505855990 01/09/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5902927

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
SOO BUM LEE	12/20/2019
ADRIAN EDWARD ESCOTT	01/02/2020
GAVIN BERNARD HORN	12/27/2019
ANAND PALANIGOUNDER	12/20/2019

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	16669420
Application Number:	62754461

CORRESPONDENCE DATA

Fax Number: (303)473-2720

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: 303-473-2700

Email: plnorman@hollandhart.com

Correspondent Name: MICHAEL DRAPKIN Address Line 1: P.O. BOX 11583

Address Line 4: SALT LAKE CITY, UTAH 84147

ATTORNEY DOCKET NUMBER:	PR154.01 (103038.0950)
NAME OF SUBMITTER:	MICHAEL L. DRAPKIN
SIGNATURE:	/Michael L. Drapkin/
DATE SIGNED:	01/09/2020

Total Attachments: 4

source=190194_Assignment#page1.tif

PATENT REEL: 051468 FRAME: 0242

505855990

source=190194_Assignment#page2.tif
source=190194_Assignment#page3.tif
source=190194_Assignment#page4.tif

ASSIGNMENT

WHEREAS, WE,

- 1. Soo Bum LEE, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121-1714,
- 2. Adrian Edward ESCOTT, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121-1714,
- 3. Gavin Bernard HORN, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121-1714,
- 4. Anand PALANIGOUNDER, having a mailing address located at 5775 Morehouse Drive, San Diego, CA, 92121-1714,

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 **IDENTITY BASED SIGNATURE IN SYSTEM INFORMATION PROTECTION** (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. 16/669,420 filed October 30, 2019, Qualcomm Reference No. 190194, and all provisional applications relating thereto, together with U.S. Provisional Application No. 62/754,461, filed November 1, 2018, Qualcomm Reference No. 190194P1, (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.

PATENT QUALCOMM Ref. No. 190194 Pags 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	atra mark of a strong & organ (, on		
	CITY, STATE		DATE	Soo Bum LEE
Done at [landing, UK	on 2nd	January 2020	Mr. Prostt Adrian Edward ESCOTT
	CITÝ, STATE		DATE	Adrian Edward ESCOTT
Done at		, on		
•	CITY, STATE		DATE	Gavin Bernard HORN
Done at		, on		
	CITY, STATE		DATE	Anand PALANIGOUNDER

PATENT REEL: 051468 FRAME: 0247

RECORDED: 01/09/2020