

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT4020140

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
NATARAJ BACTHU	08/19/2016
RAGHAVA SIVARAMU	08/19/2016
SRINIVASAN RAMABADRAN	08/22/2016
TERRY FANGCHENG TANG	08/18/2016
LENIN BABU DONTUBOYINA	08/17/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	CISCO TECHNOLOGY, INC.
<b>Street Address:</b>	170 WEST TASMAN DRIVE
<b>City:</b>	SAN JOSE
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95134
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15216651
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(310)556-1802
<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>	415-814-6161
<b>Email:</b>	bvo@polsinelli.com
<b>Correspondent Name:</b>	CISCO TECHNOLOGY, INC. C/O POLSINELLI PC
<b>Address Line 1:</b>	1000 LOUISIANA STREET
<b>Address Line 2:</b>	FIFTY-THIRD FLOOR
<b>Address Line 4:</b>	HOUSTON, TEXAS 77002
<b>ATTORNEY DOCKET NUMBER:</b>	543236(1003544-US.01)
<b>NAME OF SUBMITTER:</b>	BENJAMIN B. MATTHEW
<b>SIGNATURE:</b>	/Benjamin B. Matthew/
<b>DATE SIGNED:</b>	08/23/2016
<b>Total Attachments: 6</b>	

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**ASSIGNMENT  
(JOINT)**

THIS ASSIGNMENT, by Nataraj Baethu; Raghava Sivaramu; Srinivasan Ramabadrnan; Terry Fangcheng Tang; and Lenin Babu Dontuboyina (hereinafter referred to collectively as the "Assignors"), witnesseth:

WHEREAS, said Assignors have invented certain new and useful improvements in: **BIDIRECTIONAL MULTICASTING OVER VIRTUAL PORT CHANNEL**, set forth in an application for Letters Patent of the United States with U.S. Application No. 15/216,651, filed on July 21, 2016.

WHEREAS, **CISCO TECHNOLOGY, INC.**, a corporation duly organized under and pursuant to the laws of the State of California, and having a principal place of business at 170 West Tasman Drive, San Jose, California 95134 (hereinafter referred to as the "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions and applications for Letters Patent of the United States, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon:

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, said Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto said Assignee, its successors, legal representatives and assigns, Assignors' interest in the entire right, title and interest in and to the above-mentioned inventions, application for Letters Patent, and any and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted therefor and thereon, and in and to any and all divisions, continuations, and continuations-in-part of said application, or reissues or extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by said Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignors, had this sale and assignment not been made; and

FOR THE SAME CONSIDERATION, said Assignors hereby covenant and agree to and with said Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, said Assignors are the lawful owners of the entire right, title and interest in and to said invention and the application for Letters Patent above mentioned, and that the same is unencumbered and that said Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth; and

FOR THE SAME CONSIDERATION, said Assignors hereby covenant and agree to and with said Assignee, its successors, legal representatives and assigns, that said Assignors will, whenever counsel of said Assignee, or the counsel of its successors, legal representatives and assigns, shall advise that any proceeding in connection with said inventions, or said application for Letters Patent, or any proceeding in connection with Letters Patent for said inventions in any country, including interference proceedings, is lawful and desirable, or that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue or extension of any Letters Patent, to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent for said inventions, without charge to said Assignee, its successors, legal representatives and assigns, but at the cost and expense of said Assignee, its successors, legal representatives and assigns.

FOR THE SAME CONSIDERATION, said Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto said Assignee, its successors, legal representatives and assigns, Assignors' interest in the entire right, title and interest in all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to Assignee, or may accrue hereafter including, but not limited to, the right to sue for, collect, and retain damages for past infringement of the said Patents and Applications before or after issuance.

IN WITNESS WHEREOF, Assignors have thus set their hands on the dates below written.

Date: Aug 19, 2016

Signature: B. Nataraj  
Nataraj Baethu

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

Signature: \_\_\_\_\_  
Raghava Sivaramu

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

Signature: \_\_\_\_\_  
Srinivasan Ramabadran

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

Signature: \_\_\_\_\_  
Terry Fangcheng Tang

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

Signature: \_\_\_\_\_  
Lenin Babu Dontuboyina

IN WITNESS WHEREOF, Assignors have thus set their hands on the dates below written.

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

**Nataraj Bacthu**

Date: 08/19/16 Signature: \_\_\_\_\_

**Raghava Sivaramu**

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

**Srinivasan Ramabadran**

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

**Terry Fangcheng Tang**

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

**Lenin Babu Dontuboyina**

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Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
**Nataraj Bacthu**

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
**Raghava Sivaramu**

Date: 08/22/2016 Signature:   
**Srinivasan Ramabadran**

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
**Terry Fangcheng Tang**

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
**Lenin Babu Dontuboyina**

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Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Nataraj Bacthu

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Raghava Sivaramu

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Srinivasan Ramabadran

Date: 8/18/2016 Signature: \_\_\_\_\_  
Terry Fangcheng Tang

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Lenin Babu Dontuboyina

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Nataraj Bacthu

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Raghava Sivaramu

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Srinivasan Ramahadran

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Terry Fangcheng Tang

Date: 8/17/2016 Signature: \_\_\_\_\_  
Lenin Babu Dontuboyina