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| <b>PATENT ASSIGNMENT COVER SHEET</b> |
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EPAS ID: PAT5308646

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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>            |
| JONAS GEYER   | 08/13/2018                       |
| MEHMET AYDINLIK   | 08/13/2018                       |
| CHRISTIAN RASMUSSEN   | 11/08/2018                       |
| <b>RECEIVING PARTY DATA</b>   |                                  |
| <b>Name:</b>  | ACACIA COMMUNICATIONS, INC.      |
| <b>Street Address:</b>  | 3 MILL AND MAIN PLACE            |
| <b>Internal Address:</b>  | SUITE 400                        |
| <b>City:</b>  | MAYNARD                          |
| <b>State/Country:</b>   | MASSACHUSETTS                    |
| <b>Postal Code:</b>   | 01754                            |
| <b>PROPERTY NUMBERS Total: 1</b>  |                                  |
| <b>Property Type</b>  | <b>Number</b>                    |
| <b>Application Number:</b>  | 16102376                         |
| <b>CORRESPONDENCE DATA</b>  |                                  |
| <b>Fax Number:</b>  | (978)226-3022                    |
| <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>   | 9782542425                       |
| <b>Email:</b>   | PatentDocketing@acacia-inc.com   |
| <b>Correspondent Name:</b>  | JOSEPH D'ANGELO                  |
| <b>Address Line 1:</b>  | ACACIA COMMUNICATIONS, INC.      |
| <b>Address Line 2:</b>  | 3 MILL AND MAIN PLACE, SUITE 400 |
| <b>Address Line 4:</b>  | MAYNARD, MASSACHUSETTS 01754     |
| <b>ATTORNEY DOCKET NUMBER:</b>  | ACA-17-001PROORD                 |
| <b>NAME OF SUBMITTER:</b>   | JOSEPH D'ANGELO                  |
| <b>SIGNATURE:</b>   | /Joseph D'Angelo/                |
| <b>DATE SIGNED:</b>   | 01/04/2019                       |
| <b>Total Attachments: 4</b>   |                                  |
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| source=ACA-17-001PROORDFullyExecutedAssignment#page2.tif  |                                  |

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**ASSIGNMENT**

WHEREAS, We, Mehmet Aydinlik of Acton, Massachusetts, USA, Jonas Geyer of Somerville, Massachusetts, USA, and Christian Rasmussen of Lyngby, Denmark, have invented one or more inventions described in an application (or provisional application) for Letters Patent of the United States entitled:

ENCODING A FIRST MODULATION TYPE WITH A FIRST SPECTRAL EFFICIENCY INTO A SECOND MODULATION TYPE CAPABLE OF HAVING A SECOND SPECTRAL EFFICIENCY

and identified by

Attorney Docket No. **ACA-17-001PROORD**, and/or executed by us on even date herewith and about to be filed in the U.S. Patent and Trademark Patent Office; and

Application No. \_\_\_\_\_, filed in the U.S. Patent and Trademark Office on \_\_\_\_\_; and

WHEREAS, Acacia Communications, Inc.,(hereinafter "ASSIGNEE"), having a usual place of business at 3 Mill and Main Place, Suite 400, Maynard, MA 01754, desires to acquire an interest therein, in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, at least as early as the filing date of said application, our entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the invention(s) described in said application, together with our entire right, title and interest in and to said application, and such Letters Patent that may issue thereon and applications that claim priority thereto under United States law or international convention, and such Letters Patent that may issue thereon, including but not limited to non-U.S., international, non-provisional, continuation, divisional, reissue, reexamination, extension, and substitution applications of said application and such Letters Patent, and any right, title and interest we may have in provisional applications to which said application claims priority; said invention(s), applications and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all of our rights arising under or pursuant to any and all United States laws and international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent, including but not limited to any cause(s) of action and damages accruing prior to this assignment. We hereby acknowledge that this assignment, being of our entire right, title and interest in and to said invention(s), carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all Letters Patent to ASSIGNEE in its own name as assignee of our entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention(s) to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of papers for filing of non-

provisional, substitution, continuation, divisional, reissue, reexamination, and corresponding foreign and international patent applications;

AND, we hereby further agree to provide statements or testimony in any interference or other proceeding in which said invention(s) or any application or patent directed thereto may be involved;

AND, we hereby authorize ASSIGNEE or its attorneys or agents to insert the correct serial number and filing date into this assignment, if none is indicated on the date of our execution of this assignment;

AND, we hereby authorize and request the Director of the United States Patent and Trademark Office and the empowered officials of all other governments to issue such Letters Patent as shall be granted upon said application, or applications based thereon, to said ASSIGNEE, its successors, assigns or legal representatives.

*IN TESTIMONY WHEREOF*, we have hereunto set our hands and affixed our seals on the date(s) set forth below.

Inventor: Jonas Geyer  
Jonas Geyer

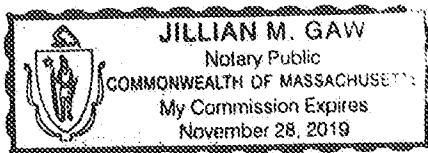
Commonwealth of Massachusetts )  
County of Middlesex ) ss

On this 3<sup>rd</sup> day of August, 2018, before me, the undersigned Notary Public, personally appeared Jonas Geyer, proved to me to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.


Jillian M. Gaw  
Signature of Notary

(Seal)

My Commission Expires: 11/28/2019

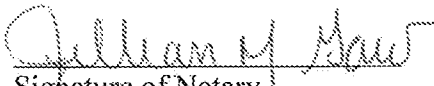


Inventor:

  
Mehmet Aydinlik

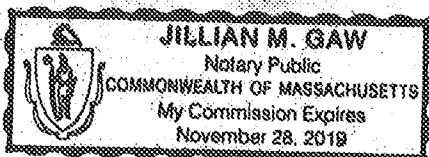
Commonwealth of Massachusetts )  
County of Middlesex ) ss

On this 13<sup>th</sup> day of August, 2018, before me, the undersigned Notary Public, personally appeared **Mehmet Aydinlik**, proved to me to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

  
Signature of Notary

(Seal)

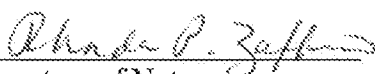
My Commission Expires: 11/28/2019



Inventor:   
**Christian Rasmussen**

Commonwealth of Massachusetts )  
County of Middlesex ) ss

On this 8<sup>th</sup> day of November, 2018, before me, the undersigned Notary Public, personally appeared **Christian Rasmussen**, proved to me to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

  
Signature of Notary

(Seal)

My Commission Expires: August 29, 2019

