

## 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>
CHAKRAVARTHI CHIGURAPATI	10/31/2017
PAWAN UBEROY	10/31/2017
SOMNATH MANI	10/31/2017
PRAVEEN MADHAV	10/31/2017
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<b>City:</b>	NAPERVILLE
<b>State/Country:</b>	ILLINOIS
<b>Postal Code:</b>	60563
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15799825
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<b>ATTORNEY DOCKET NUMBER:</b>	1057.P0054D2
<b>NAME OF SUBMITTER:</b>	JAMES M. WU
<b>SIGNATURE:</b>	/James M. Wu/
<b>DATE SIGNED:</b>	10/31/2017
<b>Total Attachments: 6</b>	
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**ASSIGNMENT**

WHEREAS, we,

Chakravarthi Chigurapti, a citizen of United States of America, residing at 818 E.

Meadow Dr., Palo Alto, CA, 94301, USA,

Pawan Uberoy, a citizen of United States of America, residing at 1819 Montage Court,

San Jose, CA, 95131, USA,

Somnath Mani, a citizen of United States of America, residing at 983 East River Pkwy.,

Santa Clara, CA, 95054, USA,

Praveen Madhav, a citizen of, United States of America, residing at 1456 Miller Ave.,

San Jose, CA, 95129, USA

Duncan Stuart Ritchie, a citizen of Canada, residing at RR #1-U4, Bowen Island, British

Columbia, V0N 1G0, Canada, and

Sebastian Sapa, a citizen of Canada, residing at #301 – 2121 Alma St., Vancouver,

British Columbia, V6R 3R1, Canada

have made an invention in:

**METHODS AND APPARATUS FOR IMPROVING RELIABILITY OF  
POINT-TO-POINT NETWORK CONNECTION**

for which we have executed application papers for a U.S. patent thereon; and

WHEREAS, Tellabs Operations, Inc., a Delaware Corporation, having a place of business located at 1415 West Diehl Road, Naperville, IL 60563, USA, is desirous of acquiring the exclusive right, title and interest in and to said invention and in and to the Letters Patent to be granted and issued therefore in the United States of America and its territories and possessions, and all countries foreign thereto;

NOW, THEREFORE, for a valuable consideration, the receipt of which is hereby acknowledged, we, Chakravarthi Chigurapti, Pawan Uberoy, Somnath Mani, Praveen Madhav, Duncan Stuart Ritchie, and Sebastian Sapa, do sell, assign, transfer and set over unto the said Tellabs Operations, Inc., its successors and assigns the full and exclusive right, title and interest in and to said invention, and in and to any and all Letters Patent to be granted and issued therefore, not only for, to and in the United States of America, its territories and possessions, but also for, to and in all other countries including all priority rights under the International Convention; and we hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent to said Tellabs Operations, Inc., its successors and assigns, in accordance with this Assignment. IN TESTIMONY WHEREOF, we have hereunto signed our names on the date indicated hereinafter:



Re: U.S. Patent Application entitled:

**METHODS AND APPARATUS FOR PERFORMING IN-SERVICE SOFTWARE  
UPGRADE FOR A NETWORK DEVICE USING SYSTEM VIRTUALIZATION**

1) Inventor: **Chakravarthi S. Chigurupati**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Chakravarthi S. Chigurupati

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

2) Inventor: **Pawan Uberoy**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Pawan Uberoy

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

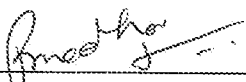
3) Inventor: **Somnath Mani**

Signature: Somnath Date: 06/05/2012  
Somnath Mani

Witness: [Signature] Date: 6/5/12

Witness: [Signature] Date: 6/5/12

4) Inventor: **Praveen Madhav**

Signature:  Date: 5/17/2012  
Praveen Madhav

Witness:  Date: 5/17/12

Witness:  Date: 5/17/2012

5) Inventor: **Duncan Stuart Ritchie**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Duncan Stuart Ritchie

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

6) Inventor: **Sebastian Sapa**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Sebastian Sapa

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

4) Inventor: **Praveen Madhav**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Praveen Madhav

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

5) Inventor: **Duncan Stuart Ritchie**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Duncan Stuart Ritchie

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

6) Inventor: **Sebastian Sapa**

Signature: \_\_\_\_\_ Date: 30/5/2012  
Sebastian Sapa

Witness: \_\_\_\_\_ Date: 30/5/2012  
James Pang

Witness: \_\_\_\_\_ Date: 30/5/2012  
HONGGANG XI