PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6597946

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MICHAL LIPSON	08/20/2019
CHRISTOPHER THOMAS PHARE	08/27/2019
YOU-CHIA CHANG	08/16/2019

RECEIVING PARTY DATA

Name:	THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK
Street Address:	535 WEST 116TH STREET
Internal Address:	412 LOW MEMORIAL LIBRARY
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10027

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17275753

CORRESPONDENCE DATA

Fax Number: (215)568-3439

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: 2155683100

Email: assignments@woodcock.com **BAKER & HOSTETLER LLP Correspondent Name:** Address Line 1: CIRA CENTRE 12TH FLOOR

Address Line 2: 2929 ARCH STREET

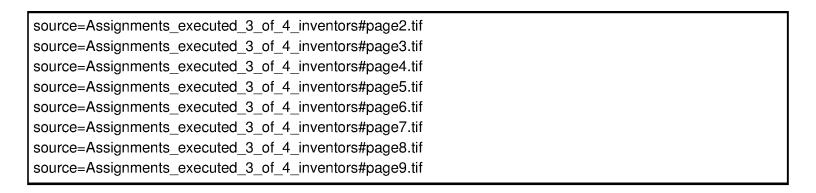
Address Line 4: PHILADELPHIA, PENNSYLVANIA 19104-2891

ATTORNEY DOCKET NUMBER:	101879.000138 / CU18275
NAME OF SUBMITTER:	VALERIE CHICCHI
SIGNATURE:	/Valerie Chicchi/
DATE SIGNED:	03/12/2021

Total Attachments: 9

source=Assignments executed 3 of 4 inventors#page1.tif

PATENT REEL: 055574 FRAME: 0325



PATENT REEL: 055574 FRAME: 0326

ASSIGNMENT

WHEREAS, I, Michal Lipson, a citizen of United States, residing at New York, New York, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number 101879.000058 / CU18275 ("the invention"), assigned application number 62/731,151 filed on September 14, 2018, entitled BEAM STEERING AND RECEIVING METHOD BASED ON AN OPTICAL SWITCH ARRAY ("the subject application").

AND WHEREAS, The Trustees of Columbia University in the City of New York, ASSIGNEE, having a place of business at 412 Low Memorial Library, 535 West 116th Street, New York, New York 10027, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, the entire right, title and interest in and to the Invention entitled BEAM STEERING AND RECEIVING METHOD BASED ON AN OPTICAL SWITCH ARRAY, and any and all improvements thereto, and in and to the application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues or re-exams thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements, including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, and in and to any other applications based in whole or in part on any of the foregoing; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY represent and warrant that I have the full power to make this assignment and that the rights, titles, and interests assigned are not encumbered by any grant, licens, or right heretofore given; and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal

representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this <u>20th</u> day of <u>frequest</u>, year of 2019.

Signature – Michal Lipson

STATEMENT OF WITNESS

SIGNED at	New York	NY	USA
_	(City)	(State)	(Country)

This 20 day of August, 2019.

I, Katarayna Pelossof	whose full residence address is
425 Main St, Apt 4N	New York, NY 10044
, , , , ,	

was personally present and did see **Michal Lipson** execute the above assignment on the _____ day of ________, 20______, and such assignor is personally known to me to be the person described in such document.

Kopanyur Pelossof Signature of Witness

ACCEPTANCE BY ASSIGNEE

In connection with an assignment in any jurisdiction in which an acceptance by ASSIGNEE is required, I hereby accept this assignment on behalf of The Trustees of Columbia University in the City of New York. I declare under penalty of perjury under the laws of the United States of America, and under penalty of the laws of any other jurisdiction before which this document may be presented, that (check all that apply):

I am an officer of the above-identified ASSIGNEE,

I have signed this document on behalf of ASSIGNEE with the full authority of the ASSIGNEE.

and that all the foregoing is true and correct.

Dated:

By:

Name:

Title:

Joffrey M. Sears, Ph.D. Associate General Counsel Columbia University

ASSIGNMENT -

WHEREAS, I, Christopher Thomas Phare, a citizen of United States, residing at New York, New York, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number 101879.000058 / CU18275 ("the invention"), assigned application number 62/731,151 filed on September 14, 2018, entitled BEAM STEERING AND RECEIVING METHOD BASED ON AN OPTICAL SWITCH ARRAY ("the subject application").

AND WHEREAS, The Trustees of Columbia University in the City of New York, ASSIGNEE, having a place of business at 412 Low Memorial Library, 535 West 116th Street, New York, New York 10027, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, the entire right, title and interest in and to the Invention entitled BEAM STEERING AND RECEIVING METHOD BASED ON AN OPTICAL SWITCH ARRAY, and any and all improvements thereto, and in and to the application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues or re-exams thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements, including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, and in and to any other applications based in whole or in part on any of the foregoing; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY represent and warrant that I have the full power to make this assignment and that the rights, titles, and interests assigned are not encumbered by any grant, licens, or right heretofore given; and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal

representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this 77 day of August, year of 2019.

Signature - Christopher T. Phare

STATEMENT OF WITNESS

SIGNED at New York NY USA (Country)

o19.

whose full residence address is
Long Island City, NY 11101

was personally present and did see Christopher T. Phare execute the above assignment on the 27 day of Aug, 2019, and such assignor is personally known to me to be the person described in such document.

ACCEPTANCE BY ASSIGNEE

In connection with an assignment in any jurisdiction in which an acceptance by ASSIGNEE is required, I hereby accept this assignment on behalf of The Trustees of Columbia University in the City of New York. I declare under penalty of perjury under the laws of the United States of America, and under penalty of the laws of any other jurisdiction before which this document may be presented, that (check all that apply):

I am an officer of the above-identified ASSIGNEE,

I have signed this document on behalf of ASSIGNEE with the full authority of the ASSIGNEE.

and that all the foregoing is true and correct.

Dated

By:

Name:

Title:

Jeffrey M. Sears, Ph.D. Associate General Counsel Columbia University

ASSIGNMENT

WHEREAS, I, You-Chia Chang, a citizen of Taiwan, residing at New York, New York, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number 101879.000058 / CU18275 ("the invention"), assigned application number 62/731,151 filed on September 14, 2018, entitled BEAM STEERING AND RECEIVING METHOD BASED ON AN OPTICAL SWITCH ARRAY ("the subject application").

AND WHEREAS, The Trustees of Columbia University in the City of New York, ASSIGNEE, having a place of business at 412 Low Memorial Library, 535 West 116th Street, New York, New York 10027, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, the ASSIGNOR, hereby sell, assign, transfer, and set over, unto the ASSIGNEE, its successors, legal representatives, and assigns, the entire right, title and interest in and to the Invention entitled BEAM STEERING AND RECEIVING METHOD BASED ON AN OPTICAL SWITCH ARRAY, and any and all improvements thereto, and in and to the application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues or re-exams thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements, including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, and in and to any other applications based in whole or in part on any of the foregoing; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HERBBY represent and warrant that I have the full power to make this assignment and that the rights, titles, and interests assigned are not encumbered by any grant, licens, or right heretofore given; and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal

IN TESTIMONIV WILLDEGE I have glound.	mar nome balone on the date in the sea it is	. :
IN TESTIMONY WHEREOF, I have signed my signature.		ye
Executed this 16 day of August	_, year of 20 19.	
Signature - You-Chia Chang	,	
Signature - You-Chia Chang /		
*****************	****************************	**
STATEMENT OF WITNESS		
SIGNED at Housely	Towns	
SIGNED at Horschie (City) (State)	Jaīvan (Country)	•
This 16 day of Angust, 20 19.		
I, Yu - Stang Line	whose full residence address is	
I, Yu - Stang Line	, Harndu City 300, Tanvan (R.O.C.)	_
I, Yu-Stang Line No. 10, Ln. 51, Trangong 1st Rd., East Dist.	, Hernehu City 300, Tanvan (R.O.C.)	_
I, Yu - Stang Line No. 10, Lu. 51, Trangeng 1st Rd., East bist. was personally present and did see You-Chia Change	execute the above assignment on the 16	_
I, Yu-Stang Line No. 10, Ln. 51, Trangong 1st Rd., East Dist.	execute the above assignment on the 16	_

ACCEPTANCE BY ASSIGNEE

In connection with an assignment in any jurisdiction in which an acceptance by ASSIGNEE is required, I hereby accept this assignment on behalf of The Trustees of Columbia University in the City of New York. I declare under penalty of perjury under the laws of the United States of America, and under penalty of the laws of any other jurisdiction before which this document may be presented, that (check all that apply):

I am an officer of the above-identified ASSIGNEE,

Thave signed this document on behalf of ASSIGNEE with the full authority of the ASSIGNEE.

and that all the foregoing is true and correct.

Dated

By:

2). Name

Title:

Jampay M. Soars, Ph.D. Associate General Counsel Columbia University

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