502867775 06/25/2014

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2914372

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
OMAR EL AYACH	06/24/2014
SUNDAR SUBRAMANIAN	06/17/2014
ASHWIN SAMPATH	06/17/2014
JUNYI LI	06/17/2014
JOHN EDWARD SMEE	06/19/2014

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:	14306097

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 213-629-7400

Email: dcipdocket@arentfox.com

Correspondent Name: ARENT FOX, LLP AND QUALCOMM, INCORPORATE

Address Line 1: 1717 K STREET, NW

Address Line 4: WASHINGTON, D.C. 20036-5342

ATTORNEY DOCKET NUMBER:	030284.07923 / 143276
NAME OF SUBMITTER:	PEGGY O'CONNOR
SIGNATURE:	/Peggy O'Connor/
DATE SIGNED:	06/25/2014

Total Attachments: 9

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502867775 REEL: 033180 FRAME: 0863



PATENT REEL: 033180 FRAME: 0864

ASSIGNMENT

WHEREAS, WE.

- 1. Omar EL AYACH, a citizen of Lebanon, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California;
- Sundar SUBRAMANIAN, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of Bridgewater, New Jersey;
- 3. John Edward SMEE, a citizen of Canada, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California;
- 4. Ashwin SAMPATH, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of Skillman, New Jersey; and
- 5. Junyi LI, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of Chester, New Jersey,

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 CONNECTION POINT DISCOVERY AND ASSOCIATION IN A DIRECTIONAL WIRELESS NETWORK (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

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INVENTIONS in the United States, including but not limited to U.S. Application No(s). 14/306,097 filed June 16 2014, Qualcomm Reference No. 143276, 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

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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 covenant that WE will not execute any writing nor do any act whatsoever conflicting with these presents.

Done at	San Orego, CF	on 06/24/14	Grace of Mysich	
	<i>V</i>LOCATION	DATE	Omar EL AYACH	
Done at		, on		
	LOCATION	DATE	Sundar SUBRAMANIAN	
Done at		, on		
	LOCATION	DATE	John Edward SMEE	
Done at		, on		
	LOCATION	DATE	Ashwin SAMPATH	*****
Done at		, on		
·	LOCATION	DATE	Junyi LI	

Error! Unknown document property name.

PATENT REEL: 033180 FRAME: 0867

ASSIGNMENT

WHEREAS, WE,

- 1. Omar EL AYACH, a citizen of Lebanon, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California;
- 2. Sundar SUBRAMANIAN, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of Bridgewater, New Jersey;
- 3. John Edward SMEE, a citizen of Canada, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California;
- 4. Ashwin SAMPATH, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of Skillman, New Jersey; and
- 5. Junyi LI, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of Chester, New Jersey,

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 CONNECTION POINT DISCOVERY AND ASSOCIATION IN A DIRECTIONAL WIRELESS NETWORK (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). 14/306,097 filed June 16 2014, Qualcomm Reference No. 143276, 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

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PATENT REEL: 033180 FRAME: 0869

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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 covenant that WE will not execute any writing nor do any act whatsoever conflicting with these presents.

Done at		, on	
·	LOCATION	DATE	Omar EL AYACH
Done at Bridge	DWATEC NJ	on 06/17/2014 DATE	Bonsa
•	LOCATION	DATE	Sundar SUBRAMANIAN
Done at		, on	
	LOCATION	DATE	John Edward SMEE
Done at Bridg	ewater, NJ	, on 06/17/2014	Sans
-	LOCATION	DATE	Ashwin SAMPATH
Done at Bridge	WATER NJ	on 06/17/2014	
	LOCATION	DATE	Junyi LI
			1

ASSIGNMENT

WHEREAS, WE,

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- 4. Ashwin SAMPATH, a citizen of the United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of Skillman, New Jersey; and
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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.

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INVENTIONS in the United States, including but not limited to U.S. Application No(s). 14/306,097 filed June 16 2014, Qualcomm Reference No. 143276, 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;

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PATENT
QUALCOMM Ref. No. 143276
Page 3 of 3

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AND WE HEREBY covenant that WE will not execute any writing nor do any act whatsoever conflicting with these presents.

Done at	, on		
	LOCATION	DATE	Omar EL AYACH
Done at	, on		
	LOCATION	DATE	Sundar SUBRAMANIAN
Done at	San Diayu (A. 92130, on_	6/19/2014	Soul
-	LOCATION	DATE	John Edward SMEE
Done at	, on		
Done ac	LOCATION	DATE	Ashwin SAMPATH
Done at	, on		. 1999
	LOCATION	DATE	Junyi LI

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PATENT REEL: 033180 FRAME: 0873

RECORDED: 06/25/2014