

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4706565

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT		
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT		
<b>CONVEYING PARTY DATA</b>			
	<b>Name</b>	<b>Execution Date</b>	
	ERIC BARNUM	01/24/2017	
	TERENCE BANKS	01/24/2017	
<b>RECEIVING PARTY DATA</b>			
<b>Name:</b>	CAPITAL ONE SERVICES, LLC		
<b>Street Address:</b>	1680 CAPITAL ONE DRIVE		
<b>City:</b>	MCLEAN		
<b>State/Country:</b>	VIRGINIA		
<b>Postal Code:</b>	22012		
<b>PROPERTY NUMBERS Total: 1</b>			
	<b>Property Type</b>	<b>Number</b>	
	<b>Application Number:</b>	15824412	
<b>CORRESPONDENCE DATA</b>			
<b>Fax Number:</b>	(404)885-3900		
<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>	(404)8853900		
<b>Email:</b>	uspto@troutman.com, beverly.hopkins@troutman.com		
<b>Correspondent Name:</b>	TROUTMAN SANDERS LLP/CAPITAL ONE		
<b>Address Line 1:</b>	600 PEACHTREE ST., NE, SUITE 5200		
<b>Address Line 2:</b>	SUITE 5200		
<b>Address Line 4:</b>	ATLANTA, GEORGIA 30308		
<b>ATTORNEY DOCKET NUMBER:</b>	COF0005CON		
<b>NAME OF SUBMITTER:</b>	JOHN A. MORRISSETT		
<b>SIGNATURE:</b>	/John A. Morrissett/		
<b>DATE SIGNED:</b>	11/28/2017		
<b>Total Attachments: 4</b>			
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**ASSIGNMENT**

**WHEREAS**, We, **Eric Barnum** and **Terence Banks** (collectively, “Assignor”), have invented certain improvements in **SYSTEMS AND METHODS FOR AUTOMATED DETERMINATION OF NETWORK DEVICE TRANSITING DATA ATTRIBUTES**, for which U.S. Provisional Patent Application No. **62/396,434** was filed on **September 19, 2016**, and for which future applications may be filed, (collectively referred to as the “Application”), and whereas

**CAPITAL ONE SERVICES, LLC**  
**1680 Capital One Drive**  
**McLean, VA 22012**  
**United States of America**

(“Assignee”) desires to purchase all the rights in same;

**NOW THEREFORE**, in consideration of the sum of One Dollar (\$1.00) and other good and valuable considerations paid by the said Assignee, the receipt and sufficiency of which are hereby acknowledged, Assignor has and by these presents does hereby sell, assign, transfer and convey unto said Assignee all of Assignor’s rights, title, and interest in and to said Application, including in and to any conventional, division, continuation, continuation-in-part, substitution, reissue, renewal, reexam, continued prosecution application (“CPA”), or request for continued examination (“RCE”) thereof, and in and to all inventions and improvements thereon (herein collectively referred to as “Related US Applications”), preparatory to obtaining Letters Patent of the United States thereof; and Assignor hereby requests the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States resulting from said Application and Related US Applications, to Assignee, for its interest and for the sole use and benefit of Assignee and its assigns and legal representatives.


**For the same consideration**, Assignor, by these presents does sell, assign, and transfer to Assignee all of Assignor’s rights, title and interest in and to any foreign and international applications related to and/or seeking benefit of said Application and Related US Applications, and in and to all inventions and improvements thereon (herein collectively referred to as “Related Foreign Applications”), in and to any Letters Patent and similar protective rights granted on said Related Foreign Applications, and in and to the right to claim any applicable priority rights arising from or required for said Related Foreign Applications under the terms of any applicable conventions, treaties, statutes, or regulations, said Related Foreign Applications to be filed and issued in the name of Assignee or its designee, insofar as permitted by applicable law.

**For the same consideration**, Assignor agrees, without charge to Assignee, but at Assignee’s expense, to sign all lawful papers, execute said Application, Related US Applications and Related Foreign Applications, make all assignments and rightful oaths, assist in prosecution of said Application, Related US Applications and Related Foreign Applications, assist in prosecution of legal proceedings, and generally do everything reasonably possible to aid Assignee its successors, assigns, and nominees, to obtain and enforce proper protection for all said inventions and improvements in all countries throughout the world.

AND, for the same consideration, Assignor also hereby sells, assigns and transfers unto Assignee all of Assignor's rights and claims to sue for damages and other remedies with respect to any and all past infringement of all said Application, Related US Applications, and Related Foreign Applications, including said inventions and improvements which may have occurred before the date of this Assignment.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 24<sup>th</sup> day of

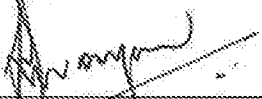
January, 2017.

 (SEAL)  
ERIC BARNUM

Witnessed by: Holly Flowers  
Signature

Date: 1/24/17

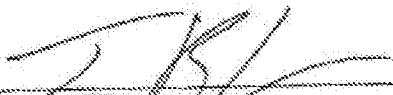
Holly Flowers  
Printed Name of Witness

Witnessed by:   
Signature

Date: 1/24/2017

Subbu Panyam  
Printed Name of Witness


IN WITNESS WHEREOF, I have hereunto set my hand and seal this 24 day of  
January, 2017.

  
TERENCE BANKS (SEAL)

Witnessed by:   
Signature

Date: 1/24/17

Michael Lauderdale  
Printed Name of Witness

Witnessed by:   
Signature

Date: 1-24-17

KAREN SIDDQUI  
Printed Name of Witness

IN WITNESS WHEREOF, Assignee hereby accepts from Assignor the sale, assignment, transfer and conveyance unto said Assignee of the full, exclusive and entire right, title, and interest in and to said Application, Related US Applications and Related Foreign Applications, by its duly authorized officer this \_\_\_\_\_ day of \_\_\_\_\_, 2017.

CAPITAL ONE SERVICES, LLC  
(Assignee)

By: 

Name: Dennis Browne

Title: Authorized Signatory

Date: 3/28/2017

Witnessed by: \_\_\_\_\_

Signature

\_\_\_\_\_  
Printed Name of Witness

Witnessed by: \_\_\_\_\_

Signature

\_\_\_\_\_  
Printed Name of Witness