505524743 06/13/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TECHNISCHE UNIVERSITÄT GRAZ	04/30/2019

RECEIVING PARTY DATA

Name:	QUALCOMM TECHNOLOGIES, INC.	
Street Address:	5775 MOREHOUSE DRIVE	
City:	SAN DIEGO	
State/Country:	CALIFORNIA	
Postal Code:	92121-1714	

PROPERTY NUMBERS Total: 3

Property Type	Number	
Application Number:	15946669	
Application Number:	62586449	
PCT Number:	US2018050516	

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NAME OF SUBMITTER:	ISOBEL MORADA
SIGNATURE:	/ISOBEL MORADA/
DATE SIGNED:	06/13/2019

Total Attachments: 6

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PATENT 505524743 REEL: 049464 FRAME: 0593

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PATENT REEL: 049464 FRAME: 0594

PATENT ASSIGNMENT

This Patent Assignment ("Patent Assignment") is made by Technische Universität Graz (also sometimes referred to as "Technical University of Graz"), an institution organized under the laws of Austria and having a business address at Rechbauerstrasse 12, 8010 Graz, Austria (hereinafter "ASSIGNOR") to Qualcomm Technologies, Inc., a corporation duly organized under the laws of Delaware, United States of America, having its principal place of business at 5775 Morehouse Drive, San Diego, California, 92121-1714, United States of America (hereinafter "ASSIGNEE").

WHEREAS, ASSIGNOR and QUALCOMM Incorporated previously entered into the Agreement Concerning Mutual Requirements for Confidentiality, Publications and Exploitation of Research Results (GRA-148670), effective July 1, 2010, as amended from time-to-time (the "First Agreement"), and QUALCOMM Incorporated assigned its rights under the First Agreement to ASSIGNEE on or about October 1, 2012.

WHEREAS, ASSIGNOR and ASSIGNEE previously entered into the Agreement Concerning Mutual Requirements for Confidentiality, Publications and Exploitation of Research Results (GRA-312895), dated on or about January 20, 2016, as amended from time-to-time (the "Second Agreement").

WHEREAS, pursuant to the terms of both the First Agreement and the Second Agreement, ASSIGNOR agreed to transfer to ASSIGNEE sole ownership of certain intellectual property and ASSIGNOR timely claimed ownership of the Patent Items (as defined below) from the inventors on April 9, 2018 pursuant to Section 106 of the Austrian University Act of 2002.

WHEREAS, ASSIGNOR desires to sell, assign and transfer to ASSIGNEE the Patent Items (as defined below), with an effective date as of April 10, 2018.

WHEREAS, ASSIGNOR has agreed, subject to the terms and conditions of this Patent Assignment, to assign, transfer and sell all right, title and interest in, to and under (i) the patent applications listed in the schedule of <u>Exhibit 1</u> attached hereto and all inventions, discoveries, and improvements claimed or described in the patent applications listed in <u>Exhibit 1</u>; (ii) any patent applications which may hereafter be filed based on the inventions, discoveries, and improvements claimed or described in the patent applications listed in <u>Exhibit 1</u>, including without limitation all provisional and priority applications relating thereto; (iii) all patents issuing on or from the patent application listed in <u>Exhibit 1</u> and any patent applications which may be filed based on the inventions, discoveries, and improvements claimed or described in the patent applications listed in the <u>Exhibit 1</u>; and (iv) all reissues, reexaminations, extensions, divisionals, renewals, continuations, continuations-in-part and counterparts (whether foreign or domestic) claiming priority to any of the foregoing items in (i), (ii) or (iii) above, along with all patents issuing therefrom (subsections (i), (ii), (iii), and (iv) hereinafter collectively referred to as the "Patent Items").

WHEREAS, ASSIGNEE has agreed, subject to the terms and conditions of this Patent Assignment, to assume, acquire and purchase the Patent Items.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

- 1. <u>Assignment of Patent Items</u>. ASSIGNOR does hereby sell, assign, transfer, convey and deliver unto ASSIGNEE, its successors, legal representatives and assigns, all right, title and interest throughout the world in, to and under the Patent Items, including without limitation all foreign patents and any and all rights of priority under international conventions, treaties or agreements based on or relating to the Patent Items.
- 2. <u>Patent Offices Recordation</u>. ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States of America and any Official of any country or countries foreign to the United States of America, whose duty it is to issue patents on applications, to record ASSIGNEE as the assignee and owner of the Patent Items and to issue all patents for the Patent Items to and in the name of ASSIGNEE, its successors, legal representatives and assigns, as the assignee to the entire interest therein, in accordance with the terms of this Patent Assignment.
- 3. <u>Assignment of Enforcement Rights</u>. ASSIGNOR hereby assigns, transfers, conveys and delivers to ASSIGNEE, its successors, legal representatives and assigns, all rights of enforcement, all claims for damages and all remedies arising out of, relating to or resulting from the Patent Items or any violation(s) thereof, whether accrued prior to the date of this Patent Assignment or hereafter, including but not limited to the right to sue for, seek, collect, recover and retain damages and any other relief arising out of or resulting from any past, present or future infringement or violation of any of the Patent Items, and all other rights, including common law rights, that ASSIGNOR may have relating to the Patent Items, including but not limited to any ongoing or prospective royalties to which ASSIGNOR may be entitled, or that ASSIGNOR may collect for any infringements of any of the Patent Items or from any settlement or agreement related to the Patent Items arising before or after the date of this Patent Agreement, such rights to be held and enjoyed by ASSIGNEE, its successors, legal representatives and assigns, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR if this Patent Assignment had not been made.
- Representations and Further Assurances. ASSIGNOR represents and warrants that it has full right, power and authority to sell, assign, transfer, convey and deliver all of the subject matter set forth herein, and hereby covenants and agrees that upon the written request of ASSIGNEE and without further compensation, ASSIGNOR shall execute, acknowledge, and deliver all the instruments and documents and shall take all the actions reasonably necessary or required by law to consummate and make fully effective the transaction contemplated by this Patent Assignment and will communicate promptly to ASSIGNEE, its successors, legal representatives and assigns, all facts known to ASSIGNOR respecting the Patent Items, and will testify in any legal proceeding, sign all lawful papers, transfer all file histories, make diligent effort to find or reach every inventor of the Patent Items necessary or appropriate in connection with preparation of any lawful document or proceeding relating to the Patent Items, make reasonable efforts to obtain all necessary or appropriate signed and executed documents relating to the Patent Items from every inventor named in the Patent Items, make all rightful declarations and/or oaths and generally do everything possible to aid ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce patent protection for the Patent Items on a worldwide basis in all countries and for perfecting, recording, or maintaining the title of ASSIGNEE, and ASSIGNEE'S successors and assigns, in and to each of the Patent Items in the United States and throughout the world. ASSIGNEE

further covenants and agrees that it will wholly refrain from challenging the validity, enforceability or scope of the Patent Items, whether through opposition, re-examination and/or court proceedings.

- 5. Appointment. If ASSIGNEE is unable for any reason to secure ASSIGNOR'S signature to any document required to file, prosecute, register, or memorialize the assignment of any rights under any Patent Items as provided under this Patent Assignment, ASSIGNOR hereby irrevocably designates and appoints ASSIGNEE and ASSIGNEE'S duly authorized officers and agents as ASSIGNOR'S agents and attorneys-in-fact to act for and on ASSIGNOR'S behalf and instead of ASSIGNOR to take all lawfully permitted acts to further the filing, prosecution, registration, memorialization of assignment, issuance, and enforcement of rights under such Patent Items, all with the same legal force and effect as if executed by ASSIGNOR. The foregoing is deemed a power coupled with an interest and is irrevocable.
- 6. <u>Assignor Representations and Warranties</u>. ASSIGNOR represents and warrants that ASSIGNOR has not sold, assigned, transferred or granted and will not sell, assign, transfer or grant to others either (1) any rights, title or interest in and to any of the Patent Items, or (2) any rights inconsistent with the rights granted herein, including without limitation granting or allowing any lien, security interest or other encumbrance in or to such Patent Items.
- 7. No Amendment or Waiver. No waiver, amendment, or modification of this Patent Assignment shall be effective against either party, unless in writing executed by a duly authorized representative of each party. This Patent Assignment shall be governed in all respects by the laws of the Republic of Austria without giving effect to any choice or conflict of law provision or rule.
- 8. <u>Counterparts</u>. This Patent Assignment may be executed in multiple counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same document. A signature page delivered by electronic means will be deemed an original for all purposes.

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IN WITNESS WHEREOF, I hereunto set my hand this 30 day of April 2019.

Technische Universität Grak,

Bv:

Printed Name: HORST BISCHOF

Title: VR TUGRAZ

[Assignor's Signature Page to Patent Assignment]

IN WITNESS WHEREOF, acknowledged and accepted on this 2.1 day of May 2019.

Qualcomm Te	chnologies, Inc	•	
By: <u> </u>	e ks	<u> </u>	
Printed Name:	ALCASIA	PAUHLOA	HA
Title:	An		

[Assignee's Signature Page to Patent Assignment]

EXHIBIT 1

Patent Schedule

Country	Invention Disclosure Reference Numbers	Title	Patent Application Number	Application Filed Date
US	180426IDF; E_0793_04_18	POSE ESTIMATION AND MODEL RETRIEVAL FOR OBJECTS IN IMAGES	62/586,449	11/15/2017
US	180426IDF; E_0793_04_18	POSE ESTIMATION AND MODEL RETRIEVAL FOR OBJECTS IN IMAGES	15/946,669	04/05/2018
WO	180426IDF; E_0793_04_18	POSE ESTIMATION AND MODEL RETRIEVAL FOR OBJECTS IN IMAGES	PCT/US2018/050516	09/11/2018

END OF EXHIBIT 1

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RECORDED: 06/13/2019