505225319 12/07/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
EMILIO PARISOTTO	12/06/2018
JIAN ZHANG	10/17/2018
RUSLAN SALAKHUTDINOV	10/25/2018
DEVENDRA SINGH CHAPLOT	11/30/2018

RECEIVING PARTY DATA

Name:	APPLE INC.
Street Address:	ONE APPLE PARK WAY
Internal Address:	M/S 169 3IPL
City:	CUPERTINO
State/Country:	CALIFORNIA
Postal Code:	95014

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16113647

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.

Email: mail@fernando-ip.com

Correspondent Name: FERNANDO & PARTNERS LLP

Address Line 1: 228 HAMILTON AVENUE

Address Line 2: 3RD FLOOR

Address Line 4: PALO ALTO, CALIFORNIA 94301

ATTORNEY DOCKET NUMBER:	27753-50168US1
NAME OF SUBMITTER:	WILLIAM J. HIGLEY
SIGNATURE:	/William J. Higley/
DATE SIGNED:	12/07/2018

Total Attachments: 4

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PATENT REEL: 047707 FRAME: 0556 source=27753-50168US1_Signed-Assignment#page2.tif source=27753-50168US1_Signed-Assignment#page3.tif source=27753-50168US1_Signed-Assignment#page4.tif

> PATENT REEL: 047707 FRAME: 0557

WHEREAS WE, Emilio Parisotto residing in Pittsburgh, PA, Jian Zhang residing in Cuperlino, CA, Ruslan Salakhutdinov residing in Pittsburgh, PA, and Devendra Singh Chaptot residing in Pittsburgh, PA (the "ASSIGNORS") are the inventors of the invention in METHOD AND DEVICE FOR IMPROVED LOCALIZATION AND MAPPING, described in an application for a Patent of the United States

which is executed on even date herewith

which is identified by Fernando & Partners, LLP docket no. 27753-50168US1

8 which was filed on August 27, 2018, Application No. 16/113,647

and WHEREAS, Apple Inc. ("ASSIGNEE"), a corporation, having a place of business at **One Apple Park Way, M/S**169 3IPL, Cupertino, CA 95014, is desirous of obtaining our entire right, title and interest in, to and under said invention and said application:

NOW, THEREFORE, let it be known that for and in consideration of the sum of One Dollar (\$1.00) to us paid, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, we, said ASSIGNOAS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under said invention, and said United States application and all divisions, renewals and continuations thereof, and any substitute applications therefore, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof, said United States provisional patent application(s), if any, on which said United States application claims priority; and all applications for intellectual property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application and said United States provisional patent application(s), if any, under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property. or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable, and all forms of intellectual property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of intellectual property protection on applications as aforesaid, to issue the same to said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further coveriant and agree that we will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful caths, and generally do everything possible to aid said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, we hereunto set my hand and seal the day and year set opposite our signature.

Endo Privile	Date: 12/06/2016
Emilio Parisotto	·
Jian Zhang	Date:
Rusian Sälakhuldinov	Date:
Devendra Sinch Chapter	Date:

Page 1 of 1

WHEREAS WE, Emilio Parisotto residing in Pittsburgh, PA, Jian Zhang residing in Cupertino, CA, Ruslan Salakhutdinov residing in Pittsburgh, PA, and Devendra Singh Chaplot residing in Pittsburgh, PA (the "ASSIGNORS") are the inventors of the invention in METHOD AND DEVICE FOR IMPROVED LOCALIZATION AND MAPPING, described in an application for a Patent of the United States

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IN TESTIMONY WHEREOF, we hereunto set my hand and seal the day and year set opposite our signature.

Emilio Parisotto	Date:
Jian Zhang	Date: 10-17-208
Ruslan Salakhutdinov	Date:
Devendra Singh Chaplot	Date:

Page 1 of 1

WHEREAS WE, Emilio Parisotto residing in Pittsburgh, PA, Jian Zhang residing in Cupertino, CA, Ruslan Salakhutdinov residing in Pittsburgh, PA, and Devendra Singh Chaplot residing in Pittsburgh, PA (the "ASSIGNORS") are the inventors of the invention in METHOD AND DEVICE FOR IMPROVED LOCALIZATION AND MAPPING, described in an application for a Patent of the United States

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IN TESTIMONY WHEREOF, we hereunto set my hand and seal the day and year set opposite our signature.

Emilio Parisotto	Date
Jian Zhang	Date:
Rusian Salakhutdinov	Date: 04 25 2018
Devendra Singh Chaplot	Date:

Page 1 of 1

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Emilio Parisotto	Date:
Jian Zhang	Date:
Ruslan Salakhutdinov	Date:
Operation Singh Chaplot	Date: 11/30/2018

Page 1 of 1

PATENT REEL: 047707 FRAME: 0561