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| <b>PATENT ASSIGNMENT COVER SHEET</b> |
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5524199

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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>                    |
| SHEKHAR DWIVEDI   | 02/10/2019                               |
| ANDRIY ANDREYEV   | 04/30/2019                               |
| CHUANYONG BAI   | 04/30/2019                               |
| CHI-HUA TUNG  | 01/24/2019                               |
| <b>RECEIVING PARTY DATA</b>   |  |
| <b>Name:</b>  | KONINKLIJKE PHILIPS N.V.                 |
| <b>Street Address:</b>  | HIGH TECH CAMPUS 5                       |
| <b>City:</b>  | EINDHOVEN                                |
| <b>State/Country:</b>   | NETHERLANDS                              |
| <b>Postal Code:</b>   | 5656 AE                                  |
| <b>PROPERTY NUMBERS Total: 1</b>  |  |
| <b>Property Type</b>  | <b>Number</b>                            |
| <b>Application Number:</b>  | 16461121                                 |
| <b>CORRESPONDENCE DATA</b>  |  |
| <b>Fax Number:</b>  | (914)495-9540                            |
| <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>   | 914-495-9516                             |
| <b>Email:</b>   | patti.demichele@Philips.com              |
| <b>Correspondent Name:</b>  | PHILIPS INTELLECTUAL PROPERTY & STANDARD |
| <b>Address Line 1:</b>  | 465 COLUMBUS AVENUE                      |
| <b>Address Line 2:</b>  | SUITE 340                                |
| <b>Address Line 4:</b>  | VALHALLA, NEW YORK 10595                 |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 2016P00813WOUS                           |
| <b>NAME OF SUBMITTER:</b>   | DAVID LAWRENCE SCHREIBER                 |
| <b>SIGNATURE:</b>   | /David Lawrence Schreiber/               |
| <b>DATE SIGNED:</b>   | 05/15/2019                               |
| <b>Total Attachments: 4</b>   |  |
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| source=2016P00813WOUS_Assignment#page2.tif  |  |

source=2016P00813WOUS\_Assignment#page3.tif

source=2016P00813WOUS\_Assignment#page4.tif

For good and valuable consideration, of which I/we acknowledge receipt, I/we as a below-named Assignor(s), hereby sell, and assign, and transfer the entire and exclusive right, title, and interest in the following to Koninklijke Philips N.V., having a place of business at High Tech Campus 5,5656 AE, Eindhoven, the Netherlands, its successors, assigns, and legal representatives, including any nominees (collectively "the Assignee") my/our invention for which an application:


- is executed concurrently herewith
- was executed by me/us on .....
- was filed on. ...., having a Serial No. ....
- was filed on. **22 Nov 2017**, having an International Application No. **PCT/EP2017/079987**,

and all rights in and to said application, and all other United States, foreign and international patent applications associated therewith, based thereon, or claiming priority therefrom including, but not limited to, any and all provisionals, non-provisionals divisions, continuations, continuations-in-part, re-examinations, reissues, and extensions thereof, and the right to claim priority thereto, and the entire and exclusive right, title, and interest in and to any and all patents granted on these applications.

I/We authorize and request that the Patent Office officials in the United States and in any and all foreign countries to issue any and all Letters Patent when granted, solely to the Assignee(s), for its sole use, and that of its successors, assigns, and legal representatives.

I/We will provide my/our cooperation to enable the Assignee to enjoy the foregoing right, title, and interest to the fullest extent. Upon request at the expense of the Assignee, I/we agree to execute all papers, take all rightful oaths, testify in all legal proceedings including patent prosecution actions and infringement actions, and do all other such acts which may be necessary, desirable, or convenient for securing and maintaining patents on the foregoing invention or for perfecting title thereto in the Assignee.

I/We certify that I/we have the full right to convey the above rights.

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|------------------|-------------------|--|------------|
| <u>2-10-2019</u> | (sign name here)  |  | _____      |
| Date             | (print name here) | <b>Shekhar DWIVEDI</b>   | , Assignor |
| _____            | (print name here) | <b>Andriy ANDREYEV</b>   | _____      |
| Date             | (print name here) | <b>Andriy ANDREYEV</b>   | , Assignor |
| _____            | (print name here) | <b>Chuanyong BAI</b>   | _____      |
| Date             | (print name here) | <b>Chuanyong BAI</b>   | , Assignor |
| _____            | (print name here) | <b>Chi-Hua TUNG</b>  | _____      |
| Date             | (print name here) | <b>Chi-Hua TUNG</b>  | , Assignor |

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| _____              | (sign name here)  | _____  | _____      |
| Date               | (print name here) | <b>Shekbar DWIVEDI</b>   | , Assignor |
| <u>30 Apr 2019</u> | _____             |  |            |
| Date               | (print name here) | <b>Andriy ANDREYEV</b>   | , Assignor |
| _____              | (print name here) | _____  | _____      |
| Date               | (print name here) | <b>Chuanyong BAI</b>   | , Assignor |
| _____              | (print name here) | _____  | _____      |
| Date               | (print name here) | <b>Chi-Hua TUNG</b>  | , Assignor |

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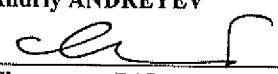
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| _____            | (sign name here)     | _____  | _____      |
| Date             | (print name here)    | <b>Shekhar DWIVEDI</b>   | , Assignor |
| _____            | (print name here)    | _____  | _____      |
| Date             | (print name here)    | <b>Andriy ANDREYEV</b>   | , Assignor |
| <u>4/30/2019</u> | <u>Chuanyong Bai</u> |  | _____      |
| Date             | (print name here)    | <b>Chuanyong BAI</b>   | , Assignor |
| _____            | (print name here)    | _____  | _____      |
| Date             | (print name here)    | <b>Chi-Hua TUNG</b>  | , Assignor |

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| _____            | (sign name here)  | _____                  | _____      |
| Date             | (print name here) | <b>Shekhar DWIVEDI</b> | , Assignor |
| _____            | (print name here) | _____                  | _____      |
| Date             | (print name here) | <b>Andriy ANDREYEV</b> | , Assignor |
| _____            | (print name here) | _____                  | _____      |
| Date             | (print name here) | <b>Chuanyong BAI</b>   | , Assignor |
| <b>1/24/2019</b> | (print name here) | <i>Chi-Hua Tung</i>    | _____      |
| Date             | (print name here) | <b>Chi-Hua TUNG</b>    | , Assignor |