503651890 01/15/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3698524

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the CORRECTION OF SPELLING OF NAME OF THE THIRD INVENTOR LISTED. previously recorded on Reel 037295 Frame 0414. Assignor(s) hereby confirms the MAHDI CHERAGHEHI BASHI ASTENCH SHOULD BE MAHDI CHERAGHCHI BASHI ASTANEH.

CONVEYING PARTY DATA

Name	Execution Date
THOMAS JOSEPH RICHARDSON	12/04/2015
MICHAEL GEORGE LUBY	12/03/2015
MAHDI CHERAGHCHI BASHI ASTANEH	12/04/2015
LORENZ CHRISTOPH MINDER	12/12/2015

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:	14954609

CORRESPONDENCE DATA

Fax Number: (214)855-8200

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: 214.855.8000

Email: lisa.decordova@nortonrosefulbright.com
Correspondent Name: NORTON ROSE FULBRIGHT US LLP

Address Line 1: 2200 ROSS AVENUE

Address Line 2: SUITE 3600

Address Line 4: DALLAS, TEXAS 75201

ATTORNEY DOCKET NUMBER:	QLXX.P1082US/11507221
NAME OF SUBMITTER:	R. ROSS VIGUET
SIGNATURE:	/R. Ross Viguet/
DATE SIGNED:	01/15/2016

PATENT 503651890 REEL: 037540 FRAME: 0305

Total Attachments: 8 source=QLXXP1082US#page1.tif source=QLXXP1082US#page2.tif source=QLXXP1082US#page3.tif source=QLXXP1082US#page4.tif source=QLXXP1082US#page5.tif source=QLXXP1082US#page6.tif source=QLXXP1082US#page7.tif source=QLXXP1082US#page8.tif

ASSIGNMENT

WHEREAS, WE,

- Thomas Joseph Richardson, a citizen of United States, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of South Orange, NJ.
- Michael George Luby, a citizen of United States, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Berkeley, CA.
- Astaneh Initials: MC Date: 01/15/2016

 3. Mahdi Cheraghchi Bashi Asteneb, a citizen of Islamic Republic of Iran, having a mailing address located at 200 Chatham Way, Apt 444, Cleveland, OH 44124 and a resident of Cleveland, OH,
- Lorenz Christoph Minder, a citizen of Canada, having a mailing address located at 5775
 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Evanston, IL,

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 SYSTEMS AND METHODS FOR VERIFICATION OF CODE RESILIENCY FOR DATA STORAGE (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). 14/954,609 filed November 30, 2015, Qualcomm Reference No. 153952U1, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 62/211,243, filed August 28, 2105, Qualcomm Reference No. 153952P1, (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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PATENT QUALCOMM Ref. No. 153952U1 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, 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 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 ASSIGNEB, 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 ASSIGNEB, 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 ASSIGNEB, 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 ASSIGNEB, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

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PATENT QUALCOMM Ref. No. 153952U1 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 4	Bridge ster EDCATION	_NJ on/	2/4/2015 DATE	Thomas Joseph Richardson
Done at _	LOCATION	on	DATE	Michael George Luby
Done at _	LOCATION	on	DATE	Mahdi Cheraghchi Bashi Asteneh
Done at _	LOCATION	on	DATE	Lorenz Christoph Minder

QLXX.P1082US

PATENT QUALCOMM Ref. No. 153952U1 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	:	
LOCATION	DATE	Thomas pseuh Richardson
Done at <u>Buddley</u> , on LOCATION	Del 3 2015	Michael George Luby
Done ad noyfield Heights, on LOCATION	Dec 4, 2015 DATE	Mahdi Chereghcht Bashi Astench
Done at, on	***************************************	Initials: <u>MC</u> Assansa Oate: <u>01/15/2016</u>
LOCATION	DATE	I among Phylotoph Adladon

QLXX.P1082US

PATENT QUALCOMM Ref. No. 153952U1 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	
_	LOCATION	DATE	Thomas Joseph Richardson
Done at _		, on	
	LOCATION	DATE	Michael George Luby
Done at		, on	
	LOCATION	DATE	Mahdi Cheraghchi Bashi Asteneh
_	.		4. 1.
Done at _		_on_12/12/2015	
	LOCATION	DATE	Larene Cheletonh Mindon

QLXX.P1082US



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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

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MICHAEL GEORGE LUBY <u>>0 HERAGACAT</u>	12/03/2015
MAHDI-CHERAGHEHI BASHI ASTENCH ASTANEH	12/04/2015
LORENZ CHRISTOPH MINDER	12/12/2015

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Property Type	Number
Application Number:	14954609

PATENT 12/15/2015

REEL: 037540 FRAME: 0312

CORRESPONDENCE DATA	
Fax Number: Phone: 214-855-8200 Email: tamerie.ballance@nortonrosefulbright.com 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, Correspondent Name: QUALCOMM/NORTON ROSE FULBRIGHT US LLP Address Line 1: 2200 ROSS AVENUE Address Line 2: SUITE 3600 Address Line 4: DALLAS, UNITED STATES 75201-7932	
ATTORNEY DOCKET NUMBER:	QLXX.P1082US/11507221
NAME OF SUBMITTER:	R. ROSS VIGUET
Signature:	/R. ROSS VIGUET/
Date:	12/15/2015
Total Attachments: 5 source=P1082US#page1.tif source=P1082US#page2.tif source=P1082US#page3.tif source=P1082US#page4.tif source=P1082US#page5.tif	
RECEIPT INFORMATION	
EPAS ID: PAT3659078 Receipt Date: 12/15/2015	

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