

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5498135

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the ASSIGNOR: CASTILLO, PABLO previously recorded on Reel 045681 Frame 0354. Assignor(s) hereby confirms the ASSIGNOR: CASTILLO CANALES, PABLO.
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ALI ISRAR	04/12/2018
PABLO CASTILLO CANALES	04/12/2018
FRANCES WING YEE LAU	04/19/2018
ROBERT TURCOTT	04/13/2018
FREDDY ABNOUSI	04/12/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	FACEBOOK, INC.
<b>Street Address:</b>	1601 WILLOW ROAD
<b>City:</b>	MENLO PARK
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94025
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15949465
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(650)938-5200
<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>	4158752023
<b>Email:</b>	mnascimento@fenwick.com
<b>Correspondent Name:</b>	MONICA NASCIMENTO
<b>Address Line 1:</b>	FENWICK & WEST LLP
<b>Address Line 2:</b>	801 CALIFORNIA STREET
<b>Address Line 4:</b>	MOUNTAIN VIEW, CALIFORNIA 94041
<b>ATTORNEY DOCKET NUMBER:</b>	26295-38638/US
<b>NAME OF SUBMITTER:</b>	MONICA NASCIMENTO
<b>SIGNATURE:</b>	/Monica Nascimento/
<b>DATE SIGNED:</b>	04/29/2019

**Total Attachments: 6**

source=38638 US Corrective Assign+Dec#page1.tif

source=38638 US Corrective Assign+Dec#page2.tif

source=38638 US Corrective Assign+Dec#page3.tif

source=38638 US Corrective Assign+Dec#page4.tif

source=38638 US Corrective Assign+Dec#page5.tif

source=38638 US Corrective Assign+Dec#page6.tif



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

MAY 2, 2018

PTAS

VIKRAM IYENGAR  
FENWICK & WEST LLP  
801 CALIFORNIA STREET  
MOUNTAIN VIEW, CA 94041

**504893684**

### UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT RECORDATION BRANCH OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE ASSIGNMENT RECORDATION BRANCH AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT RECORDATION BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 05/01/2018

REEL/FRAME: 045681/0354  
NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

DOCKET NUMBER: 38638

ASSIGNOR:  
ISRAR, ALI

DOC DATE: 04/12/2018

ASSIGNOR:  
CASTILLO, PABLO

DOC DATE: 04/12/2018

ASSIGNOR:  
LAU, FRANCES WING YEE

DOC DATE: 04/19/2018

ASSIGNOR:  
TURCOTT, ROBERT

DOC DATE: 04/13/2018

ASSIGNOR:  
ABNOUSI, FREDDY

DOC DATE: 04/12/2018

ASSIGNEE:  
FACEBOOK, INC.  
1601 WILLOW ROAD  
MENLO PARK, CALIFORNIA 94025

APPLICATION NUMBER: 15949465

FILING DATE:

PATENT NUMBER:

ISSUE DATE:

TITLE: CUTANEOUS ACTUATORS WITH DAMPENING LAYERS AND END EFFECTORS TO  
INCREASE PERCEPTIBILITY OF HAPTIC SIGNALS

ASSIGNMENT RECORDATION BRANCH  
PUBLIC RECORDS DIVISION

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4940427

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ALI ISRAR	04/12/2018
PABLO CASTILLO	04/12/2018
FRANCES WING YEE LAU	04/19/2018
ROBERT TURCOTT	04/13/2018
FREDDY ABNOUSI	04/12/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	FACEBOOK, INC.
<b>Street Address:</b>	1601 WILLOW ROAD
<b>City:</b>	MENLO PARK
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94025
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15949465
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(650)938-5200
<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>	650-335-7140
<b>Email:</b>	mnascimento@fenwick.com
<b>Correspondent Name:</b>	VIKRAM IYENGAR
<b>Address Line 1:</b>	FENWICK & WEST LLP
<b>Address Line 2:</b>	801 CALIFORNIA STREET
<b>Address Line 4:</b>	MOUNTAIN VIEW, CALIFORNIA 94041
<b>ATTORNEY DOCKET NUMBER:</b>	38638
<b>NAME OF SUBMITTER:</b>	VIKRAM IYENGAR, REG. NO. 65488
<b>SIGNATURE:</b>	/Vikram Iyengar/
<b>DATE SIGNED:</b>	05/01/2018
This document serves as an Oath/Declaration (37 CFR 1.63).	

## **COMBINED ASSIGNMENT/DECLARATION (37 CFR 1.63)**

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 **Facebook, Inc.**, a Delaware corporation, having a place of business at 1601 Willow Road, Menlo Park, California 94025 ("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 application filed under 35 U.S.C. § 111(b), non-provisional application filed under 35 U.S.C. § 111(a), 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. **15/949,465**, entitled "**CUTANEOUS ACTUATORS WITH DAMPENING LAYERS AND END EFFECTORS TO INCREASE PERCEPTIBILITY OF HAPTIC SIGNALS**" filed on **April 10, 2018**, which claims priority from **U.S. Provisional Application No. 62/486,337, filed April 17, 2017; U.S. Provisional Application No. 62/574,389, filed October 19, 2017; U.S. Provisional Application No. 62/552,791, filed August 31, 2017; and U.S. Provisional Application No. 62/621,977, filed January 25, 2018.**

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 which have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) which 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.

INVENTOR represents that INVENTOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the INVENTOR has not made and will not hereafter make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

Title:

**CUTANEOUS ACTUATORS WITH DAMPENING LAYERS AND END EFFECTORS TO INCREASE PERCEPTIBILITY OF HAPTIC SIGNALS**

Date Filed:

**April 10, 2018**

Application No.:

**15/949,465**

---

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 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.

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION  
USING AN APPLICATION DATA SHEET (37 CFR 1.76)**

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 acknowledges the duty to disclose to the United States Patent and Trademark Office all information known to INVENTOR to be material to patentability as defined in 37 CFR § 1.56, which for a continuation-in-part includes information known to INVENTOR to be material to patentability as defined in 37 CFR § 1.56 that became available between the filing date of the prior patent application and the National or PCT filing date of the continuation-in-part application.

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

Name and Signature

*Ali Israr*

**Ali Israr**

Date of Signature

**Apr 12, 2018**

Name and Signature

*Pablo Castillo*

**Pablo Castillo Canales**

Initials: *PCC*

Date: 04/25/2019

Date of Signature

**Apr 12, 2018**

Name and Signature

*Frances Wing Yee Lau*

**Frances Wing Yee Lau**

Date of Signature

**Apr 19, 2018**

Title:

**CUTANEOUS ACTUATORS WITH DAMPENING LAYERS AND END  
EFFECTORS TO INCREASE PERCEPTIBILITY OF HAPTIC SIGNALS**

Date Filed:

**April 10, 2018**

Application No.:

**15/949,465**

---

Name and Signature

*Robert J Turcott*

**Robert Turcott**

Date of Signature

**Apr 13, 2018**

Name and Signature

*Freddy Abnousi*

**Freddy Abnousi**

Date of Signature

**Apr 12, 2018**

**Signature:** *Pablo Castillo Canales*

**Email:** pablo.castillo@oculus.com