503206734 03/05/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3253349

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KERN RIM	11/13/2014
STANLEY SEUNGCHUL SONG	11/13/2014
XIANGDONG CHEN	11/25/2014
RAYMOND GEORGE STEPHANY	10/28/2014
JOHN JIANHONG ZHU	11/12/2014
OHSANG KWON	11/25/2014
ESIN TERZIOGLU	02/23/2015
CHOH FEI YEAP	11/13/2014

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:	14484137

CORRESPONDENCE DATA

Fax Number: (310)201-5219

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: 310.277.7200

Email: Qualcomm-USPTO@seyfarth.com

Correspondent Name: SEYFARTH SHAW LLP

Address Line 1: 2029 CENTURY PARK EAST, SUITE 3500

Address Line 4: LOS ANGELES, CALIFORNIA 90067

ATTORNEY DOCKET NUMBER:	140762
NAME OF SUBMITTER:	JOSEPH LUTZ
SIGNATURE:	/Joseph Lutz/

PATENT 503206734 REEL: 035097 FRAME: 0621

DATE SIGNED:	03/05/2015			
Total Attachments: 12				
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source=140762_Signed_Assignment_as_filed_05March2015#page12.tif				

WHEREAS, WE.

- 1. Kern RIM, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California,
- Stanley Seunghul SONG, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California.
- 3. Xiangdong CHEN, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of Irvine, California.
- 4. Raymond George STEPHANY, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of Austin, Texas,
- John Jianhong ZHU, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California,
- 6. Ohsang KWON, a citizen of The Republic of Korea, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California,
- 7. Esin TERZIOGLU, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California,
- 8. Choh Fei YEAP, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, 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 VARIABLE INTERCONNECT PITCH FOR IMPROVED PERFORMANCE (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.

QUALCOMM Ref. No. 140762

Page 2 of 3

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). 14/484,137 filed September 11, 2014, Qualcomm Reference No. 140762, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 61/981,611, filed April 18, 2014, Qualcomm Reference No. 140762P1, (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 San Diego, on LOCATION	11/13/14 DATE	LL LL Kern RIM
Done at COM DEO, on LOCATION		Stanley Scunghul SONG
Done at, on LOCATION	DATE	Xiangdong CHEN
Done at, on LOCATION	DATE	Raymond George STEPHANY
Done at San Diffion	11/12/14 DATE	John Jianhong ZHU
Done at, on	DATE	Ohsang KWON
Done at, on	DATE	Esin TERZIOGLU
Done at, on	11/13/14 DATE	Chole Pei XEAP

WHEREAS, WE,

- 1. Kern RIM, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California.
- 2. Stanley Seunghul SONG, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California,
- 3. Xiangdong CHEN, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of Irvine, California,
- 4. Raymond George STEPHANY, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of Austin, Texas.
- 5. John Jianhong ZHU, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California,
- 6. Ohsang KWON, a citizen of The Republic of Korea, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California,
- 7. Esín TERZIOGLU, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California,
- 8. Choh Fei YEAP, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, 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 **VARIABLE INTERCONNECT PITCH FOR IMPROVED PERFORMANCE** (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). 14/484,137 filed September 11, 2014, Qualcomm Reference No. 140762, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 61/981,611, filed April 18, 2014, Qualcomm Reference No. 140762P1, (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 , c	en ,	
Done at, o	DATE	Keru RIM
Done at, o	m	
LOCATION	DATE	Stanley Seunghul SONG
Done at Sun Diego, o	m 11/25/14	
LOCATION	DATE	Xiangdong CHEN
Done at, c	on	Raymond George STEPHANY
Done at, o	onDATE	John Jianhong ZHU
Done at San Diego, o	m 11/25/14 DATE	Chang KWON
Done at, o	m <u></u>	Esin TERZIOGLU
LOCATION	DATE	Esin TERZIOGLU
	*	
Done at, o	n	Choh Fei YEAP
LOCATION	DATE	Chon Fei YEAP

WHEREAS, WE,

- 1. **Kern RIM,** a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California,
- 2. Stanley Seunghul SONG, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California,
- 3. Xiangdong CHEN, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of Irvine, California,
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- 8. Choh Fei YEAP, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California.

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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.

QUALCOMM Ref. No. 140762

Page 2 of 3

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). 14/484,137 filed September 11, 2014, Qualcomm Reference No. 140762, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 61/981,611, filed April 18, 2014, Qualcomm Reference No. 140762P1, (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

PATENT QUALCOMM Ref. No. 140762 Page 3 of 3

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	Kern RIM
Done at	LOCATION	, on		
	LOCATION		DATE	Stanley Seunghul SONG
Done at	LOCATION	, on	***************************************	
	LOCATION		DATE	Xiangdong CHEN
Done at	AUSTEN TX- LOCATION	_, on _(0/23/14	
	LOCATION		DATE	Raymond George STEPHANY
Done at	LOCATION	, on		
	LOCATION		DATE	John Jianhong ZHU
Done at	LOCATION	, on		
	LOCATION		DATE	Obsang KWON
Done at	LOCATION	, on		
	LOCATION		DATE	Esin TERZIOGLU
Done at_	LOCATION	,on		
	LOCATION		DATE	Choh Fei YEAP

WHEREAS, WE,

- 1. Kern RIM, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A. and a resident of San Diego, California.
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PATENT QUALCOMM Ref. No. 140762 Page 3 of 3

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		
L)	OCATION	DATE	Kern RIM
Done at	, on	53 4 7T	Stanley Seunghul SONG
£	OCATION	DATE	Tri Contraction of the Contracti
Done at	, on		Xiangdong CHEN
1.	OCATION	DATE	Alanguong CHEN
Done at	, on	DATE	Raymond George STEPHANY
Done at	OCATION, on	DATE	John Jianhong ZHU
Done at	LOCATION .	DATE	Ohsung KWON
S	o. Dese m	, 2/23/15	Esin TERZIOGLU V
TANK H	LOCATION	DATE	Esin TERZIOGLU V
Done at	, O	n	Choh Fei YEAP

PATENT REEL: 035097 FRAME: 0634

RECORDED: 03/05/2015