PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3493487

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
PARTHASARATHY KRISHNAMOORTHY	08/11/2015
ANAND RAJURKAR	08/17/2015
PRASHANTH MOHAN	08/17/2015
ARAVINTH RAJENDRAN	08/13/2015
NITHIN THILAK NALLASIVAM	08/12/2015
JANGA REDDY ALIMINETI	08/17/2015
KRISHNAKUMAR VASANTHASENAN	08/17/2015

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:	14801963		

CORRESPONDENCE DATA

Fax Number: (703)621-7155

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: 7036217140
Email: rdb@mg-ip.com

Correspondent Name: MUNCY, GEISSLER, OLDS & LOWE, P.C.

Address Line 1: 4000 LEGATO ROAD, SUITE 310

Address Line 4: FAIRFAX, VIRGINIA 22033

ATTORNEY DOCKET NUMBER:	QC151502
NAME OF SUBMITTER:	MARK E, OLDS
SIGNATURE:	/MARK E. OLDS/
DATE SIGNED:	08/21/2015

PATENT REEL: 036392 FRAME: 0024

503446862

Total Attachments: 9 source=151502_Assignment_signed#page1.tif source=151502_Assignment_signed#page2.tif source=151502_Assignment_signed#page3.tif source=151502_Assignment_signed#page4.tif source=151502_Assignment_signed#page5.tif source=151502_Assignment_signed#page6.tif source=151502_Assignment_signed#page7.tif source=151502_Assignment_signed#page8.tif source=151502_Assignment_signed#page9.tif

ASSIGNMENT

WHEREAS, WE.

- Parthasarathy KRISHNAMOORTHY, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA.
- 2. Anand RAJURKAR, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India,
- Prashanth MOHAN, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India,
- Aravinth RAJENDRAN, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India,
- Nithin Thitak NALLASIVAM, a citizen of India, having a mailing address located at 14-1, Kalpana Layout, M.K.P Colony, Ganapathy, Coimbatore, Tamil Nadu, India 641006 and a resident of Tamil Nadu, India,
- 6. Janga Reddy ALIMINETI, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India,
- KrishnaKumar VASANTHASENAN, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India,

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 LINK-QUALITY-BASED RESOURCE ALLOCATION IN DEVICE-TO-DEVICE COMMUNICATIONS (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). 14/801,963 filed July 17, 2015, Qualcomm Reference No. 151502 (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 covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at	Sandr Ego	on (28 11 2015	Parthasarathy KRISHNAMOORTHY
	LOCATION		DATE	Parthasarathy KRISHNAMOORTHY
Done at		, on	DATE	
	LOCATION		DATE	Anand RAJURKAR
Done at		, on		
·	LOCATION		DATE	Prashanth MOHAN
Done at		, on	DATE	
	LOCATION		DATE	Aravinth RAJENDRAN
Done at		, on	DATE	
	LOCATION		DATE	Nithin Thilak NALLASIVAM
Done at		, on	DATE	
	LOCATION		DATE	Janga Reddy ALIMINETI
Done at	LOCATION	, on		
	LOCATION		DATE	KrishnaKumar VASANTHASENAN

ASSIGNMENT

WHEREAS, WE.

- Parthasarathy KRISHNAMOORTHY, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA.
- Anand RAJURKAR, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India.
- Prashanth MOHAN, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India,
- Aravinth RAJENDRAN, a citizen of India, having a maifing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India.
- Nithin Thilak NALLASIVAM, a citizen of India, having a mailing address located at 14-1, Kalpana Layout, M.K.P Colony, Ganapathy, Coimbatore, Tamil Nadu, India 641006 and a resident of Tamil Nadu, India.
- Janga Reddy ALIMINETI, a citizen of India, having a mailing address located at 5775
 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India.
- KrishnaKumar VASANTHASENAN, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India.

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 LINK-QUALITY-BASED RESOURCE ALLOCATION IN DEVICE-TO-DEVICE COMMUNICATIONS (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). 14/801,963 filed July 17, 2015, Qualcomm Reference No. 151502 (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 covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at	.a. a.	, on		
	LOCATION	DA	1 E	Parthasarathy KRISHNAMOORTHY
Done at	HYDERA(A))	on 17/08	2015	
	LOCATION	DĀ	TE	Anand KA, II K K A K
Done at	Hy)(EASA)) LOCATION	on 17 5%	2015	M. Thomas
	LOCATION	DA	TE	Prashanth MOHAN
Done at	Nedpoled LOCATION	.on 18 08 1	rew	#JL
	LOCATION	DA	TE	Aravinth RAJENDRAN
Done at	LOCATION	_, on:		
	LOCATION	ĐĄ	TE	Nithio Thilak NALLASIVAM
Done at	IN ACYALA D LOCATION	on (S S	; (2-015)	4.5. (walk
-	LOCATION	DA	TE	Janga Reddy ALIMINETI
Done at	Jana ka j Location	.00 7/es	12015	V. Kill bum hammen
	EOCATION	DA	TE	KrishnaKumar VASANTHASENAN

ASSIGNMENT

WHEREAS, WE,

- 1. **Parthasarathy KRISHNAMOORTHY**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA.
- 2. **Anand RAJURKAR**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India,
- 3. **Prashanth MOHAN**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India,
- 4. Aravinth RAJENDRAN, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India,
- 5. Nithin Thilak NALLASIVAM, a citizen of India, having a mailing address located at 14-1, Kalpana Layout, M.K.P Colony, Ganapathy, Coimbatore, Tamil Nadu, India 641006 and a resident of Tamil Nadu, India,
- 6. **Janga Reddy ALIMINETI**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India,
- 7. **KrishnaKumar VASANTHASENAN**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Hyderabad, India,

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 LINK-QUALITY-BASED RESOURCE ALLOCATION IN DEVICE-TO-DEVICE COMMUNICATIONS (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). 14/801,963 filed July 17, 2015, Qualcomm Reference No. 151502 (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;

PATENT
QUALCOMM Ref. No. 151502
Page 3 of 3

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at		, on		
_	LOCATION	ano"	DATE	Parthasarathy KRISHNAMOORTHY
Done at _	LOCATION	on و	DATE.	Anand RAJURKAR
Done at		on		
Done at	LOCATION	۳۰۰ و	DATE	Prashanth MOHAN
Done at _		on ر	DATE	
	LOCATION		DATE	Aravinth RAJENDRAN
Done at	Combatore	on	AUGUST 12,2018	Nithin Thilak NALLASIVAM
	LOCATION	_	DATE	Nithin Thilak NALLASIVAM
Done at _		on ر	DATE	
	LOCATION		DATE	Janga Reddy ALIMINETI
Done at _	LOCATION	on ر		
	LOCATION		DATE	KrishnaKumar VASANTHASENAN

PATENT REEL: 036392 FRAME: 0034

RECORDED: 08/21/2015