

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

EPAS ID: PAT5332267

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the 4TH MISSING INVENTOR LISTED IN THE ASSIGNMENT previously recorded on Reel 047784 Frame 0665. Assignor(s) hereby confirms the 4TH INVENTOR IS SAGAR RAJIV VAZE.
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CHRISTOPHE BLONDIN	09/10/2018
JEAN-MARIE BUSSAT	09/07/2018
ROBERT LEO SHERIDAN	11/12/2018
SAGAR RAJIV VAZE	09/11/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	APPLE INC.
<b>Street Address:</b>	ONE APPLE PARK WAY
<b>City:</b>	CUPERTINO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95014
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15998425
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>	213-892-5200
<b>Email:</b>	sbartolo@mofo.com
<b>Correspondent Name:</b>	MORRISON & FOERSTER LLP
<b>Address Line 1:</b>	707 WILSHIRE BOULEVARD
<b>Address Line 4:</b>	LOS ANGELES, CALIFORNIA 90017
<b>ATTORNEY DOCKET NUMBER:</b>	106842160900 (P34754US1)
<b>NAME OF SUBMITTER:</b>	EROL C. BASOL
<b>SIGNATURE:</b>	/Erol C. Basol/
<b>DATE SIGNED:</b>	01/18/2019
<b>Total Attachments: 7</b>	
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<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CHRISTOPHE BLONDIN	09/10/2018
JEAN-MARIE BUSSAT	09/07/2018
ROBERT LEO SHERIDAN	11/12/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	APPLE INC.
<b>Street Address:</b>	ONE APPLE PARK WAY
<b>City:</b>	CUPERTINO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95014
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15998425
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<b>Phone:</b>	213-892-5200
<b>Email:</b>	sbartolo@mfo.com
<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>Correspondent Name:</b>	MORRISON & FOERSTER LLP
<b>Address Line 1:</b>	707 WILSHIRE BOULEVARD
<b>Address Line 4:</b>	LOS ANGELES, CALIFORNIA 90017
<b>ATTORNEY DOCKET NUMBER:</b>	106842160900 (P34754US1)
<b>NAME OF SUBMITTER:</b>	SARAH H. STEVENS
<b>Signature:</b>	/Sarah H. Stevens/
<b>Date:</b>	12/14/2018

PATENT

REEL: 048097 FRAME: 0915

**Total Attachments: 5**

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**RECEIPT INFORMATION**

**EPAS ID:** PAT5285213  
**Receipt Date:** 12/14/2018

**PATENT**

## ASSIGNMENT

This assignment is by:

- 1 Christophe Blondin  
c/o Apple Inc.  
One Apple ParkWay  
Cupertino, CA 95014  
United States of America
- 2 Jean-Marie Bussat  
4740 Applewood Drive  
San Jose, California 95129  
United States of America
- 3 Robert Leo Sheridan  
c/o Apple Inc.  
One Apple Park Way  
Cupertino, California 95014  
United States of America
- 4 Sagar Rajiv Vaze  
c/o Apple Inc.  
One Apple Park Way  
Cupertino, California 95014  
United States of America

(each referred to in this Assignment as "Assignor"), whose residence or mailing address information is listed above.

This Assignment is to:

Assignee: Apple Inc.  
Address: One Apple Park Way  
Cupertino, California 95014  
United States of America  
A juristic entity duly organized under and pursuant to the laws of: California

(referred to in this Assignment as "Assignee"), which desires to acquire the entire right, title and interest in, to and under the patent application identified below and the inventions covered thereby.

Assignor invented certain new and useful inventions in:

### **SELF-CAPACITANCE AND MUTUAL CAPACITANCE HYBRID TOUCH SENSOR PANEL ARCHITECTURE**

which are set forth in:

Serial No.: 15/998,425

Filing Date: August 15, 2018

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee or a predecessor in interest of the Assignee, or if the Assignor has already done so via a prior agreement with the Assignee or a predecessor in interest of the Assignee then in confirmation of any obligation to do so in said prior agreement,

1. Assignor hereby sells, assigns, transfers and sets over, to Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in and to the above-mentioned inventions, application for letters patent, any and all provisionals, non-provisionals, divisions, continuations, and continuations-in-part claiming priority thereto or the benefit thereof, substitutions of said applications, and any and all letters patent or patents in the United States of America and all foreign countries or jurisdictions which may be granted therefor and thereon, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination or other post-grant proceeding, and any and all 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 Assignee (including any right to institute actions and to recover damages for past, present and future infringement), for its own use and the use 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 Assignor, had this sale and assignment not been made.

2. Assignor represents, warrants and covenants (a) that, at the time of execution and delivery of this agreement, Assignor is the sole and lawful owner of Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same are unencumbered and that Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth in this agreement, or (b) that Assignor solely and lawfully owned Assignor's entire right, title and interest in and to said inventions and said application for letters patent, and that the same were unencumbered and that Assignor previously sold, assigned, transferred and set over, to Assignee, its successors, legal representatives and assigns, or to a predecessor in interest of Assignee, Assignor's entire right, title and interest in and to said inventions and said applications for letters patent.

3. Assignor shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. For purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.

4. Assignor hereby authorizes and requests the Commissioner of Patents in the United States to issue the above mentioned letters patent of the United States to Assignee as the assignee of said inventions and the letters patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.

5. Assignor hereby grants attorneys, all of Morrison & Foerster LLP, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office or any foreign patent issuing authority for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known.

6. This assignment may be executed in one or more counterparts, with the same effect as if each signature were on the same document. Each counterpart so executed shall be deemed to be an original, and all such counterparts shall be construed together and shall constitute one agreement.

In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date: 9/10/2018 Signature:   
Christophe Blondin

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Jean-Marie Bussat

1. Assignor hereby sells, assigns, transfers and sets over, to Assignee, its successors, legal representatives and assigns, Assignor's entire right, title and interest in and to the above-mentioned inventions, application for letters patent, any and all provisionals, non-provisionals, divisions, continuations, and continuations-in-part claiming priority thereto or the benefit thereof, substitutions of said applications, and any and all letters patent or patents in the United States of America and all foreign countries or jurisdictions which may be granted therefor and thereon, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination or other post-grant proceeding, and any and all 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 Assignee (including any right to institute actions and to recover damages for past, present and future infringement), for its own use and the use 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 Assignor, had this sale and assignment not been made.

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3. Assignor shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. For purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.

4. Assignor hereby authorizes and requests the Commissioner of Patents in the United States to issue the above mentioned letters patent of the United States to Assignee as the assignee of said inventions and the letters patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.


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In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Christophe Blondin

Date: 9/7/18 Signature:  \_\_\_\_\_  
Jean-Marie Bussat

Date: 11/12/18 Signature:   
Robert Leo Sheridan

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Sagar Rajiv Vaze



Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Robert Leo Sheridan

Date: **9/11/2018** Signature: STV  
Sagar Rajiv Vaze