504263593 03/08/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4310273

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RAMI SALEM	02/02/2017
LESLY ZAREN V. ENDRINAL	02/01/2017
HYEOKJIN LIM	03/01/2017
HADI BUNNALIM	02/03/2017
ROBERT KIM	02/15/2017
LAVAKUMAR RANGANATHAN	02/01/2017
MICKAEL MALABRY	02/03/2017

RECEIVING PARTY DATA

Name:	QUALCOMM INCORPORATED	
Street Address:	5775 MOREHOUSE DRIVE	
City:	SAN DIEGO	
State/Country:	y: CALIFORNIA	
Postal Code: 92121-1714		

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15265744

CORRESPONDENCE DATA

Fax Number:	(202)	857-6395		
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:	213-6	629-7400		
Email:	pater	tdocket@arentfox.com, rachele.wittwer@arentfox.com		
Correspondent Name:	ARENT FOX, LLP AND QUALCOMM, INCORPORATE			
Address Line 1:	1717 K STREET, NW			
Address Line 4:	WASHINGTON, D.C. 20006-5344			
ATTORNEY DOCKET NUMBER:		030284.12404/162152		
NAME OF SUBMITTER:		RACHELE WITTWER		
SIGNATURE: /Rachele Wittwer/		/Rachele Wittwer/		

DATE SIGNED:	03/08/2017	
504263593		PATENT REEL: 041511 FRAME: 0062

Total Attachments: 15

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ASSIGNMENT

WHEREAS, WE,

1. **Rami SALEM**, a citizen of Egypt, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California,

2. Lesly Zaren V. ENDRINAL, a citizen of the Philippines, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California,

3. **Hyeokjin LIM**, a citizen of the Republic of Korea, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California,

4. Hadi BUNNALIM, 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, California,

5. **Robert KIM**, a citizen of the United States of America, having a mailing address located at 1025 Via Vera Cruz, San Marcos, CA 92078, and a resident of San Marcos, California,

6. Lavakumar RANGANATHAN, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, and a resident of San Diego, California,

7. Mickael MALABRY, a citizen of France, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714, 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 **VISIBLE ALIGNMENT MARKERS/LANDMARKS FOR CAD-TO-SILICON BACKSIDE IMAGE ALIGNMENT** (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). <u>15/265,744</u> filed <u>September 14, 2016</u>, Qualcomm Reference No. <u>162152</u>, 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;

PATENT

QUALCOMM Ref. No. 162152 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 S DATE Rami SALEM LOCATION

Done at ______, on _____ LOCATION DATE

Done at _____, on _____ LOCATION DATE Lesiy Zaren V. ENDRINAL

Hyeokjin LIM

Hadi BUNNALIM

Robert KIM

Layakumar RANGANATHAN

Mickael MALABRY

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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.

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). <u>15/265,744</u> filed <u>September 14, 2016</u>, Qualcomm Reference No. <u>162152</u>, 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;

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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 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;

Done at	, on		
	, on LOCATION	DATE	Rami SALEM
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	LOCATION	DATE	Lerly Zdren V. ENDRINAL
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	LOCATION , on	DATE	Hyeokjin LIM
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	LOCATION	DATE	Hadi BUNNALIM
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a national and a second	LOCATION	DATE	Robert KIM
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	<u>να Μέζος CA</u> , or LOCATION	DATE	Lavakumar RANGANATHAN
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	, or LOCATION	DATE	Mickael MALABRY
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Done at		, on		
	LOCATION		DATE	Rami SALEM
Done at		, on		
	LOCATION		DATE	Lesly Zaren V. ENDRINAL
Done at	<u>Sún die no</u> Locatión	. on Č	13/01/2017	HE
1999 - Die 1 1999 - Die 1997 - Die 1 1997 - Die 1997 - Die 1	LOCATIÓN	anni - San anna	DATE	Hyeokjin LIM
Done at	LOCATION	_, on		
	LOCATION		DATE	Hadi BUNNALIM
Done at		. on		
	LOCATION		DATE	Røbert KIM
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Done at	LOCATION	, on	DATE	Lavakumar RANGANATHAN
Done at		, on		
	LOCATION	5	DATE	Mickael MALABRY

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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). <u>15/265,744</u> filed <u>September 14, 2016</u>. Qualcomm Reference No. <u>162152</u>, 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;

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Done at		41	
	LOCATION	n DATE	Rami SALEM
Done at		m	Lesly Zaren V. ENDRINAL
	LOCATION	DATE	Lesly Zaren V. ENDRINAL
Done at		n DATE	
	LOCATION	DATE	Hyeokjin LIM
Done at	San Diago	m <u>2/3/2017</u> DATE	Harts
	LOCATION	DATE	Hadi BUNNALIM
Done at	, a	n DATE	
	LOCATION	DATE	Robert KIM
Done at	* 0	m	Lavakumar RANGANATHAN
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ους του Αλάγου 1997 - Του Του Του Του 1997 - Του Του Του Του Του Του 1997 - Του	LOCATION	DATE	Mickael MALABRY

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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.

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 inay 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). <u>15/265,744</u> filed <u>September 14, 2016</u>. Qualcomm Reference No. <u>162152</u>, and all provisional applications relating thereto, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application mmber(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;

Done at	, on	and an	
	LOCATION	DATE	Rami SALEM
Done at	LOCATION		
	LOCATION	DATE	Lesly Zaren V. ENDRINAL
Done at	LOCATION , OB		
	LOCATION	DATE	Hyeokjin LIM
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	LOCATION	DATE	Hadi BUNNALIM
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	LOCATION	DATE	Robert KIM
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<u>.</u>	LOCATION , on	DATE	Lavakumar RANGANATHAN
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