05/18/2018 504920990

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HAO-YU WU	01/09/2014
MICHAEL RUBINSTEIN	11/25/2013
FREDERIC DURAND	11/15/2013
WILLIAM T. FREEMAN	11/26/2013
JOHN V. GUTTAG	12/04/2013
NEAL WADHWA	05/01/2018

RECEIVING PARTY DATA

Name:	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
Street Address:	77 MASSACHUSETTS AVENUE	
City:	CAMBRIDGE	
State/Country:	MASSACHUSETTS	
Postal Code:	02139	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15982765

CORRESPONDENCE DATA

Fax Number: (978)341-0136

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.

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CONCORD, MASSACHUSETTS 01742 Address Line 4:

ATTORNEY DOCKET NUMBER:	0050.2205-002
NAME OF SUBMITTER:	NICOLE ISABELLE
SIGNATURE:	/Nicole Isabelle/
DATE SIGNED:	05/18/2018

Total Attachments: 10
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Multi-Joint

ASSIGNMENT

WHEREAS, we, Hao-yu Wu, Michael Rubinstein, John V. Guttag, Frederic Durand and William T. Freeman, together with co-inventor Eugene Inghaw Shih, have invented a certain improvement in Linear-Based Eulerian Motion Modulation described in an application for Patent, П the specification of which is about to be filed in the United States Patent Office (use for utility (37 CFR § 1.53(b)) and design filings only); is about to be filed in the United States Patent Office as a Provisional Application; the specification of which is United States Application No. 13/850,717, filed M March 26, 2013; П the specification of which is a Patent Cooperation Treaty Application, International Application No. [], filed [], which designates the United States of America [and is assigned United States Application No. 1]]; П which was patented under United States Patent No. []. WHEREAS, Massachusetts Institute of Technology (hereinafter "ASSIGNEE"), a

corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139-4307 desires to confirm its interest therein in accordance with agreements duly entered into with us:

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, our entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with our entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of our entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein; I hereby expressly authorize the filing of an International Patent Application under the Patent Cooperation Treaty which corresponds to and claims the priority of the above-identified application;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any further applications including substitution, reissue, divisional or continuation, continuation-in-part applications, and all related provisional and nonprovisional, international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the

date set forth below. Inventor's Signature: State/Commonwealth of Calitornia County of Santa Clas 2014, before me, the undersigned notary day of public, personally appeared Hao-yu Wu. personally known to me, or proved to me through satisfactory evidence of identification, which was to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as hig/her free act and deed. (SEAL) Notary Public Anno F. Ravenwood (print name) My Commission expires ANNE E. RAVENWOOD

Commission # 1971802 Notary Public - California Santa Clara County My Comm. Expires Mar 11, 2016

Inventor's Signature:	
State/Commonwealth of MASSACHUSETS County of MIDDLESEX	chael Rubinstein
· /	立る 2013, before me, the undersigned notary nstein,
personally known to me, or	
proved to me through satisfactory MA VRIVERS (ICENSE	evidence of identification, which was
to be the person whose name was signed of	on the foregoing instrument in my presence, and going instrument as his/her free act and deed.
(SEAL)	Notary Public
**************************************	TIFFAND LUCION (print name) My Commission expires 007 75 / 204
Inventor's Signature:	
State/Commonwealth ofCounty of	ohn V. Guttag
On this day of	20 , before me, the undersigned notary
public, personally appeared John V. Gutta	
personally known to me, or	
proved to me through satisfactory	evidence of identification, which was
	on the foregoing instrument in my presence, and coing instrument as his/her free act and deed.
(SEAL)	Notary Public
	(print name)
	My Commission expires/

and the state of t			
Inventor's Signature:			
Frederic Durand State/Commonwealth of MassacLuse++3 County of Massacluse Frederic Durand			
On this 15 day of Noverter 2013, before me, the undersigned notary public, personally appeared Frederic Durand,			
personally known to me, or			
proved to me through satisfactory evidence of identification, which was			
Pernanent Research CARD			
to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.			
(SEAL) Tilliany Luongo, Notary Public Commonwealth of Messachusetts My Commission Expires 6/20/201 My Commission expires 6/2/14			
Inventor's Signature: 446///			
William T. Freeman			
State/Commonwealth of MASSACHUSETTS County of MIDDLESEX			
On this 26 day of November 2013, before me, the undersigned notary public, personally appeared William T. Freeman,			
personally known to me, or			
proved to me through satisfactory evidence of identification, which was			
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to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.			
(SEAL) Interry Lucingo, Notery Public Commonwealth of Massachusetts My Commission Expires 6/20/2014 Notary Public INTERRY LUCIAC (print name) My Commission expires 36 / Qc / 14			

Multi-Joint

ASSIGNMENT

WHEREAS, we, Hao-yu Wu, Michael Rubinstein, John V. Guttag, Frederic Durand and William T. Freeman, together with co-inventor Eugene Inghaw Shih, have invented a certain improvement in Linear-Based Eulerian Motion Modulation described in an application for Patent,

the specification of which is about to be filed in the United States Patent Office

(use for utility (37 CFR \S 1.53(b)) and design filings only);
is about to be filed in the United States Patent Office as a Provisional Application;
the specification of which is United States Application No. 13/850,717, filed March 26, 2013;
the specification of which is a Patent Cooperation Treaty Application, International Application No. [], filed [], which designates the United States of America [and is assigned United States Application No. []];
which was patented under United States Patent No. [].

WHEREAS, Massachusetts Institute of Technology (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139-4307 desires to confirm its interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, our entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with our entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of our entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein; I hereby expressly authorize the filing of an International Patent Application under the Patent Cooperation Treaty which corresponds to and claims the priority of the above-identified application;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any further applications including substitution, reissue, divisional or continuation, continuation-in-part applications, and all related provisional and nonprovisional, international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved:

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature:					
State/Commonwealth ofCounty of	-	Hao-yu Wu			
On this public, personally app			_, before me, t	he under	signed notary
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(SEAL)		Notary Public	<u> </u>		
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		My Commiss	ion expires	/	/

Inventor's Signature:					
State/Commonwealth of County of	fichael Rubinstein				
On this day of public, personally appeared Michael Rub	, before me, the undersigned notary pinstein,				
personally known to me, or					
proved to me through satisfactory	evidence of identification, which was				
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Page 3 of 4

Inventor's Signature:			
State/Commonwealth of County of	Fr	ederic Durand	
On thispublic, personally appe	day of cared Frederic Durar	20 nd,	, before me, the undersigned notary
personally know	wn to me, or		
proved to me th	rough satisfactory e	vidence of identif	fication, which was
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Inventor's Signature:			
State/Commonwealth ofCounty of		iam T. Freeman	
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(SEAL)		Notary Public_	
			(print name)
		My Commission	on expires/

Molti-Sole

ASSIGNMENT

WHEREAS, I. Neal Wadhwa, together with co-inventor(s) Hao-yn Wu, Michael Rubinstein, Eugene Inghaw Shih, John V. Guttag, Frederic Durand and Walliam T. Freeman, have invented a certain improvement in Linear-Based Eulerian Motion Modulation described in an application for Patent.

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WHEREAS Massachusetts Institute of Technology (bereinable: ASSASSE) as corporation organized and existing under the laws of the Commonwealth of Massachusetts and naving a usual place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 62139 desires to confirm its interest therein in accordance with agreements daily critical into with one

NOW THERE ORE coall where a new concentre a known that to give in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged. I have sold assened and transferred and by these present as hereby will be you and transfer and saud ASSIGNED. As necessors, assects and ecorepresentatives, are emire right, title and interest in and throughout the United States of America instermionies and all foreign countries, in and to said invention as described in said application. procedure with the entire right, little and interest in and to said application and such littles. For exas many residence specific recording word in sent ros application and Latters Patent to be held as it enjoyed by said ASSICALL for its own use and behalf and for its successors, asserts and its conrepresentatives, to the full cool of the term for which soul Letters Palent may be granted as and entropy on the came would have been held by the had this assignment and sale by the made. I hereby convey all rights priving under or pursuant to any god all international generations, progress or laws relating to the protection of inclusional property by films are such protections for Letters Parest. Thereby acknowledge that the assignment being of the solic ners, the and merest in and to suit invention, carries with a the right in ASSEC LESS was to Leaves and all related provisional and nonphorasonal informational and national phase area and the company are and all substitutions residue developed continuation and and the state of t A STATE OF THE PROPERTY OF THE and the second of all such factors form to ASSIGNED for as own come as assigned of the

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Docket No. 0050 2205 401

entire right, title and interest therein. I hereby expressly authorize the filing of an International Patent Application under the Patent Cooperation Treaty which corresponds to and claims the Patent Oppication.

AND, I hereby further agree for myself and my executors and administrators to execute them request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to scure fully the aforesaid invention to said ASSIGNEE, its successors assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries and the execution of any further applications including substitution, reissue, divisional or continuation, continuation-in-part applications and all related provisional and nonprovisional international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved.

ASD, I do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

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