

## PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>WILLIAM THOMAS SELLA</td> <td>02/11/2014</td> </tr> <tr> <td>JAMES MICHAEL SELLA</td> <td>02/11/2014</td> </tr> </tbody> </table>		Name	Execution Date	WILLIAM THOMAS SELLA	02/11/2014	JAMES MICHAEL SELLA	02/11/2014				
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WILLIAM THOMAS SELLA	02/11/2014										
JAMES MICHAEL SELLA	02/11/2014										
RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>TW TELECOM HOLDINGS, INC.</td> </tr> <tr> <td>Street Address:</td> <td>10475 PARK MEADOWS DRIVE</td> </tr> <tr> <td>City:</td> <td>LITTLETON</td> </tr> <tr> <td>State/Country:</td> <td>COLORADO</td> </tr> <tr> <td>Postal Code:</td> <td>80124</td> </tr> </table>		Name:	TW TELECOM HOLDINGS, INC.	Street Address:	10475 PARK MEADOWS DRIVE	City:	LITTLETON	State/Country:	COLORADO	Postal Code:	80124
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CORRESPONDENCE DATA											
<p>Fax Number: (202)371-2540          Phone: 202-371-2600          Email: JMUTSCHE@SKGF.COM,JHALL@SKGF.COM  <i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i>          Correspondent Name: STERNE, KESSLER, GOLDSTEIN &amp; FOX P.L.L.C          Address Line 1: 1100 NEW YORK AVENUE, N.W.          Address Line 2: C/O JOSEPH E. MUTSCHELKNAUS          Address Line 4: WASHINGTON, DISTRICT OF COLUMBIA 20005</p>											
ATTORNEY DOCKET NUMBER:	3385.0080000										
NAME OF SUBMITTER:	JOSEPH E. MUTSCHELKNAUS										
Signature:	/JOSEPH E. MUTSCHELKNAUS, # 63,285/										
Date:	02/11/2014										
Total Attachments: 2 source=3385 0080000vASSIGNMENT#page1.tif source=3385 0080000vASSIGNMENT#page2.tif											

## ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventors: **William Thomas Sella and James Michael Sella**, hereby sell and assign to **tw telecom holdings, inc.**, a corporation formed under the laws of Delaware, whose mailing address is 10475 Park Meadows Drive, Littleton, Colorado 80124 (hereafter referred to as the Assignee), his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages, for the United States of America (as defined in 35 U.S.C. § 100) and throughout the world,

(a) in the invention(s) known as **Network Element Authentication in Communication Networks** for which application(s) for patent in the United States of America has a filing date or a 371(c) date of Feb. 11, 2014 (also known as United States Application No. 14/178,036), in any and all applications thereon, in any and all Letters Patent(s) therefor, and

JEM  
#63,285  
2/11/2014

(b) in any and all applications that claim the benefit of the patent application listed above in part (a), including non-provisional applications, continuing (continuation, divisional, or continuation-in-part) applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and

(c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventors agree to execute all papers necessary in connection with the application(s) and any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

The undersigned inventors agree to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

The undersigned inventors hereby represent that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

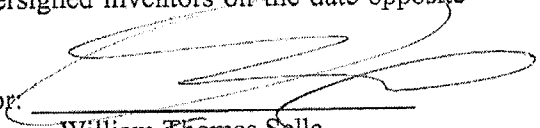
The undersigned inventors hereby grant the patent practitioners associated with **CUSTOMER NUMBER 26111** the power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

The undersigned inventors hereby represent that he/she understands that the patent practitioners associated with **CUSTOMER NUMBER 26111** are the legal representatives of, and attorneys for, the assignee, and are NOT the legal representatives of, and attorneys for, the inventors.

IN WITNESS WHEREOF, executed by the undersigned inventors on the date opposite his/her name.

Date: FEB 11, 2014

Signature of Inventor:

  
William Thomas Sella

Date: 2/11/14

Signature of Inventor:

  
James Michael Sella

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