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PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date | |
|-----------------------------|----------------|--|
| JULIEN Y. ROBERT | 01/31/2017 | |
| TYLER M. FOX | 02/06/2017 | |
| CAMILLE MOUSSETTE | 02/06/2017 | |
| VIKTOR MILADINOV | 02/06/2017 | |
| JEAN-PIERRE M. MOUILLESEAUX | 02/03/2017 | |
| MADELEINE S. CORDIER | 01/30/2017 | |

RECEIVING PARTY DATA

| Name: | APPLE INC. |
|-----------------|-----------------|
| Street Address: | 1 Infinite Loop |
| City: | Cupertino |
| State/Country: | CALIFORNIA |
| Postal Code: | 95014 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15271708 |

CORRESPONDENCE DATA

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Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

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GARY S. WILLIAMS Correspondent Name:

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Address Line 4: PALO ALTO, CALIFORNIA 94304

| ATTORNEY DOCKET NUMBER: | 063266-7444-US |
|-------------------------|--------------------|
| NAME OF SUBMITTER: | GARY S. WILLIAMS |
| SIGNATURE: | /Gary S. Williams/ |
| DATE SIGNED: | 03/27/2017 |

PATENT REEL: 041752 FRAME: 0816 504291524

Total Attachments: 2

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PATENT REEL: 041752 FRAME: 0817

ASSIGNMENT

WHEREAS, WE, JULIEN Y. ROBERT, citizen of France, residing in Paris, France; TYLER M. FOX, citizen of the United States of America, residing in Santa Clara, CA; CAMILLE MOUSSETTE, citizen of Canada, residing in Los Gatos, CA; VIKTOR MILADINOV, citizen of the United States of America, residing in Palo Alto, CA; JEAN-PIERRE M. MOUILLESEAUX, citizen of the United States of America, residing in San Francisco, CA; and MADELEINE S. CORDIER, citizen of Germany, residing in San Francisco, CA, ASSIGNORS, are the inventors of the invention in DEVICES, METHODS, AND GRAPHICAL USER INTERFACES FOR GENERATING TACTILE OUTPUTS, described in an application for a Patent of the United States

| \boxtimes | which is executed on even date herewith |
|-------------|--|
| X | which is identified by Morgan, Lewis & Bockius LLP docket no. P32453USC2/63266-7444-US |
| \boxtimes | which was filed on September 21, 2016, Application No. 15/271,708 |
| \boxtimes | which claims priority on U.S. Provisional Patent Application No(s). 62/384,159 |
| | We hereby authorize and request our attorney, Gary S. Williams, of Morgan, Lewis & Bockius LLP, to insert here |
| | in parenthesis (Application number, filed) the filing date and application |
| | number of said application when known. |

and WHEREAS, APPLE INC., ASSIGNEE, having a place of business at 1 Infinite Loop, Cupertino, California 95014, is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, let it be known that for and in consideration of the sum of One Dollar (\$1.00) to me paid, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and any substitute applications therefore, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; the said United States provisional patent application(s), if any, on which the said United States applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application and said United States provisional patent application(s), if any, under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date 1/31/17 Julien Y. Rober

John Fox

Tyler M. Fox

DB2/ 30799212.1

| Date 6 feb 2017 | Camille Moussette | L.S. |
|--------------------|-----------------------------|------|
| Date Feb Gin 2017 | Victor Miladinov | L.S. |
| Date 3 88 2017 | Jean-Pievre M. Mouilleseaux | L.S. |
| Date 0/1/30 (2017 | Madeleine S. Cordier | L.S. |

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PATENT REEL: 041752 FRAME: 0819

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