503587468 11/28/2015

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CAMILLE MOUSSETTE	09/03/2015
GARY I. BUTCHER	09/04/2015
HUGO D. VERWEIJ	09/04/2015
JONATHAN IVE	11/20/2015

RECEIVING PARTY DATA

Name:	APPLE INC
Street Address:	ONE INFINITE LOOP
City:	CUPERTINO
State/Country:	CALIFORNIA
Postal Code:	95014

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14835708

CORRESPONDENCE DATA

Fax Number: (650)938-5200

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.

Phone: (650) 335-7213
Email: cdiez@fenwick.com

Correspondent Name: JENNIFER R. BUSH

Address Line 1: FENWICK & WEST LLP

Address Line 2: 801 CALIFORNIA STREET

Address Line 4: MOUNTAIN VIEW, CALIFORNIA 94041

ATTORNEY DOCKET NUMBER:	18602-30169/US	
AME OF SUBMITTER: JENNIFER R. BUSH, REG. NO. 50,784		
SIGNATURE:	/Jennifer R. Bush/	
DATE SIGNED:	11/28/2015	

Total Attachments: 8

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PATENT 503587468 REEL: 037161 FRAME: 0488

PATENT REEL: 037161 FRAME: 0489

For good and valuable consideration, the receipt of which is hereby acknowledged, the person(s) named below (referred to as "INVENTOR" whether singular or plural) has sold, assigned, and transferred and does hereby sell, assign, and transfer to **Apple Inc**, a California corporation, having a place of business at One Infinite Loop, Cupertino, CA 95014 ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the following:

- 1. The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following provisional or non-provisional application filed under 35 U.S.C. § 111, design application filed under 35 U.S.C. § 171, international application filed according to the Patent Cooperation Treaty (PCT), or U.S. national phase application filed under 35 U.S.C. § 371 ("APPLICATION"):
 - Application No. 14/835,708, entitled "SEMANTIC FRAMEWORK FOR VARIABLE HAPTIC OUTPUT," filed on August 26, 2015, which claims priority from a provisional application, filed on September 2, 2014, now bearing US Application No. 62/044,870, and from a provisional application, filed on March 8, 2015, now bearing US Application No. 62/129,905, and from a provisional application, filed on June 7, 2015, now bearing US Application No. 62/172,122.
- 2. The entire worldwide right, title, and interest in and to:
 (a) the APPLICATION; (b) all applications claiming priority from the APPLICATION;
 (c) all provisional, utility, divisional, continuation, substitute, renewal, reissue, and other applications related thereto that have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) that may be granted on the applications set forth in (a), (b), and (c) above; and (e) all right of priority in the APPLICATION and in any underlying provisional or foreign application, together with all rights to recover damages for infringement of provisional rights.

INVENTOR agrees that ASSIGNEE may apply for and receive patents for SUBJECT MATTER in ASSIGNEE's own name.

INVENTOR agrees to do the following, when requested, and without further consideration, in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. INVENTOR further agrees to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

1 of 2

Title:	SEMANTIC FRAMEWORK FOR VARIABLE HAPTIC OUTPUT		
Filed:	August 26, 2015	Attorney Docket #:	18602-30169 US
Application #:	14/835,708	Client Ref.:	P24595US1

INVENTOR grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or other authority for recordation of this document.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

By signing below, INVENTOR further attests to the following:

- The APPLICATION was made or authorized to be made by INVENTOR.
- INVENTOR believes that INVENTOR is the original inventor or an original joint inventor of a claimed invention in the APPLICATION.

INVENTOR hereby acknowledges that any willful false statement made in this document is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Name and Signature	Date of Signature
Comple Musselle	9/3/2015
CAMILLE MOUSSETTE	-0(
Name and Signature	Date of Signature
GARY I. BUTCHER	
Name and Signature	Date of Signature
HUGO D. VERWEIJ	
Name and Signature	Date of Signature
JONATHAN IVE	

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CAMILLE MOUSSETTE	
Name and Signature	Date of Signature
GARY I. BUTCHER	09/04/2015
Name and Signature	Date of Signature
HUGO D. VERWEIJ	
Name and Signature	Date of Signature
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CAMILLE MOUSSETTE	
Name and Signature	Date of Signature
GARY I. BUTCHER	
Name and Signature	Date of Signature
	9/4/2015
HUGO O, VERWEIJ	
Name and Signature	Date of Signature
MNATUAN IVE	

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Name and Signature	Date of Signature	
GARY I. BUTCHER		
Name and Signature	Date of Signature	
HUGO D. VERWEIJ		
Name and Signature	Date of Signature	
ONATHANIVE	11/20/15	

2 of 2