

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4967736

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
<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>	
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Email:	nicole.isabelle@hbsr.com
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Address Line 1:	530 VIRGINIA ROAD, P.O. BOX 9133
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Address Line 4:	CONCORD, MASSACHUSETTS 01742
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-JointASSIGNMENT

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 **Linesr-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 § 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: *Hao-yu Wu*
Hao-yu Wu

State/Commonwealth
of California
County of Santa Clara

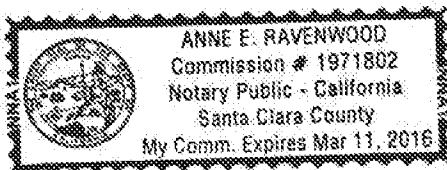
On this 9th day of January, 2014, before me, the undersigned notary public, personally appeared Hao-yu Wu,

- 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 his/her free act and deed.

(SEAL)

Notary Public *[Signature]*
Anne E. Ravenwood (print name)
My Commission expires 3/11/2016



Inventor's Signature: _____

Michael Rubinstein

State/Commonwealth
of MASSACHUSETTS
County of MIDDLESEX

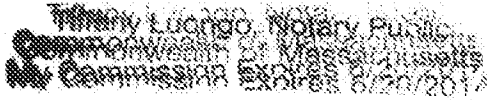
On this 25th day of NOVEMBER 2013, before me, the undersigned notary public, personally appeared Michael Rubinstein,

- personally known to me, or
- proved to me through satisfactory evidence of identification, which was

MA DRIVERS LICENSE

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)



Notary Public _____

TIFFANY LUONGO (print name)

My Commission expires 08/20/2014

Inventor's Signature: _____

John V. Guttag

State/Commonwealth
of _____
County of _____

On this _____ day of _____ 20____, before me, the undersigned notary public, personally appeared John V. Guttag,

- 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 his/her free act and deed.

(SEAL)

Notary Public _____

_____ (print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Frederic Durand

State/Commonwealth
of Massachusetts
County of Middlesex

On this 15th day of November 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

Permanent Resident 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)
Tiffany Luongo, Notary Public
Commonwealth of Massachusetts
My Commission Expires 6/20/2014

Notary Public [Signature]
TIFFANY LUONGO (print name)
My Commission expires 06/20/14

Inventor's Signature: _____

William T. Freeman

State/Commonwealth
of Massachusetts
County of Middlesex

On this 26th 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)
Tiffany Luongo, Notary Public
Commonwealth of Massachusetts
My Commission Expires 6/20/2014

Notary Public [Signature]
TIFFANY LUONGO (print name)
My Commission expires 06/20/14

Multi-JointASSIGNMENT

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 § 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: _____

Hao-yu Wu

State/Commonwealth
of _____
County of _____

On this _____ day of _____, 20____, before me, the undersigned notary 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 his/her free act and deed.

(SEAL)

Notary Public _____

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____
Michael Rubinstein

State/Commonwealth
of _____
County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared Michael Rubinstein,

- 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 his/her free act and deed.

(SEAL) Notary Public _____

(print name)
My Commission expires ____/____/____

Inventor's Signature: John V. Guttag
John V. Guttag

State/Commonwealth
of Massachusetts
County of Middlesex

On this 4th day of December, 2013, before me, the undersigned notary public, personally appeared John V. Guttag,

- 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 his/her free act and deed.

(SEAL) Notary Public Tiffany Luongo
TIFFANY LUONGO (print name)
My Commission expires 06 / 20 / 2014

Tiffany Luongo, Notary Public
Commonwealth of Massachusetts
My Commission Expires 6/20/2014

Inventor's Signature: _____

Frederic Durand

State/Commonwealth
of _____

County of _____

On this _____ day of _____, 20____, 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

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)

Notary Public _____

_____ (print name)

My Commission expires ____/____/____

Inventor's Signature: _____

William T. Freeman

State/Commonwealth
of _____

County of _____

On this _____ day of _____, 20____, 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

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)

Notary Public _____

_____ (print name)

My Commission expires ____/____/____

Multi-Sole

ASSIGNMENT

WHEREAS, I, **Neal Wadhwa**, together with co-inventor(s) **Hao-yu Wu, Michael Rubinstein, Eugene Inghaw Shih, John V. Guttag, Frederic Durand and William T. Freeman**, 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 § 1.33(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. **15/721,375**, filed **September 29, 2017**;
- 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** desires to confirm its interest therein in accordance with agreements duly entered into with me;

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, I have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, my 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 my 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 me had this assignment and sale not been made. I 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. I hereby acknowledge that this assignment, being of my 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, I hereby further agree for myself and my 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, 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.

Inventor Neil Wadhwa Date 05/01/18

Witness Signature [Signature]
Print Witness Name Dillon Sharbat

Witness Signature [Signature]
Print Witness Name Tianfan Xue