# 503788186 04/18/2016

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3834832

		NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT	
CONVEYING PARTY DA	<b>ATA</b>			
		Name	Execution Date	
SANDIP HOMCHAUDHU	JRI		10/18/2013	
SHU DU			10/18/2013	
SUMEET KUMAR			10/31/2013	
SOHANI GANESH RAO			11/15/2013	
PAUL HUSTED			11/15/2013	
RECEIVING PARTY DA	 TA			
Name:				
Street Address:	5775 N	IOREHOUSE DRIVE		
City:	SAN D	IEGO		
State/Country:	CALIFO	ORNIA		
Postal Code:	92121-	1714		
PROPERTY NUMBERS	Total: 1			
Property Type		Number		
Application Number:		15131739		
CORRESPONDENCE D	ΔΤΔ			
Fax Number:		(303)473-2720		
Fax Number: <i>Correspondence will be</i>	e sent to	(303)473-2720 o the e-mail address first; if that is unsue		
Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i>	e sent to provideo	o the e-mail address first; if that is unsuc d; if that is unsuccessful, it will be sent v		
Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone:	e sent to provideo	o the e-mail address first; if that is unsue d; if that is unsuccessful, it will be sent v 303-473-2700		
Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email:	e sent to provideo	o the e-mail address first; if that is unsue d; if that is unsuccessful, it will be sent v 303-473-2700 sesoares@hollandhart.com		
Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name:	e sent to provideo	o the e-mail address first; if that is unsue d; if that is unsuccessful, it will be sent v 303-473-2700 sesoares@hollandhart.com PAUL M. SCHRAMM		
Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	e sent to provideo	o the e-mail address first; if that is unsue d; if that is unsuccessful, it will be sent 303-473-2700 sesoares@hollandhart.com PAUL M. SCHRAMM HOLLAND & HART LLP		
Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name:	e sent to provideo	o the e-mail address first; if that is unsue d; if that is unsuccessful, it will be sent v 303-473-2700 sesoares@hollandhart.com PAUL M. SCHRAMM		
Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: Address Line 2:	e sent to provideo	o the e-mail address first; if that is unsue d; if that is unsuccessful, it will be sent w 303-473-2700 sesoares@hollandhart.com PAUL M. SCHRAMM HOLLAND & HART LLP P.O. BOX 11583 SALT LAKE CITY, UTAH 84147		
Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET NU	e sent to provideo	o the e-mail address first; if that is unsue d; if that is unsuccessful, it will be sent w 303-473-2700 sesoares@hollandhart.com PAUL M. SCHRAMM HOLLAND & HART LLP P.O. BOX 11583 SALT LAKE CITY, UTAH 84147		
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Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET NUN NAME OF SUBMITTER:	e sent to provideo	o the e-mail address first; if that is unsuccessful, it will be sent with a sent with		

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# ASSIGNMENT

### WHEREAS, WE,

1. Sandip Homchaudhuri, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of San Jose, California,

2. Shu Du, a citizen of the People's Republic of China, having a mailing address located at 589 Carlsbad Street, Milpitas, California 95035, and a resident of Milpitas, California,

3. Sumeet Kumar, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of San Jose, California,

4. Sohani Ganesh Rao, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, and a resident of San Jose, California,

5. **Paul Husted**, 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 Jose, California,

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 **MULTIDIMENSIONAL ALGORITHM FOR ROAMING** (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). **14/048,464**, filed **October 8, 2013**, Qualcomm Reference No. **132272**, 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, 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 _	<u>(水外の気子」(</u> /, on LOCATION	Jojk (1) DATE	Sandip Homchaudhuri
Done at _	LOCATION	DATE	Shu Du
Done at _	LOCATION	DATE	Sumeet Kumar
Done at _	LOCATION	DATE	Sohani Ganesh Rao
Done at _	LOCATION	DATE	Paul Husted

#### 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 **MULTIDIMENSIONAL ALGORITHM FOR ROAMING** (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.

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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;

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

Done at	LOCATION DATE		
	LOCATION	DATE	Sandip Homchaudhuri
Done at _	, on		
	LOCATION	DATE	Shu Du
Done at _	Save Jose, CA LOCATION	<u>31<sup>5†</sup>0(†-2013</u> DATE	Sumer Kumar
Done at	LOCATION	DATE	Sohani Ganesh Rao
Done at _	, on LOCATION	DATE	Paul Husted
	1367X-7311X314	£713327	A 44847 A X487844

#### ASSIGNMENT

#### WHEREAS, WE,

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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;

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

	LOCATION	DATE	Paul Husted
Done at		a	
	LOCATION	DATE	Solianí Ganesh Rao
Done at $\stackrel{\frown}{\leq}$	aleen Subonal.,o	n(DATE	De-
Done at	LOCATION	n DATE	Sumeet Kumar
Jone at	LOCATION	nDATE	Shu Du
		DATE	Sandip Homchaudhuri
	, 0		

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

Done at	, on _		
	LOCATION	DATE	Sandip Homchaudhuri
Done at			
	LOCATION	DATE	Shu Du
Done at	, on,	DATE	Concerne X7
			Sumeet Kumar
Done at	LOCATION		
	LOCATION	DATE	Sohani Ganesh Rao
Done at	<u>0.3 Juze</u> , on	W/15/13	
	LOCATION	DATE	Paul Husted

PATENT REEL: 038308 FRAME: 0343

**RECORDED: 04/18/2016**