

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
THOMAS C. CLANCY	04/28/2016
JEFFREY H. REED	04/20/2016
ROBERT W. MCGWIER	05/03/2016
AVIK SENGUPTA	04/26/2016
AKSHAY KUMAR	04/21/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Virginia Polytechnic Institute and State University
<b>Street Address:</b>	301 Burruss Hall
<b>City:</b>	Blacksburg
<b>State/Country:</b>	VIRGINIA
<b>Postal Code:</b>	24061
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	13835012
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(540)951-5292
<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>	(540) 951-9374
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<b>ATTORNEY DOCKET NUMBER:</b>	VTIP 00-000_1 PROV US
<b>NAME OF SUBMITTER:</b>	MARK S. COBURN
<b>SIGNATURE:</b>	/Mark S. Coburn/
<b>DATE SIGNED:</b>	01/18/2017
<b>Total Attachments: 6</b>	
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## ASSIGNMENT

**WHEREAS**, I/we, the below-named inventor(s) (hereinafter referred to as ASSIGNORS) whose residence address is stated below, have invented certain new and useful improvements in an invention entitled:

### **System and Method for Heterogenous Spectrum Sharing Between Commercial Cellular Operators and Legacy Incumbent Users in Wireless Network**

for which an application for United States Letters Patent Serial No. 13/835,012 has been filed on 3/15/2013; and

**WHEREAS**, Virginia Polytechnic Institute and State University, (hereinafter referred to as ASSIGNEE), an institute of higher education organized under the laws of the Commonwealth of Virginia, having an office and principal place of business at 301 Burruss Hall, Blacksburg, Virginia, 24061, is desirous of acquiring the entire right, title and interest in, to and under said application and said invention and in, to and under Letters Patent or similar legal protection to be obtained therefore in the United States and in any and all foreign countries.


**NOW, THEREFORE**, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell, assign and transfer to ASSIGNEE, its lawful successors and assigns, the full and exclusive right, title and interest to said invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries and any non-provisional applications claiming the benefit of said application to be obtained for said invention by said application or any continuation, division, continuation-in-part, reexamination, renewal, substitute, extension or reissue thereof or any legal equivalent thereof in a foreign country for the full term or terms for which the same may be granted; and authorize and request the Commissioner of Patents of the United States and any official of any foreign country whose duty it is to issue patents or legal equivalents thereto, to issue same for this invention to ASSIGNEE, its lawful successors and assigns.

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

ASSIGNORS further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to ASSIGNORS and will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue, enforce and defend said application, said invention and said Letters Patent and said equivalents thereof in any foreign country which may be necessary or desirable to carry out the purposes thereof.

VTIP 14-020  
Serial Number: 13/835,012

Full Name of Inventor: Thomas C. Clancy  
Residence: 1009 D Street SE, Washington, DC 20003

Signature:  Date: 4/28/2016

Full Name of Inventor: Jeffrey H. Reed  
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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Full Name of Inventor: Robert W. McGwier  
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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Full Name of Inventor: Avik Sengupta  
Residence: 917 University City Blvd, Apt D-6, Blacksburg, Virginia 24060

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Full Name of Inventor: Akshay Kumar  
Residence: 5600 Heather Drive, Apt D, Virginia 24060

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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Full Name of Inventor: Jeffrey H. Reed  
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Signature: Jeffrey H. Reed Date: 4/20/14

Full Name of Inventor: Robert W. McGwier  
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Full Name of Inventor: Avik Sengupta  
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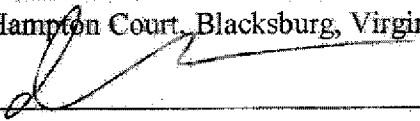
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Signature:  \_\_\_\_\_ Date: 5/5/16

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VTTP 14-020  
Serial Number: 13/835,012

Full Name of Inventor: Thomas C. Clancy  
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Full Name of Inventor: Avik Sengupta  
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Signature: Avik Sengupta Date: 4/26/2016

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VTIP 14-020

Serial Number: 13/835,012

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Full Name of Inventor: Akshay Kumar

Residence: 5600 Heather Drive, Apt D, Virginia 24060

Signature: Akshay \_\_\_\_\_ Date: 4/21/2016