

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	NACHIAPPAN VALLIAPPAN	09/15/2014
	KIRAN SOMASUNDARAM	09/15/2014
	AHMED KAMEL SADEK	09/15/2014
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:	14471840	
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NAME OF SUBMITTER:	MARIA WOODFORD	
SIGNATURE:	/Maria Woodford/	
DATE SIGNED:	09/23/2014	
Total Attachments: 2		
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ASSIGNMENT

WHEREAS, WE,

1. **Nachiappan VALLIAPPAN**, a citizen of **India**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA 92121-1714** and a resident of **San Diego, CA**,
2. **Kiran SOMASUNDARAM**, a citizen of **India**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA 92121-1714** and a resident of **San Diego, CA**,
3. **Ahmed Kamel SADEK**, a citizen of **Egypt**, having a mailing address located at **5775 Morehouse Drive, San Diego, CA 92121-1714** and a resident of **San Diego, CA**,

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 **DYNAMIC BANDWIDTH MANAGEMENT FOR LOAD-BASED EQUIPMENT IN UNLICENSED SPECTRUM** (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 under the Patent Cooperation Treaty (PCT) or in the United States, including but not limited to International Patent Application No. **14/471840**, filed **August 28, 2014**, Qualcomm Reference No. **143851**, and all provisional applications relating thereto, together with U.S. Provisional Application No. **62/016,331**, filed **June 24, 2014**, Qualcomm Reference No. **143851P1**, (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 nonprovisional applications, national phase applications, 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,

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 09/15/2014
LOCATION DATE

V. Nachiappan

Nachiappan VALLIAPPAN

Done at SAN DIEGO, on 09/15/2014
LOCATION DATE

S. Kiran Kumar

Kiran SOMASUNDARAM

Done at San Diego, on 09/15/14
LOCATION DATE

Ahmed Kamel Sadek
Ahmed Kamel SADEK