502630600 01/10/2014

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT2677208

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ARUN AVUDAINAYAGAM	12/18/2013
EHAB TAHIR	12/17/2013

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14085527

CORRESPONDENCE DATA

Fax Number: (281)754-4914 Phone: 2817580025

Email: kbremer@deliziogilliam.com

Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name: DELIZIO GILLIAM, PLLC.

Address Line 1: 15201 MASON ROAD

Address Line 2: SUITE 1000-312

Address Line 4: CYPRESS, TEXAS 77433

ATTORNEY DOCKET NUMBER:	133570
NAME OF SUBMITTER:	KATARINA BREMER
Signature:	/Katarina Bremer/
Date:	01/10/2014

502630600 REEL: 031943 FRAME: 0551

Total Attachments: 4

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ASSIGNMENT

WHEREAS, WE,

- 1. **Arun Avudainayagam**, a citizen of India, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Gainesville, FL
- 2. **Ehab Tahir**, a citizen of Canada, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121-1714 and a resident of Mississauga, Canada

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 **OPTIMIZING RESPONSE INTERFRAME SPACE IN COMMUNICATION SYSTEMS** (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).

14/085,527 filed Nov 20, 2013, Qualcomm Reference No. 133570

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.

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QUALCOMM Ref. No. 133570
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Done at	Ocala , FL , o	n Decl8, 2	013 Jan A	
	LOCATION	DATE	Arım Avudainayagam	
Done at	,0	n		
	LOCATION	DATE	Ehab Tahir	

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Done at		_, on		
	LOCATION		DATE	Arun Avudainayagam
Done at	Toronto	, on	Dec 17 2013	1/2
	LOCATION		DATE	Ehab Tahir

PATENT REEL: 031943 FRAME: 0556

RECORDED: 01/10/2014