# 503693292 02/16/2016

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3739930

SUBMISSION TYPE:		N	NEW ASSIGNMENT				
NATURE OF CONVEYANCE:		A	ASSIGNMENT				
CONVEYING PARTY D	ΑΤΑ						
		Na	me			Execution Date	
MARTIN JAMES MORRELL						01/22/2016	
NILS GÜNTHER PETERS						01/14/2016	
DIPANJAN SEN						01/22/2016	
RECEIVING PARTY DA	ТА						
Name:	1						
Street Address:			OUSE DRIVE				
City:	SAN D						
State/Country:	CALIFO						
Postal Code:	92121-						
PROPERTY NUMBERS	Total: 1						
Property Type			Number				
		140000	4288276				
Application Number:		142002	70				
		142002	0		]		
CORRESPONDENCE D		(651)73			]		
CORRESPONDENCE D Fax Number: Correspondence will b	e sent to	(651)73 o the e-n	5-1102 nail address first; if tha				
CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i>	e sent to provideo	(651)73 o the e-n	5-1102 nail address first; if tha is unsuccessful, it will				
CORRESPONDENCE D Fax Number: <i>Correspondence will b using a fax number, if p</i> Phone:	e sent to provideo	(651)733 5 <i>the e-n</i> <i>d; if that</i> 651.735 pairdock	5-1102 nail address first; if tha is unsuccessful, it will .1100 keting@ssiplaw.com				
CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name:	e sent to provideo	(651)735 5 <i>the e-n</i> <i>d; if that</i> 651.735 pairdock SHUMA	5-1102 <i>nail address first; if tha</i> <i>is unsuccessful, it will</i> .1100 keting@ssiplaw.com KER & SIEFFERT, P.A.				
CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1:	e sent to provideo	(651)733 5 the e-n d; if that 651.735 pairdock SHUMA 1625 RA	5-1102 nail address first; if tha is unsuccessful, it will .1100 keting@ssiplaw.com KER & SIEFFERT, P.A. ADIO DRIVE				
CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2:	e sent to provideo	(651)735 5 <i>the e-n</i> 651.735 pairdock SHUMA 1625 RA SUITE 3	5-1102 <i>nail address first; if tha</i> <i>is unsuccessful, it will</i> .1100 keting@ssiplaw.com KER & SIEFFERT, P.A. ADIO DRIVE 800	be ser			
CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2:	e sent to provideo	(651)735 5 <i>the e-n</i> 651.735 pairdock SHUMA 1625 RA SUITE 3	5-1102 nail address first; if tha is unsuccessful, it will .1100 keting@ssiplaw.com KER & SIEFFERT, P.A. ADIO DRIVE	be ser			
CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4:	e sent to provideo	(651)733 <b>5</b> the e-n <b>6</b> ; if that 651.735 pairdock SHUMA 1625 RA SUITE 3 WOODE	5-1102 <i>nail address first; if tha</i> <i>is unsuccessful, it will</i> .1100 keting@ssiplaw.com KER & SIEFFERT, P.A. ADIO DRIVE 800	be ser			
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET NUME NAME OF SUBMITTER:	e sent to provideo	(651)73 <b>5</b> the e-n <b>6</b> ; if that 651.735 pairdock SHUMA 1625 RA SUITE 3 WOODE 12	5-1102 <i>nail address first; if tha</i> <i>is unsuccessful, it will</i> .1100 keting@ssiplaw.com KER & SIEFFERT, P.A. ADIO DRIVE 300 BURY, MINNESOTA 551	be ser			
CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4:	e sent to provideo	(651)73 <i>o the e-n</i> 651.735 pairdock SHUMA 1625 RA SUITE 3 WOODE 12 R	5-1102 <i>nail address first; if tha</i> <i>is unsuccessful, it will</i> .1100 keting@ssiplaw.com KER & SIEFFERT, P.A. ADIO DRIVE 800 BURY, MINNESOTA 551 212-539US01/132394	be ser			
CORRESPONDENCE D Fax Number: <i>Correspondence will b</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	(651)735 <b>b</b> the e-n d; if that 651.735 pairdock SHUMA 1625 RA SUITE 3 WOODE 12 R /F	5-1102 <i>nail address first; if tha</i> <i>is unsuccessful, it will</i> .1100 keting@ssiplaw.com KER & SIEFFERT, P.A. ADIO DRIVE 300 3URY, MINNESOTA 551 212-539US01/132394 ENEE A. WOLFF	be ser			

 $source = 132394\_Assignment\_signed \# page 2.tif$ 

source=132394\_Assignment\_signed#page3.tif

source=132394\_Assignment\_signed#page4.tif source=132394\_Assignment\_signed#page5.tif source=132394\_Assignment\_signed#page6.tif

> PATENT REEL: 037739 FRAME: 0045

### ASSIGNMENT

#### WHEREAS, WE,

- 1. Martin James Morrell, a citizen of Great Britain, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, CA,
- 2. Nils Günther Peters, a citizen of Germany, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, CA,
- 3. Dipanjan Sen, a citizen of Australia, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, 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 **BINAURAL RENDERING OF SPHERICAL HARMONIC COEFFICIENTS** (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. 14/288,276 filed May 27, 2014, Qualcomm Reference No. 132394, and all provisional applications relating thereto, together with U.S. Provisional Application No. 61/828,620 filed May 29, 2013, Qualcomm Reference No. 132515P1, U.S. Provisional Application No. 61/847,543 filed July 17, 2013, Qualcomm Reference No. 132515P2, U.S. Provisional Application No. 61/886,593 filed October 3, 2013. Qualcomm Reference No. 135163P1, and U.S. Provisional Application No. 61/886,620 filed October 3, 2013. Qualcomm Reference No. 132394P1 (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, 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 SAN Dim 40	, on <u>1/22/2018</u>	
LOCATION	DATE	Martin James Morrell
	, on	
LOCATION	DATE	Nils Günther Peters
Done at SAAT DERG	, on 1/22/2015	
LOCATION	DATE	Dipanjan Sen

PATENT QUALCOMM Ref. No. 132394 Page 1 of 3

#### ASSIGNMENT

#### WHEREAS, WE,

- 1. Martin James Morrell, a citizen of Great Britain, having a mailing address located at 5775 Morchouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, CA.
- 2. Nils Günther Peters, a citizen of Germany, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, CA;
- 3. Dipanjan Sen, a citizen of Australia, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, 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 **BINAURAL RENDERING OF SPHERICAL HARMONIC COEFFICIENTS** (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. 14/288,276 filed May 27, 2014. Qualcomm Reference No. 132394, and all provisional applications relating thereto, together with U.S. Provisional Application No. 61/828,620 filed May 29, 2013, Qualcomm Reference No. 132515P1, U.S. Provisional Application No. 61/847,543 filed July 17, 2013. Qualcomm Reference No. 132515P2, U.S. Provisional Application No. 61/886,593 filed October 3, 2013. Qualcomm Reference No. 135163P1, and U.S. Provisional Application No. 61/886,620 filed October 3, 2013, Qualcomm Reference No. 132394P1 (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:

PATENT QUALCOMM Ref. No. 132394 Page 2 of 3

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, 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 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	• 01	3	·
	LOCATION	DATE	Martin James Morrell
Done at	San Diego .or	1 Jan 14 2016	Pelas
	LOCATION, OI	DATE	Nils Günther Peters
Done at	, OI	ä	
	LOCATION	DATE	Dipanjan Sen

RECORDED: 02/16/2016