PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT5357879

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date | |
|---------------------|----------------|--|
| BO ZHANG | 12/11/2012 | |
| THEODORE J. SCHMIDT | 12/11/2012 | |
| CHRISTIAN MALOUIN | 12/11/2012 | |

RECEIVING PARTY DATA

| Name: | JUNIPER NETWORKS, INC. | |
|-----------------|------------------------|--|
| Street Address: | 1133 INNOVATION WAY | |
| City: | SUNNYVALE | |
| State/Country: | CALIFORNIA | |
| Postal Code: | 94089 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number | |
|---------------------|----------|--|
| Application Number: | 16263897 | |

CORRESPONDENCE DATA

Fax Number: (571)432-0808

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.

Phone: 5714320800

Email: Jcato@harrityllp.com

HARRITY AND HARRITY, LLP **Correspondent Name:** Address Line 1: 11350 RANDOM HILLS ROAD

Address Line 2: SUITE 600

Address Line 4: FAIRFAX, VIRGINIA 22030

| ATTORNEY DOCKET NUMBER: | 0023-0649D1C1 | |
|--------------------------------|--------------------------------|--|
| NAME OF SUBMITTER: KRIS M. RHU | | |
| SIGNATURE: | /Kris M. Rhu, Reg. No. 74,817/ | |
| DATE SIGNED: | 02/04/2019 | |

Total Attachments: 2

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PATENT REEL: 048228 FRAME: 0668 505311099

Attorney Docket No. <u>0023-0649</u> JOINT INVENTION (Worldwide Rights)

ASSIGNMENT

WHEREAS, WE, the below named inventors (hereinafter referred to as Assignors), have made an invention entitled:

MINIMIZING POLARIZATION-DEPENDENT OPTICAL POWER FOR PM-M-QAM TRANSMITTERS

| for which an application is being file | ed herewith; | or 🛛 for which we | e filed an applicat | ion for |
|--|--------------|---------------------|---------------------|---------|
| United States Letters Patent on December | oer 12, 201 | 12 under Serial No. | 13/711,861 | ; and |

We hereby authorize Applicants' representative to fill in the preceding information relating to the filing date and/or serial number, as appropriate.

WHEREAS, <u>Juniper Networks</u>, <u>Inc.</u>, a corporation of <u>Delaware</u> whose post office address is <u>1194 North Mathilda Avenue</u>, <u>Sunnyvale</u>, <u>California 94089-1206</u> (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from assignee is hereby acknowledged, we as assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the assignee, its lawful successors and assigns, our entire right, title, and interest in and to this invention and this application, and including any previously or subsequently filed provisional applications, all divisions, continuations, and continuations-in-part thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority on the basis of such application, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, WE HEREBY covenant that we have the full right to convey the interest assigned by this Assignment, and we have not executed and will not execute any agreement in conflict with this Assignment;

AND, WE HEREBY further covenant and agree that we will, without further consideration, communicate with assignee, its successors and assigns, any facts known to us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the assignee, its successors and assigns.

PATENT REEL: 048228 FRAME: 0669 IN TESTIMONY WHEREOF, WE have hereunto set our hand.

Bo ZHANG

3084 Baronscourt Way San Jose, CA 95132

Theodore J. SCHMIDT 8920 Azara Street Gilroy, CA 95020

Christian MALOUIN 5138 Devon Park Ct. San Jose, CA 95136 Signature:

Date: December

Signature:

Date: DECEMBER

Signature:

Date: December 11,

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