hao Xu	06/01/2011
Madhavan Srinivasan Vajapeyam	05/12/2011
Aleksandar Damnjanovic	05/18/2011

RECEIVING PARTY DATA

Name:	QUALCOMM Incorporated		
Street Address:	5775 Morehouse Drive		
City:	San Diego		
State/Country:	CALIFORNIA		
Postal Code:	92121		

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13974954

CORRESPONDENCE DATA

Fax Number: 8588453986

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 858.651.2942

Email: c_cmille@qualcomm.com

Correspondent Name: Catherine Miller

Address Line 1: 5775 Morehouse Drive

Address Line 4: San Diego, CALIFORNIA 92121

ATTORNEY DOCKET NUMBER:	101687C1	
NAME OF SUBMITTER:	Catherine Miller	
Signature:	/catherine miller/	

PATENT REEL: 031225 FRAME: 0732 H \$40 00 1397

Date:	09/17/2013	
Total Attachments: 12 source=101687C1_Signed_Assignment#pag source=101687C1_Signed_Assignment#pag source=101687C1_Signed_Assignment#pag source=101687C1_Signed_Assignment#pag source=101687C1_Signed_Assignment#pag source=101687C1_Signed_Assignment#pag source=101687C1_Signed_Assignment#pag source=101687C1_Signed_Assignment#pag source=101687C1_Signed_Assignment#pag	ge1.tif ge2.tif ge3.tif ge4.tif ge5.tif ge6.tif	
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ASSIGNMENT

WHEREAS, WE,

- 1. Alan Barbieri, a citizen of Italy, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
- 2. Hao Xu, a citizen of United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
- 3. Madhavan Srinivasan Vajapeyam, a citizen of Brazil, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
- 4. Aleksandar Damnjanovic, a citizen of United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Del Mar, 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 SEMI-PERSISTENT SCHEDULING GRANTS IN HETEROGENEOUS NETWORKS (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). 13/087,170 filed April 14, 2011, Docket No. 101687, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 61/326,193, filed April 20, 2010, Docket No. 101687P1, (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, CA, o	n_5-11-11	Alen Berbin
LOCATION	DATE	Alan Barbieri
Done at, o		
LOCATION	DATE	Hao Xu
Done at, o	n	
LOCATION	DATE	Madhayan Srinivasan Vajapeyam
Done at, o		
LOCATION	DATE	Aleksandar Damnianovic

ASSIGNMENT

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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 SEMI-PERSISTENT SCHEDULING GRANTS IN HETEROGENEOUS NETWORKS (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). 13/087,170 filed April 14, 2011, Docket No. 101687, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 61/326,193, filed April 20, 2010, Docket No. 101687P1, (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

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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	Alan Barbieri
Done at	San Diejo,	on <u>6/1/2011</u>	
	LOCATION	DATE	Hao Xu
Done at		on	
	LOCATION	DATE	Madhavan Srinivasan Vajapeyam
Done at	,	on	
	LOCATION	DATE	Aleksandar Damnianovic

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Done at	4	, on	
	LOCATION	DATE	Alan Barbieri
Done at		, on	
	LOCATION	DATE	Hao Xu
Done at	Son Diazo	, on <u>05-12-2011</u>	Mehler S. Uggrey
	LOCATION	DATE	Madhavan Srinivasan Najapeyam
Done at		. On	
month ar	LOCATION	DATE	Aleksandar Damnianovic

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PATENT

Docket No. 101687 Page 3 of 3

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	Alan Barbieri
Done at		, on		
	LOCATION	en e	DATE	Hao Xu
Done at		_, on _		
-	LOCATION		DATE	Madhavan Srinivasan Vajapeyam
Done at	Sam Diego LOCATION	, on	C/18/11	HZ AAA
<u>.</u>	LOCATION	austr san	DATE	Afeksandar Daminjanovic

PATENT REEL: 031225 FRAME: 0745

RECORDED: 09/17/2013