505481511 05/17/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
EHSAN NEZHADARYA	04/09/2019
YANG LIU	04/09/2019
BINGBING LIU	04/10/2019

RECEIVING PARTY DATA

Name:	HUAWEI TECHNOLOGIES CO., LTD.
Street Address:	HUAWEI ADMINISTRATION BUILDING, BANTIAN, LONGGANG
City:	SHENZHEN, GUANGDONG
State/Country:	CHINA
Postal Code:	518129

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16380273

CORRESPONDENCE DATA

Fax Number: (613)236-2485

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: (613)236-1995

Email: ipinfo@ridoutmaybee.com **RIDOUT & MAYBEE LLP Correspondent Name:**

Address Line 1: 11 HOLLAND AVENUE, SUITE 601

Address Line 4: OTTAWA, CANADA K1Y 4S1

ATTORNEY DOCKET NUMBER:	50874-3290
NAME OF SUBMITTER:	COLIN CLIMIE
SIGNATURE:	/Colin Climie/
DATE SIGNED:	05/17/2019

Total Attachments: 3

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> **PATENT** REEL: 049208 FRAME: 0636 505481511

WHEREAS, I/We, the undersigned inventor(s) (or one of the undersigned joint inventors), of residence as listed below, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed in a way that effectively on the date that the application is filed or a priority date or priority dates that the application claims; and

WHEREAS, Huawei Technologies Co., Ltd. ("Assignee"), a corporation organized and existing under the laws of China, having a principal place of business at Huawei Administration Building, Bantian, Longgang, Shenzhen, Guangdong, 518129 China, is desirous of acquiring my/our entire right, title and interest in the said invention, and to the said application and any Letters Patent that may issue thereon in the United States and all other countries throughout the world;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I/we will assign, and hereby assign and transfer to the Assignee and the Assignee's legal representatives, successors and assigns the full and exclusive right, title and interest in and to the invention in the United States and every other country and the entire right, title, and interest in and to the patent application and other such applications (e.g., provisional applications, non-provisional applications, continuations, continuations-in-part, divisional, reissues, reexaminations, National Phase applications, including petty patent applications, and utility model applications) that may be filed in the United States and every other country on the invention, and the patents, extensions, or derivations thereof, both foreign and domestic, that may issue thereon, and I/we do hereby authorize and request the Commissioner for Patents to issue U.S. patents for said invention, or patent resulting therefrom, insofar as my/our interest is concerned, to the Assignee agreeably with the terms of this assignment document.

I/we also hereby agree to sell and to assign, and sell and assign to Assignee, its successors and assigns, my/our international rights to the invention disclosed in said application, in all countries of the world, including, but not limited to, the right to file applications and obtain patents under the terms of any International Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I/we hereby further agree that I/we will communicate to Assignee, or its successors, assigns, and legal representative, any facts known to me/us respecting said invention or the file history thereof, and at the expense of said assignee company testify in any legal proceedings, sign all lawful papers, execute all documents required for divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid such Assignee, its successors.

Hussel Technologies Co., Ltd. Patent Reference No. 85974224US02 Page 1 of 2

ASSIGNMENT

assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

I/we hereby authorize Assignee to modify this Assignment at a later date for the purpose of adding information to better identify the invention, such as the application serial number, and filing date of a patent application filed thereon.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

Title of Invention	ESTIMATING TWO-DIMENSIONAL OBJECT BOUNDING BOX INFORMATION BASED ON BIRD'S-EYE VIEW POINT CLOUD		
	Appl. No. 16/380.273	Filing Date April 10, 20	
Signature of Inventor: Inventor Name: Residence (City/State):	Ehsan Nezhadarya Thornhill/Ontario	Date April	9,7019
Signature of Witness: Witness Name: Residence (City/State):	Fashandi Homa Fashandi Toronto/ON	Date Apr	09, 2019
Signature of Inventor: Inventor Name: Residence (City/State):	Yang Liu North York/Ontario	Date	
Signature of Witness: Witness Name: Residence (City/State):		Date	
Signature of Inventor Inventor Name Residence (City/State):	Bingbing Liu Singapore/Singapore	Date	
Signature of Witness: Witness Name: Residence (City/State)		Date	

Husest Technologies Co., Ltd. Patent Reference No. 85074224US02 Page 2 of 2

ASSIGNMENT

assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

I/we hereby authorize Assignee to modify this Assignment at a later date for the purpose of adding information to better identify the invention, such as the application serial number, and filing date of a patent application filed thereon.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

Title of Invention	ESTIMATING TWO-DIMENSIONAL OBJECT BOUNDING BOX INFORMATION BASED ON		
	BIRD'S-EYE VIE	W POINT CLOUD	
	Appl. No.	Filing Date:	
	16/380,273	April 10, 2019	
,			
Signature of Inventor:			
Inventor Name:	Ehsan Nezhadarya	Date	
Residence (City/State):	Thornhill/Ontario	AND THE PROPERTY OF THE PROPER	
Signature of Witness:			
Witness Name:		Date	
Residence (City/State):			
	· - A		
Signature of Inventor:	V7 -		
Inventor Name:	Yang Liu	Date April 9, 2019	
Residence (City/State):	North York/Ontario		
	127		
Signature of Witness:			
Witness Name:	Ehson Toghavi	Date April 9, 2019	
Residence (City/State)	North York / Ontorio		
Signature of Inventor:	435		
Inventor Name:	Bingbing Liu	Date April 10, 2019	
Residence (City/State)	Singapore/Singapore	wannennennend with a first a second and a se	
GS	DAG J		
Signature of Witness:		D.L. 0 1 10/2-10	
Witness Name:	Elsan Bahavi	Date 1201/2019	
Residence (City/State)	: North York / Oxtorio	······	

Huawei Technologies Co., Ltd. Patent Reference No. 85974224US02 Page 2 of 2

PATENT REEL: 049208 FRAME: 0639

RECORDED: 05/17/2019