504679213 12/08/2017 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4725935

		NEW ASSIGNMENT		
NATURE OF CONVEYAN	ICE:	ASSIGNMENT		
CONVEYING PARTY DA	٩ΤΑ			
		Name	Execution Date	
DANIEL A. STEFFEN			09/28/2017	
PIERRE HABOUZIT			09/29/2017	
DANIEL A. CHIMENE			09/29/2017	
JEREMY C. ANDRUS			09/29/2017	
JAMES M. MAGEE			10/23/2017	
PUJA GUPTA			09/29/2017	
RECEIVING PARTY DA	 TA			
Name:	APPLE	APPLE INC.		
Street Address:	1 INFIN	ITE LOOP		
City:	CUPERTINO			
State/Country:	CALIFORNIA			
Postal Code:	95014			
PROPERTY NUMBERS Total: 1 Property Type		Number		
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Application Number:		15836459		
Application Number: CORRESPONDENCE D Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name:	ATA (e sent to provided, 5	15836459 (512)853-8801 <i>the e-mail address first; if that is uns</i> <i>; if that is unsuccessful, it will be sen</i> 512 853 8800 dbeasley@intprop.com MEYERTONS, HOOD, KIVLIN, KOWEF	nt via US Mail.	
Application Number: CORRESPONDENCE D Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1:	ATA (e sent to provided, t c f	15836459 (512)853-8801 <i>the e-mail address first; if that is uns</i> <i>; if that is unsuccessful, it will be sen</i> 512 853 8800 dbeasley@intprop.com MEYERTONS, HOOD, KIVLIN, KOWEF P.O. BOX 398	nt via US Mail.	
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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 <u>Apple Inc.</u> (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 <u>1 Infinite Loop, Cupertino, CA 95014</u>, 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 <u>MULTI-THREAD SYNCHRONIZATION</u> <u>PRIMITIVE</u>, 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) Signature) Name: Daniel A. Steffen	Date:Z_Z/2
(Signature) Name: Pierre Habouzit	Date: <u>9/29/</u> 2
(Signature) Name: Daniel A. Chimene	Date: <u>9/29/2</u>
(Signature) Name: Jeremy & Andrus	Date: <u>9/29/20(</u>
(Signature) Name: James M. Magee	Date:
(Signature) Name: Puja Gupta	Date:09 / 2.9 / 2.0

nate: <u>2/28/201</u>7

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Customer No. 81310 Dean M. Munyon Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. P.O. Box 398 Austin, TX 78767-0398

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ASSIGNMENT

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SELL, ASSIGN AND TRANSFER to <u>Apple Inc.</u> (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 <u>1 Infinite Loop, Cupertino, CA 95014</u>, 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 <u>MULTI-THREAD SYNCHRONIZATION</u> <u>PRIMITIVE</u>, 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;

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> PATENT REEL: 044342 FRAME: 0979

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)		Date:
Name:	Daniel A. Steffen	
(Signature) _ Name:	Pierre Habouzit	Date:
(Signature) _ Name:	Daniel A. Chimene	Date:
(Signature) _ Name:	Jeremy C. Andrus	Date:
(Signaturé) _ Name:	<u>Jewy 11/ Mages</u> James M. Magee	Date: <u>_/0- Z3-/</u>]
(Signature)_	Puja Gupta	Date:
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RECORDED: 12/08/2017