

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5038671

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the APPLICATION NUMBER previously recorded on Reel 043601 Frame 0200. Assignor(s) hereby confirms the ASSIGNMENT OF ASSIGNOR'S INTEREST.
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO	06/13/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	TACTUAL LABS CO.
<b>Street Address:</b>	295 MADISON AVENUE
<b>Internal Address:</b>	SUITE 901
<b>City:</b>	NEW YORK
<b>State/Country:</b>	NEW YORK
<b>Postal Code:</b>	10017
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14945083
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>Email:</b>	cathie.updegraff@tactualabs.com
<b>Correspondent Name:</b>	TACTUAL LABS CO.
<b>Address Line 1:</b>	1800 PEMBROOK DRIVE
<b>Address Line 2:</b>	SUITE 300
<b>Address Line 4:</b>	ORLANDO, FLORIDA 32810
<b>ATTORNEY DOCKET NUMBER:</b>	518-0-1US
<b>NAME OF SUBMITTER:</b>	CATHERINE M. UPDEGRAFF
<b>SIGNATURE:</b>	/Catherine M. Updegraff/
<b>DATE SIGNED:</b>	07/06/2018
<b>Total Attachments: 3</b>	
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## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4596237

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO	06/13/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	TACTUAL LABS CO.
<b>Street Address:</b>	295 MADISON AVENUE
<b>Internal Address:</b>	SUITE 901
<b>City:</b>	NEW YORK
<b>State/Country:</b>	NEW YORK
<b>Postal Code:</b>	10017
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14495083
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>Email:</b>	cathie.updegraff@tactualabs.com
<b>Correspondent Name:</b>	TACTUAL LABS CO.
<b>Address Line 1:</b>	1800 PEMBROOK DRIVE
<b>Address Line 2:</b>	SUITE 300
<b>Address Line 4:</b>	ORLANDO, FLORIDA 32810
<b>ATTORNEY DOCKET NUMBER:</b>	518-0-1US
<b>NAME OF SUBMITTER:</b>	CATHERINE M. UPDEGRAFF
<b>SIGNATURE:</b>	/Catherine M. Updegraff/
<b>DATE SIGNED:</b>	09/15/2017
<b>Total Attachments: 2</b>	
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**Assignment**

In re Application of: **Bruno Rodrigues De Araujo et al.**

Serial No.: **14/945,083**

Filing Date: **11/18/2015**

Title: **SYSTEM AND METHOD FOR TIMING INPUT SENSING,  
RENDERING, AND DISPLAY TO MINIMIZE LATENCY**

**WHEREAS**, The Governing Council of the University of Toronto, in Toronto, Canada, (hereinafter referred to as ASSIGNOR), has rights, title and/or interest in and to that certain new and useful improvements in **SYSTEM AND METHOD FOR TIMING INPUT SENSING, RENDERING, AND DISPLAY TO MINIMIZE LATENCY** (hereinafter referred to as the INVENTION) described in the above-captioned Application for United States Letters Patent; and

**WHEREAS**, Tactual Labs Co. having an address at 200 Park Avenue, Suite 1700, New York, NY 10166 and its successors and assigns (hereinafter referred to as ASSIGNEE), desires this Assignment of ASSIGNOR's entire right, title and interest in and to the INVENTION in the United States and throughout the world.

**NOW, THEREFORE**, for good and valuable consideration, receipt of which is hereby acknowledged, ASSIGNOR, by these presents do sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and Patent Application throughout the United States of America, including any and all United States Letters Patent granted on any U.S. Patent Application, and any division, continuation, continuation-in-part and reissue of said U.S. Patent Application; and the entire right, title and interest in and to said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under the terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEE'S expense, to identify and communicate to ASSIGNEE at ASSIGNEE'S request documents and information concerning the invention that are within ASSIGNOR'S possession or control, and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument.

Assignment

In re Application of: Bruno Rodrigues De Araujo et al.  
Serial No.: 14/945,083  
Filing Date: 11/18/2015  
Title: SYSTEM AND METHOD FOR TIMING INPUT SENSING,  
RENDERING, AND DISPLAY TO MINIMIZE LATENCY

ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives. If no serial number is listed above for the captioned patent application, Assignor hereby authorizes ASSIGNEE to insert into this Assignment the Serial Number or other information which may be necessary to identify the patent application or patents to which this Assignment relates.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE'S sole use and behoof; and for the use and behoof of ASSIGNEE'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

The Governing Council of the  
University of Toronto

  
\_\_\_\_\_  
Jennifer Fraser,  
Director, Innovations

Executed at Toronto, Ontario this 13th day of June, 2017 (the "Effective Date")