503208675 03/06/2015

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
VLADIMIR MACHKAOUTSAN	02/13/2015
MATTHIAS GEORG GOTTWALD	02/13/2015
MUSTAFA BADAROGLU	02/13/2015
JIMMY KAN	02/13/2015
KANGHO LEE	02/24/2015
YU LU	02/13/2015
CHANDO PARK	02/13/2015

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:	14609169	

CORRESPONDENCE DATA

Fax Number: (512)327-5575

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: 512-327-5515

Email: ablazek@tlgiplaw.com
Correspondent Name: TOLER LAW GROUP

Address Line 1: 8500 BLUFFSTONE COVE

Address Line 2: SUITE A201

Address Line 4: AUSTIN, TEXAS 78759

ATTORNEY DOCKET NUMBER:	145994
NAME OF SUBMITTER:	ANGIE BLAZEK
SIGNATURE:	/Angie Blazek/
DATE SIGNED:	03/06/2015

Total Attachments: 9 source=145994_Assignment#page1.tif source=145994_Assignment#page3.tif source=145994_Assignment#page4.tif source=145994_Assignment#page5.tif source=145994_Assignment#page6.tif source=145994_Assignment#page7.tif source=145994_Assignment#page8.tif source=145994_Assignment#page8.tif source=145994_Assignment#page9.tif

ASSIGNMENT

WHEREAS, WE.

- 1. Vladimir MACHKAOUTSAN, a citizen of the Kingdom of Belgium, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Leuven, Belgium,
- Matthias Georg GOTTWALD, a citizen of the Federal Republic of Germany, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Heverlee, Belgium,
- 3. Mustafa BADAROGLU, a citizen of the Kingdom of Belgium, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Leuven, Belgium,
- 4. Jimmy KAN, a citizen of Canada, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of San Diego, CA,
- 5. Kangho LEE, a citizen of the Republic of Korea, having a mailing address located at 11515 Caminito La Bar #82, San Diego, CA 92126-9998 and a resident of San Diego, CA.
- 6. Yu LU, 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 San Diego, CA,
- 7. Chando PARK, 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 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 MAGNETIC TUNNEL JUNCTION (MTJ) DEVICE ARRAY (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). 14/609,169 filed January 29, 2015, Qualcomm Reference No. 145994, 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 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. Matthias Georg GOTTWALD Done at LEUVEN, on 02/13/20/5
LOCATION DATE Mustafa BADAROGLU Done at Jimmy KAN Done at Kangho LEE Done at LOCATION DATE Yu LU

Chando PARK

ASSIGNMENT

WHEREAS, WE,

- 1. Viadimir MACHKAOUTSAN, a citizen of the Kingdom of Belgium, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Leuven, Belgium.
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- 5. Kangho LEE, a citizen of the Republic of Korea, having a mailing address located at 11515 Caminito La Bar #82, San Diego, CA 92126-9998 and a resident of San Diego, CA.
- 6. Yu LU, 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 San Diego, CA.
- Chando PARK, 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 San Diego, CA.

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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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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). 14/609,169 filed January 29, 2015, Qualcomm Reference No. 145994, 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;

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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	Vladimir MACHKAOUTSAN
Done at		, on	
	LOCATION	, onDATE	Matthias Georg GOTTWALD
Done at		, on	
	LOCATION	, on DATE	Mustafa BADAROGLU
Done at	SAN DIEGO LOCATION	on 2/13/2015 DATE	January KAN
		, on	
	LOCATION	DATE	Kangho LEE
Done at	Sum Ding	, on 2/13/2015 DATE	Mh
	LOCATION	DATE	Yu LU
Done at	Sin Degis	, on <u>2//3/2/5</u>	
	LOCATION	DATE	Chando PARK

ASSIGNMENT

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Done at	, on		
	LOCATION on	DATE	Vladimir MACHKAOUTSAN
Done at	LOCATION		
	LOCATION	DATE	Matthias Georg GOTTWALD
Done at	LOCATION , on		
	LOCATION	DATE	Mustafa BADAROGLU
Done at	LOCATION , on	TV 5 797"	Jimmy KAN
Done at	Santa Clara.f.A.on	2/4/2015	266
	LOCATION	DATE	Kangho LEE
Done at	LOCATION		
	LOCATION	DATE	Yu LU
Done at	LOCATION		THE TAX TOTAL
	LOCATION	DATE	Chando PARK

PATENT REEL: 035108 FRAME: 0146

RECORDED: 03/06/2015