

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT4806629

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
XIAONAN WEN	12/06/2017
JAMES E. PEDDER	01/29/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	APPLE INC.
<b>Street Address:</b>	ONE INFINITE LOOP
<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>	15717682
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(303)223-1111
<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>	303-223-1100
<b>Email:</b>	vbrown@bhfs.com
<b>Correspondent Name:</b>	S. CRAIG HEMENWAY
<b>Address Line 1:</b>	410 SEVENTEENTH STREET
<b>Address Line 2:</b>	SUITE 2200
<b>Address Line 4:</b>	DENVER, COLORADO 80202
<b>ATTORNEY DOCKET NUMBER:</b>	P35888US1
<b>NAME OF SUBMITTER:</b>	VALERIE H. BROWN
<b>SIGNATURE:</b>	/Valerie H. Brown/
<b>DATE SIGNED:</b>	02/02/2018
<b>Total Attachments: 3</b>	
source=P35888US1 Executed Assignment#page1.tif	
source=P35888US1 Executed Assignment#page2.tif	
source=P35888US1 Executed Assignment#page3.tif	

**ASSIGNMENT**

WHEREAS, we, Xiaonan Wen, whose address is One Infinite Loop, MS: 93-1PPO, Cupertino, California 95014; and James E. Pedder, whose address is One Infinite Loop, MS: 93-1PPO, Cupertino, California 95014 (hereinafter, individually and collectively, the "Assignor"), have invented certain new and useful systems, devices, and methods disclosed and described in a utility application for Letters Patent in the United States ("U.S."), titled "Electronic Device Having a Piezoelectric Body for Friction Haptics," which can be identified in the United States Patent and Trademark Office ("USPTO") by Application No. 15/717,682, filed on September 27, 2017, with attorney docket no. P35888US1 (the "Utility Application"); and

WHEREAS, Assignor desires to assign any and all right, title and interest to said Utility Application, and any provisional, non-provisional, continuation, continuation-in-part, divisional, international, foreign, regional and convention applications corresponding thereto, and any and all Letters Patent of the United States and countries and regions foreign thereto which may grant or have granted thereto or be lodged in relation thereto, any reissue or reexamination thereof or to be obtained therefor, any renewals, or substitutes thereof, and any and all priority rights or priority claims, International Convention rights, any and all rights to collect past damages for infringement of any and all Letters Patent of the United States and countries and regions foreign thereto which may be published, which may grant, or have granted thereto or be lodged in relation thereto, and other benefits accruing to or to accrue to Assignor with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto (the "Patent Rights");

WHEREAS, Apple Inc., a corporation organized and existing under the laws of the State of California, and having its principal place of business at One Infinite Loop, Cupertino, California 95014 (the "Assignee"), desires to acquire any and all, right, title, and interest of Assignor in and to the invention(s), the Patent Rights, and in, to, and under any and all Letters Patent to be obtained therefor;

NOW THEREFORE, for the sum of \$1.00 and other good and valuable consideration to Assignor in hand paid, the receipt and sufficiency of which are hereby acknowledged, Assignor has sold, assigned, and transfer and by these presents does hereby sell, assign and transfer to the said Assignee, and said Assignee's legal representatives, successors and assigns, any and all of the entire right, title and interest in and to the invention(s), Patent Rights, and any and all Letters Patent to be obtained therefor;

UPON SAID CONSIDERATION, the Assignor hereby covenants and agrees with the said Assignee that it will not execute any writing or do any act whatsoever conflicting with these presents, and that it will, at any time upon request, without further or additional consideration, but at the expense of the said Assignee, execute such additional assignments and other writings and do such additional acts as said Assignee may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, provisionals, non-provisionals, continuations, continuations-in-part, continuing prosecutions, divisionals, renewals, reissues, reexamined or extended Letters Patent of the United States, or of any and all foreign countries, on said Patent Rights, and execute confirmatory assignments or acknowledgments of this assignment as necessary for full enjoyment of the Patent Rights and for recording in foreign patent offices, and in enforcing any rights or choses in action accruing as a result of such Patent Rights, by giving testimony in any proceedings or transactions involving such Patent Rights, and by executing preliminary statements and other affidavits, it being understood that the foregoing covenant and

agreement shall bind, and inure to the benefit of, the assigns and legal representatives of both parties;

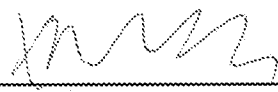
UPON SAID CONSIDERATION, Assignor represents and warrants that Assignor has the right, title, and authority to execute this Assignment and to convey any and all right, title, and interest in the Patent Rights, and that Assignor has not conveyed nor will convey hereafter all or part of the Patent Rights to a third party;

ASSIGNOR HEREBY AUTHORIZES said Assignee, its successors, and assigns, or anyone it may properly designate, to apply for Letters Patent in the U.S. and any and all foreign countries and regions, in its own name if desired, and additionally to claim priority to the filing date of the Utility Application and otherwise take advantage of the provisions of any international conventions.

ASSIGNOR HEREBY AUTHORIZES Assignee, its successors and assigns, or anyone it may properly designate, to insert in this instrument the application number, filing date, and title of the Utility Application once known.

IN WITNESS WHEREOF, the Assignor hereunto has executed this Assignment upon the date indicated below.

Date: 12-06-17

By:   
Xiaonan Wen

IN WITNESS WHEREOF, the Assignor hereunto has executed this Assignment upon the date indicated below.

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

By: \_\_\_\_\_  
James E. Pedder

agreement shall bind, and inure to the benefit of, the assigns and legal representatives of both parties.

UPON SAID CONSIDERATION, Assignor represents and warrants that Assignor has the right, title, and authority to execute this Assignment and to convey any and all right, title, and interest in the Patent Rights, and that Assignor has not conveyed nor will convey hereafter all or part of the Patent Rights to a third party.

ASSIGNOR HEREBY AUTHORIZES said Assignee, its successors, and assigns, or anyone it may properly designate, to apply for Letters Patent in the U.S. and any and all foreign countries and regions, in its own name if desired, and additionally to claim priority to the filing date of the Utility Application and otherwise take advantage of the provisions of any international conventions.

ASSIGNOR HEREBY AUTHORIZES Assignee, its successors and assigns, or anyone it may properly designate, to insert in this instrument the application number, filing date, and SBE of the Utility Application once known.

IN WITNESS WHEREOF, the Assignor hereunto has executed this Assignment upon the date indicated below.

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

By: \_\_\_\_\_  
Xiaonan Wen

IN WITNESS WHEREOF, the Assignor hereunto has executed this Assignment upon the date indicated below.

Date: 29 Jan 2018

By: \_\_\_\_\_  
James E. Pedder

