

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5388759

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CHIH-HAO LIU	12/18/2018
SRINIVAS YERRAMALLI	01/23/2019
TAMER KADOUS	02/19/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	QUALCOMM INCORPORATED
<b>Street Address:</b>	5775 MOREHOUSE DRIVE
<b>City:</b>	SAN DIEGO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	92121-1714
<b>PROPERTY NUMBERS Total: 2</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16130877
<b>Application Number:</b>	62594361
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(571)432-0808
<i>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.</i>	
<b>Phone:</b>	5714320800
<b>Email:</b>	Jcato@harrityllp.com
<b>Correspondent Name:</b>	HARRITY AND HARRITY, LLP
<b>Address Line 1:</b>	11350 RANDOM HILLS ROAD
<b>Address Line 2:</b>	SUITE 600
<b>Address Line 4:</b>	FAIRFAX, VIRGINIA 22030
<b>ATTORNEY DOCKET NUMBER:</b>	0097-0420/181103
<b>NAME OF SUBMITTER:</b>	NEIL R. KARDOS
<b>SIGNATURE:</b>	/Neil R. Kardos, Reg. No. 67,238/
<b>DATE SIGNED:</b>	02/22/2019
<b>Total Attachments: 3</b>	
source=181103_Assignment_FINAL#page1.tif	
source=181103_Assignment_FINAL#page2.tif	



**ASSIGNMENT**

WHEREAS, WE,

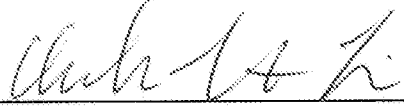
1. **Chih-Hao LIU**, a citizen of **Taiwan**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA 92121 US** and a resident of **San Diego, CA**,
2. **Srinivas YERRAMALLI**, a citizen of **India**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA 92121 US** and a resident of **San Diego, CA**,
3. **Tamer KADOUS**, a citizen of the **United States of America**, having a mailing address located at **14157 Green Valley Court, San Diego, CA 92131**, 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 **TECHNIQUES AND APPARATUSES FOR AVOIDING COLLISIONS ON AN UPLINK DATA CHANNEL AND A CELL-SPECIFIC OR UE-SPECIFIC UPLINK CONTROL CHANNEL** (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). **16/130,877** filed **September 13, 2018**, Qualcomm Reference No. **181103**, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). **62/594,361**, filed **December 4, 2017**, Qualcomm Reference No. **181103P1**, (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 HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at San Diego, on 12/18/18   
LOCATION DATE Chih-Hao LIU

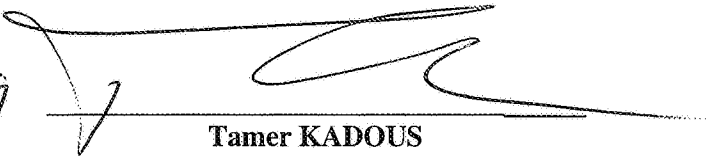
Done at San Diego, on 1/23/19   
LOCATION DATE Srinivas YERRAMALLI

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Tamer KADOUS

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 Chih-Hao LIU

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Srinivas YERRAMALLI

Done at Saudiya, on 02-19-19  
LOCATION DATE  Tamer KADOUS