504322715 04/14/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4369397

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YUTA KUBOYAMA	03/01/2017
LOUIS W. BOKMA	02/28/2017
ERIK DE JONG	02/28/2017
CHRISTOPHER M. DODSON	02/28/2017
COLIN M. ELY	02/28/2017
PRASHANTH HOLENARSIPUR	11/19/2016
MENGSHU HUANG	11/10/2016
SERHAN O. ISIKMAN	04/12/2017
BRIAN R. LAND	03/13/2017
ANANT RAI	03/07/2017
ALBERT WANG	02/28/2017
MICHAEL B. WITTENBERG	03/08/2017

RECEIVING PARTY DATA

Name:	APPLE INC.
Street Address:	1 INFINITE LOOP
City:	CUPERTINO
State/Country:	CALIFORNIA
Postal Code:	95014

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15275323

CORRESPONDENCE DATA

Fax Number:

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: 213-892-5200

Email: ssifontes@mofo.com

Correspondent Name:MORRISON & FOERSTER LLPAddress Line 1:707 WILSHIRE BOULEVARD

Address Line 4: LOS ANGELES, CALIFORNIA 90017

PATENT
REEL: 042015 FRAME: 0884

ATTORNEY DOCKET NUMBER: 106842140000 (P27569US1)		
NAME OF SUBMITTER:	KENNETH W. NEWTON	
SIGNATURE:	/Kenneth W. Newton/	
DATE SIGNED:	04/14/2017	
Total Attachments: 14		
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PATENT REEL: 042015 FRAME: 0885

ASSIGNMENT

This assignment is by:

1. Yuta KUBOYAMA

c/o Apple Inc. 1 Infinite Loop Cupertino, California 95014

2. Louis W. BOKMA

c/o Apple Inc.
1 Infinite Loop
Cupertino, California 95014

3. Erik DE JONG

c/o Apple Inc. 1 Infinite Loop Cupertino, California 95014

4. Christopher M. DODSON

c/o Apple Inc. 1 Infinite Loop Cupertino, California 95014

5. Colin M. ELY

c/o Apple Inc. 1 Infinite Loop Cupertino, California 95014

6. Prashanth HOLENARSIPUR

c/o Apple Inc.
1 Infinite Loop
Cupertino, California 95014

7. Mengshu HUANG

c/o Apple Inc. 1 Infinite Loop Cupertino, California 95014

8. Serhan O. ISIKMAN

c/o Apple Inc. 1 Infinite Loop Cupertino, California 95014

9. Brian R. LAND

c/o Apple Inc.
I Infinite Loop
Cupertino, California 95014

10. Anant RAI

c/o Apple Inc.
1 Infinite Loop
Cupertino, California 95014

11. Albert WANG

c/o Apple Inc.
1 Infinite Loop
Cupertino, California 95014

12. Michael B. WITTENBERG

c/o Apple Inc.
1 Infinite Loop
Cupertino, California 95014

(referred to in this Assignment as "Assignors"), whose residence or mailing address information is listed above.

This Assignment is to:

Assignee: Apple Inc.

Address: 1 Infinite Loop, Cupertino, California 95014

A corporation duly organized under and pursuant to the laws of: California

(referred to in this Assignment as "Assignee"), which desires to acquire the entire right, title and interest in, to and under said patent application and the inventions covered thereby.

Assignors have invented certain new and useful inventions in:

SYSTEMS AND APPARATUS FOR OBJECT DETECTION

for which Assignors have filed an application for patent in the United States of America concurrently herewith. Where this Assignment is not filed concurrently with the application, the following identifying information may be added after execution:

Serial No.: <u>15/275,323</u> Filing Date: <u>September 23, 2016</u>

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged,

- 1. Assignors hereby sell, assign, transfer and set over, to Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions, application for letters patent, any and all provisionals, non-provisionals, divisions, continuations, and continuations-in-part claiming priority thereto or the benefit thereof, substitutions of said applications, and any and all letters patent or patents in the United States of America and all foreign countries or jurisdictions which may be granted therefor and thereon, including, without limitation, any modifications to such letters patent or patents such as through reissue, re-examination or other post-grant proceeding, and any and all extensions of said letters patent or patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee (including any right to institute actions and to recover damages for past, present and future infringement), for its own use and the use of its successors, legal representatives and assigns, to the full end of the term or terms for which letters patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.
- 2. Assignors represent, warrant and covenant (a) that, at the time of execution and delivery of this agreement, Assignors are the sole and lawful owners of the entire right, title and interest in and to said inventions and said application for letters patent, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner set forth in this agreement, or (b) that Assignors solely and lawfully owned the entire right, title and interest in and to said inventions and said application for letters patent, and the same were unencumbered and that Assignors sold, assigned, transferred and set over, to Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to said inventions and said applications for letters patent.

- 3. Assignors shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. To be clear, for purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.
- 4. Assignors hereby authorize and request the Commissioner of Patents in the United States to issue the above mentioned letters patent of the United States to Assignee as the assignee of said inventions and the letters patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.
- 5. "I hereby grant Assignee's attorneys, all of Morrison & Foerster LLP, the power to insert on this assignment any further identification which 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, including the power to insert on this assignment the application number and filing date of said application when known."

In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date: 03/01/17	Signature:	Yuta-KUBOYAMA
Date:	Signature:	Louis W. BOKMA
Date:	Signature:	Erik DE JONG
Date:	Signature:	Christopher M. DODSON
Date:	Signature:	Colin M. ELY

3

- 3. Assignors shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. To be clear, for purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.
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In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

	Date:	Signature:	Yuta KUBOYAMA
,	Date: 2/28/17	Signature:	Louis W. BOKMA
	Date:	Signature:	Erik DE JONG
	Date:	Signature:	Christopher M. DODSON
	Date:	Signature:	

3

Colin M. ELY

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In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date:	Signature:Yuta KUBOYAMA
Date:	Signature:Louis W. BOKMA
Date: Feb 28, 2017	Signature: Erik DE JONG
Date:	Signature:Christopher M. DODSON
Date:	Signature:Colin M. ELY

- 3. Assignors shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. To be clear, for purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.
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In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date:	Signature:Yuta KUBOYAMA
Date:	Signature:Louis W. BOKMA
Date:	Signature:Erik DE JONG
Date: 02/28/2017	Signature: Christopher M. DODSON
Date:	Signature:Colin M. ELY

- 3. Assignors shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) any provisional, non-provisional, division, continuation, or continuation-in-part claiming priority thereto or the benefit thereof, or any substitution of any such application, or (c) any letters patent or patents for said inventions in any country or jurisdiction, including without limitation, any modifications to such letters patent or patents such as through reissue, re-examination, or other post-grant proceeding. To be clear, for purposes of this paragraph, "procurement, maintenance, enforcement, defense" shall include, without limitation, any preparation, prosecution, pre-grant proceeding, and post-grant proceeding, whether before a patent office or other administrative body or judicial body with jurisdiction therefor.
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In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date:	Signature: Yuta KUBOYAMA
Date:	Signature:Louis W. BOKMA
Date:	Signature:Erik DE JONG
Date:	Signature:Christopher M. DODSON
Date: 2/20/20/4	Signature: Colin M. EL

3

Date: Nov 19, 2016	Signature;	Prashanti HOLENARSIPUR
Date:	Signature:	Mengshu HUANG
Date:	Signature:	Serhan O. ISIKMAN
Date:	Signature:	Brian R. LAND
Date:	Signature:	Anant RAI
Date:	Signature:	Albert WANG
Date:	Signature:	Michael B. WITTENBERG

Date:	Signature:	Prashanth HOLENARSIPUR
Date: Nov.10, 2016	Signature:	Mengshu HUANG
Date:	Signature:	Serhan O. ISIKMAN
Date:	Signature:	Brian R. LAND
Date:	Signature:	Anant RAI
Date:	Signature:	Albert WANG
Date:	Signature:	Michael B. WITTENBERG

Date:	Signature:	Prashanth HOLENARSIPUR
Date:	Signature:	Mengshu HUANG
Date: 4/12/2017	Signature:	Serhan O. ISIKMAN
Date:	Signature:	Brian R. LAND
Date:	Signature:	Anant RAI
Date:	Signature:	Albert WANG
Date:	Signature:	Michael D WITTENDEDC

	Date:	Signature:	Prashanth HOLENARSIPUR
•	Date:	Signature:	Mengshu HUANG
·	Date:	Signature;	Serhan O. ISIKMAN
·	Date: 3/13/17	Signature;	Man Gillan A. LAND
,	Date:	Signature:	Anant RAI
1	Date:	Signature:	Albert WANG
1	Date:	Signature:	Michael B. WITTENBERG

Date:		Signature:	Prashanth HOLENARSIPUR
Date:		Signature:	Mengshu HUANG
Date:		Signature:	Serhan O. ISIKMAN
Date:		Signature:	Brian R. LAND
Date:	03-07-2017	Signature:	Anant RAI
Date:		Signature:	Albert WANG
Date:		Signature:	Michael B. WITTENBERG

Date:	Signature:	Prashanth HOLENARSIPUR
Date:	Signature:	Mengshu HUANG
Date:	Signature:	Serhan O. ISIKMAN
Date:	Signature:	Brian R. LAND
Date:	Signature:	Anant RAI
Date: 23 February 2017	Signaturë:	Ameri Wang
Date:	Signature:	Michael B. WITTENBERG

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Date:	Signature:	Prashanth HOLENARSIPUR
Date:	Signature:	Mengshu HUANG
Date:	Signature:	Serhan O. ISIKMAN
Date:	Signature:	Brian R. LAND
Date:	Signature:	Anant RAI
Date:	Signature:	Albert WANG
Date: 3/8/2017	Signature:	Michael B. WITTENBERG

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RECORDED: 04/14/2017