504338329 04/26/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4385017

| SUBMISSION TYPE: | | NEW ASSIGNMENT | NEW ASSIGNMENT | | | | |
|--|-------------|--|-------------------------------------|------------|----------------------|--|--|
| NATURE OF CONVEYANCE: | | ASSIGNMENT | ASSIGNMENT | | | | |
| CONVEYING PARTY | DATA | | | | | | |
| | | Name | Name | | Execution Date | | |
| CHRISTOPHER MICHAEL MURPHY | | | | | 04/24/2017 | | |
| MATTHEW JAMES W. BROWN | | | | | 04/24/2017 | | |
| MENG WANG | | | | | 04/18/2017 | | |
| GARETH JAMES SM | | | | 04/25/2017 | | | |
| RECEIVING PARTY I | ΟΑΤΑ | | | | | | |
| Name: VIAVI SOLUTIONS UK LIMITED | | | | | | | |
| Street Address: | ASTOR | ASTOR HOUSE, NEWBURY BUSINESS PARK, LONDON ROAD | | | | | |
| City: | | NEWBURY, BERKSHIRE | | | | | |
| State/Country: | | KINGDOM | | | | | |
| Postal Code: | | RG14 2PZ | | | | | |
| | | 5495602 | | | | | |
| Property Type | | | Number | | | | |
| | | | | _ | | | |
| CORRESPONDENCE | | | | | | | |
| . , | | 571)432-0808 | at ia un | | oful it will be cont | | |
| | | the e-mail address first; if the if that is unsuccessful, it wi | | | | | |
| Phone: | 5 | 714320800 | | | | | |
| Email: | | cato@harrityllp.com | | | | | |
| Correspondent Name | | ARRITY AND HARRITY, LLP | | | | | |
| Address Line 1: | | 1350 RANDOM HILLS ROAD | | | | | |
| Address Line 2:SUITE 600Address Line 4:FAIRFAX, VIRGINIA 22030 | | | | | | | |
| | Г | | | | | | |
| ATTORNEY DOCKET | NUMBER: | 0099-0151 | 0099-0151 | | | | |
| NAME OF SUBMITTEI | R: | WILLIAM P. GVOTH | WILLIAM P. GVOTH | | | | |
| SIGNATURE: | | /William P. Gvoth, Reg. N | /William P. Gvoth, Reg. No. 74,308/ | | | | |
| DATE SIGNED: | | 04/26/2017 | 04/26/2017 | | | | |
| Total Attachments: 6 | | | | | | | |
| source=0099-0151_As | • – | | | | | | |
| source=0099-0151_As | signment_FI | NAL#page2.tif | | | | | |

| source=0099-0151_Assignment_FINAL#page3.tif | |
|---|--|
| source=0099-0151_Assignment_FINAL#page4.tif | |
| source=0099-0151_Assignment_FINAL#page5.tif | |
| source=0099-0151_Assignment_FINAL#page6.tif | |

ASSIGNMENT (Joinf) **Worldwide Rights**

THIS ASSIGNMENT, by Christopher Michael MURPHY, Matthew James W. BROWN, Meng WANG, and Gareth James SMITH, residing at <u>88 Broadmoor Lane</u>, Bath, BA1 4LB, GB, <u>18 St. Johns Road</u>, Hartley Wintney, Hock, Hants, RG27 8DR, GB, <u>149 Broadacres</u>, Guildford, Surrey, GU3 3BS, GB, and <u>2</u> Connaught Road, Newbury, Berkshire, RG14 5SP, GB (hereinafter referred to as "the Assignors"), respectively, witnesseth

WHEREAS, the Assignors have invented certain new and useful improvements in SENSOR-BASED GEOLOCATION OF A USER DEVICE set forth in an application for Letters Patent of the United States,

- (1)which is a provisional application

(a) filed herewith; or (b) bearing Application No._____, and filed on _____; or

- (2)which is a non-provisional application
 - bearing Application No. <u>15/495,602</u>, and filed on <u>April 24, 2017</u>; or filed herewith; and (a)
 - (fb)

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

WHEREAS, Viavi Solutions UK Limited, having its principal place of business at Astor House, Newbury Business Park, London Road, Newbury, Berkshire, RG14 2PZ, United Kingdom (hereinafter referred to as "the Assignce"), is desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including any previously or subsequently filed provisional applications, for Letters Patent of the United States or other countries elaiming priority to said application or from which said application claims priority, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do 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 above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, provisional applications, divisions, continuations, and continuations-in-part of said applications, and reissues and 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 the Assignce, 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, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignots have good and full right and lawful authority to sell and convey the same in the manner herein set forth:

PATENT REEL: 042344 FRAME: 0396

Joint Assignment Attorney's Docket No.: 0099-0151

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assigners will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any Letters Patent or Patents 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 or Patents for said inventions, without charge to the Assignee, its successors, legal representatives, and assigns;

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters. Patent of the United States to the Assignee as the Assignee of said inventions, the Letters Patent to be issued for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

hur hunt____

Christopher Michael MURPHY

Date: 24/4/2017

MEKR

Matthew James W. BROWN

Date: 24 14 12019

Meng WANG

Date:

Gareth James SMITH

Date:

1. Candell

Witness Signature

<u>P. NAWPALL</u> Witness Name

Witness Signature

P. RANDALL

Witness Name

Witness Signature

Witness Name

Witness Signature

Witness Name

PATENT REEL: 042344 FRAME: 0397

ASSIGNMENT (Joint) Worldwide Rights

THIS ASSIGNMENT, by <u>Christopher Michael MURPHY</u>, <u>Matthew James W. BROWN</u>, <u>Meng</u> <u>WANG</u>, and <u>Gareth James SMITH</u>, residing at <u>88</u> Broadmoor Lane, Bath, <u>BA1 4LB</u>, <u>GB</u>, <u>18</u> St. Johns Road, <u>Hartley Wintney, Hook, Hants, RG27 8DR, GB</u>, <u>149</u> Broadacres, <u>Guildford</u>, <u>Surrey, GU3 3BS</u>, <u>GB</u>, and <u>2</u> <u>Connaught Road</u>, <u>Newbury, Berkshire, RG14 SSP, GB</u> (hereinafter referred to as "the Assignors"), respectively. witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in SENSOR-BASED GEOLOCATION OF A USER DEVICE set forth in an application for Letters Patent of the United States,

- (1)
- which is a provisional application
 (a) filed herewith; or
 (b) bearing Application No.______, and filed on _____; or
- (2)which is a non-provisional application
 - bearing Application No. <u>15/495.602</u>, and filed on <u>April 24, 2017</u>; or filed herewith; and (a)
 - (b)

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

WHEREAS, Viavi Solutions UK Limited, having its principal place of business at Astor House, Newbury Business Park, London Road, Newbury, Berkshire, RG14 2PZ, United Kingdom (hereinafter referred to as "the Assignce"), is desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including any previously or subsequently filed provisional applications, for Letters Patent of the United States or other countries. claiming priority to said application or from which said application claims priority, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do 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 above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, provisional applications, divisions, continuations, and continuations-in-part of said applications, and reissues and 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 the 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 Assigners had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignce, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-memboned, and that the same are unencumbered, and that the Assigners 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, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents 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 or Patents for said inventions, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignee as the Assignee of said inventions, the Letters Patent to be issued for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

Christopher Michael MURPHY

Witness Signature

Date:

8

Witness Name

Matthew James W. BROWN

Date:

Date: 18.4.2017

Gareth James SMITH

Date:

Witness Signature

Witness Name

Sthu MM

Witness Signature Sthiven Pinilla

Witness Signature

Witness Name

- 2 -

折

ASSIGNMENT (Joint) Worldwide Rights

THIS ASSIGNMENT, by <u>Christopher Michael MURPHY</u>, <u>Matthew James W. BROWN</u>, <u>Meng</u> <u>WANG</u>, and <u>Gareth James SMITH</u>, residing at <u>88</u> Broadmoor Lane, Bath, <u>BA1 4LB</u>, <u>GB</u>, <u>18</u> St. Johns Road, <u>Hartley Wintney, Hook, Hants, RG27 8DR, GB</u>, <u>149</u> Broadacres, <u>Guildford</u>, <u>Surrey, GU3 3BS</u>, <u>GB</u>, and <u>2</u> <u>Connaught Road</u>, <u>Newbury, Berkshire, RG14 SSP, GB</u> (hereinafter referred to as "the Assignors"), respectively. witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in SENSOR-BASED GEOLOCATION OF A USER DEVICE set forth in an application for Letters Patent of the United States,

- (1)
- which is a provisional application
 (a) filed herewith; or
 (b) bearing Application No.______, and filed on _____; or
- (2)Which is a non-provisional application
 - bearing Application No. <u>15/495,602</u>, and filed on <u>April 24, 2017</u>; or filed herewith; and (a)
 - (b)

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

WHEREAS, Viavi Solutions UK Limited, having its principal place of business at Astor House, Newbury Business Park, London Road, Newbury, Berkshire, RG14 2PZ, United Kingdom (hereinafter referred to as "the Assignce"), is desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including any previously or subsequently filed provisional applications, for Letters Patent of the United States or other countries. claiming priority to said application or from which said application claims priority, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do 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 above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, provisional applications, divisions, continuations, and continuations-in-part of said applications, and reissues and 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 the 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 Assigners had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignce, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-memboned, and that the same are unencumbered, and that the Assigners have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

Joint Assignment Attorney's Docket No.: 0099-0151

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents 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 or Patents for said inventions, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignce, its successors, legal representatives, and assigns;

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignee as the Assignee of said inventions, the Letters Patent to be issued for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

Christopher Michael MURPHY

Date:

Witness Signature

Witness Name

Matthew James W. BROWN

Date:

Witness Name

Witness Signature

Meng WANG

Date:

Gareth James SMITH

Date: 25th April 2017-

Witness Signature

Witness Name

Signature

Witness Name

-2-

PATENT REEL: 042344 FRAME: 0401

RECORDED: 04/26/2017