

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

EPAS ID: PAT5257805

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JULIEN OSTER	09/21/2018
ERIC S. HARMON	09/18/2018
MITCHELL K. ALLISON	09/18/2018
DALLAS B. DE ATLEY	09/21/2018
<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>	16147712
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(512)853-8801
<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>	512 853 8800
<b>Email:</b>	plitz@intprop.com
<b>Correspondent Name:</b>	MEYERTONS, HOOD, KIVLIN, KOWERT & G (APP
<b>Address Line 1:</b>	P.O. BOX 398
<b>Address Line 4:</b>	AUSTIN, TEXAS 78767-0398
<b>ATTORNEY DOCKET NUMBER:</b>	1888-46601
<b>NAME OF SUBMITTER:</b>	LAWRENCE J. MERKEL
<b>SIGNATURE:</b>	/Lawrence J. Merkel/
<b>DATE SIGNED:</b>	11/29/2018
<b>Total Attachments: 5</b>	
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**ASSIGNMENT**

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned does hereby:

SELL, ASSIGN AND TRANSFER to Apple Inc. (the "Assignee"), a corporation organized and existing under and by virtue of the laws of the State of California, and having its principal place of business at One Apple Park Way, Cupertino, CA 95014, the entire right, title and interest for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent, which has been executed by the undersigned concurrently herewith, and is entitled **External Trust Cache**, such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT that, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for securing, maintaining and enforcing proper patent protection for such improvements and for vesting title to such improvements in the Assignee;

COVENANT AND AGREE that the above is and will be binding on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assigns.

(Signature)   
Name: Julien Oster

Date: 9/21/2018

(Signature) \_\_\_\_\_  
Name: Eric S. Harmon

Date: \_\_\_\_\_

(Signature) \_\_\_\_\_  
Name: Mitchell K. Allison

Date: \_\_\_\_\_

(Signature) \_\_\_\_\_  
Name: Pierre-Olivier J. Martel

Date: \_\_\_\_\_

(Signature) \_\_\_\_\_  
Name: Damien P. Sorresso

Date: \_\_\_\_\_

(Signature) \_\_\_\_\_  
Name: Dallas B. De Atley

Date: \_\_\_\_\_

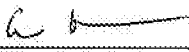
(Signature) \_\_\_\_\_  
Name: Ryan P. Nielsen

Date: \_\_\_\_\_

Customer No. 81310  
Lawrence J. Merkel  
Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C.  
P.O. Box 398  
Austin, TX 78767-0398

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(Signature) \_\_\_\_\_ Date: \_\_\_\_\_  
Name: Julien Oster

(Signature)  \_\_\_\_\_ Date: 9/18/18 \_\_\_\_\_  
Name: Eric S. Harmon

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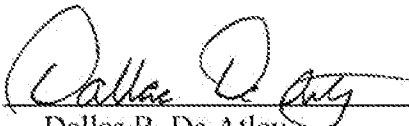
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(Signature)  \_\_\_\_\_ Date: 2019-9-21  
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(Signature) \_\_\_\_\_ Date: \_\_\_\_\_  
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