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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5922653

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
THOMAS G. PRATT	01/20/2020
ROBERT DANIEL KOSSLER	01/15/2020
BENJAMIN STRYCKER	01/16/2020
JEFFREY G. MUELLER	01/15/2020

RECEIVING PARTY DATA

Name:	UNIVERSITY OF NOTRE DAME DU LAC	
Street Address:	OFFICE OF TECHNOLOGY TRANSFER	
Internal Address:	940 GRACE HALL, NOTRE DAME	
City:	SOUTH BEND	
State/Country:	INDIANA	
Postal Code:	46556	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15134381

CORRESPONDENCE DATA

Fax Number: (949)760-9502

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: 9497600404

efiling@knobbe.com Email:

Correspondent Name: KNOBBE, MARTENS, OLSON & BEAR, LLP

Address Line 1: 2040 MAIN STREET, 14TH FLOOR

Address Line 4: IRVINE, CALIFORNIA 92614

ATTORNEY DOCKET NUMBER:	UNDRF.008A
NAME OF SUBMITTER:	DEREK BAYLES
SIGNATURE:	/Derek Bayles/
DATE SIGNED:	01/22/2020

Total Attachments: 8

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PATENT REEL: 051582 FRAME: 0894

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ASSIGNMENT

WHEREAS, Thomas G. Pratt; Xiaobin Wu; Thomas E. Fuja; Robert Daniel Kossler; Benjamin Strycker, and Jeffrey G. Mueller, (individual(s) hereinafter "ASSIGNOR"), invented certain new and useful improvements, technology, inventions, developments, ideas, ornamental design or discoveries related to SPACE-POLARIZATION MODULATED COMMUNICATIONS (collectively hereinafter referred to as the "Work") for which an application for Letters Patent in the United States has been filled (identified above) with the United States Patent and Trademark Office (hereinafter the "Application");

AND WHEREAS, University of Notre Dame du Lac (hereinafter the "ASSIGNEE") desires to acquire the entire right, title, and interest in and to the Application and the Work:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR hereby acknowledges that ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in the Application and the Work, including all provisional applications relating therefo (including but not limited to U.S. Provisional Application No(s), 62/150,127, 62/158,954 and 62/325,436, filed April 20, 2015, May 8, 2015 and April 20, 2016 (respectively if plural applications)). and all nonprovisional applications claiming priority thereto, including, all divisions, continuations, continuations-in-part, reissues, and reexaminations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and any related Letters Patent which may hereafter be granted or filed in any country or countries foreign to the United States, all extensions, renewals and reissues thereof; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all related Letters Patent to the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND ASSIGNOR DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns 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 infringements of said Letters Patent before or after issuance.

AND ASSIGNOR DOES HEREBY covenant and agree that ASSIGNOR will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Work, and testify in any legal proceeding, assist in the preparation of any other provisional or non-provisional applications relating to the Application and the Work or any improvements made thereto, sign all lawful papers, authorize the filing of and execute and make all rightful caths and/or declarations in connection with the Application and the Work including any improvements made thereto, any patent applications filed therefrom, and any continuing application filed from any of the aforementioned applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Work in all countries.

Filing Date: April 20, 2016 Page 2 of 2 Legal Name of inventor: Thomas G. Pratt Date: 1/20/2020 Legal Name of inventor: Xisobin Wu Signature: Legal Name of inventor: Thomas E. Fuja Signature: _______Date: _____ Legal Name of inventor: Robert Daniel Kossler Signature: _____ Date: _____ Legal Name of inventor: Benjamin Strycker Signature: ______ Date: _____ Legal Name of inventor: Jeffrey G. Mueller

Signature: _______ Date: _____

Application No.: 15/134,381

PATENT REEL: 051582 FRAME: 0897

Docket Number: UNDRF.008A

Timing Date. April 20, 2010

ASSIGNMENT

WHEREAS, Thomas G. Pratt; Xiaobin Wu; Thomas E. Fuja; Robert Daniel Kossler; Benjamin Strycker; and Jeffrey G. Mueller, (individual(s) hereinafter "ASSIGNOR"), invented certain new and useful improvements, technology, inventions, developments, ideas, ornamental design or discoveries related to SPACE-POLARIZATION MODULATED COMMUNICATIONS (collectively hereinafter referred to as the "Work") for which an application for Letters Patent in the United States has been filed (identified above) with the United States Patent and Trademark Office (hereinafter the "Application");

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AND ASSIGNOR DOES HEREBY covenant and agree that ASSIGNOR will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Work, and testify in any legal proceeding, assist in the preparation of any other provisional or non-provisional applications relating to the Application and the Work or any improvements made thereto, sign all lawful papers, authorize the filing of and execute and make all rightful oaths and/or declarations in connection with the Application and the Work including any improvements made thereto, any patent applications filed therefrom, and any continuing application filed from any of the aforementioned applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Work in all countries.

Application No.: 15/134,381 Filing Date: April 20, 2016	Docket Number: UNDRF.008A Page 2 of 2
Legal Name of inventor: Xiaobin Wu	
Signature:	Date:
Legal Name of inventor: Thomas E. Fuja Signature:	Date:
Legal Name of inventor: Robert Daniel Kossler Signature: Robert Janiel Kossler	Date: Jan 15, 2020
Legal Name of inventor: Benjamin Strycker	
Signature:	Date:
Legal Name of inventor: Jeffrey G. Mueller	
Signature:	Date:

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WHEREAS, Thomas G. Pratt; Xiaobin Wu; Thomas E. Fuja; Robert Daniel Kossler; Benjamin Strycker; and Jeffrey G. Mueller, (individual(s) hereinafter "ASSIGNOR"), invented certain new and useful improvements, technology, inventions, developments, ideas, ornamental design or discoveries related to SPACE-POLARIZATION MODULATED COMMUNICATIONS (collectively hereinafter referred to as the "Work") for which an application for Letters Patent in the United States has been filed (identified above) with the United States Patent and Trademark Office (hereinafter the "Application");

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Filing Date: April 20, 2016	Page 2 of 2
Legal Name of inventor: Xiaobin Wu Signature:	Date:
Legal Name of Inventor: Thomas E. Fuja Signature:	Date:
Legal Name of inventor: Robert Daniel Kossler Signature	Date:
Legal Name of Inventor: Benjamin Strycker Signature: Hyun Hull	Date; 1-16-2020
Legal Name of inventor: Jeffrey G. Mueller Signature:	Date:

Timing Date. April 20, 2010

ASSIGNMENT

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Filing Date: April 20, 2016 Page 2 of 2 Legal Name of inventor: Thomas G. Pratt Signature: _____ Date: ____ Legal Name of inventor: Xiaobin Wu Date: _____ Signature: Legal Name of inventor: Thomas E. Fuja Signature: _____ Date: ____ Legal Name of inventor: Robert Daniel Kossler Signature: Date: Legal Name of inventor: Benjamin Strycker Signature: Date: Legal Name of inventor: Jeffrey G. Mueller Date: 15-Jan-2020

> PATENT REEL: 051582 FRAME: 0903

Docket Number: UNDRF.008A

RECORDED: 01/22/2020

Application No.: 15/134,381