

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4188153

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
MICHAEL NEIL HANSON	12/12/2016
GARREY WILLIAM RICE	12/12/2016
BRIAN K. OGILVIE	12/14/2016
WITOLD R. JACHIMCZYK	12/13/2016
RECEIVING PARTY DATA	
Name:	THE MATHWORKS, INC.
Street Address:	3 APPLE HILL DRIVE
City:	NATICK
State/Country:	MASSACHUSETTS
Postal Code:	01760-2098
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15380500
CORRESPONDENCE DATA	
Fax Number:	(571)432-0808
<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>	
Phone:	571-432-0800
Email:	kschrade@harrityllp.com
Correspondent Name:	HARRITY AND HARRITY LLP
Address Line 1:	11350 RANDOM HILLS ROAD
Address Line 2:	SUITE 600
Address Line 4:	FAIRFAX, VIRGINIA 22030
ATTORNEY DOCKET NUMBER:	0069-0382
NAME OF SUBMITTER:	SEAN P. QUINN
SIGNATURE:	/Sean P. Quinn, Reg. No. 73,974/
DATE SIGNED:	12/15/2016
Total Attachments: 6	
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**ASSIGNMENT
(Joint)
Worldwide Rights**

THIS ASSIGNMENT, by Michael Neil HANSON, Garrey William RICE, Brian K. OGILVIE, and Witold R. JACHIMCZYK residing at 4 Greenlaw Drive, Newton Mearns, Glasgow G77 6NL, Scotland; Flat 1/2, 31 Dundrennan Road, Glasgow G42 9SB, Scotland; 3 Partridge Way, Holliston, MA 01746, U.S.; and 81 Hartness Road, Sutton, MA 01590, U.S. (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in MEMORY EFFICIENT ON-CHIP BUFFERING FOR PROJECTIVE TRANSFORMATION set forth in an application for Letters Patent of the United States,

- (1) which is a provisional application
(a) filed herewith; or
(b) bearing Application No. _____, and filed on _____; or
- (2) which is a non-provisional application
(a) bearing Application No. 15/380,500, and filed on December 15, 2016; or
(b) filed herewith; and

We hereby authorize Applicants' representative to fill in the preceding information relating to the filing date and/or serial number, as appropriate.

WHEREAS, The MathWorks, Inc., a corporation of the state of Delaware, having its principal place of business at 3 Apple Hill Drive, Natick, Massachusetts 01760-2098 (hereinafter referred to as "the Assignee"), is desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application or from which said application claims priority, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, be it known that for good and valuable consideration, the receipt of which is hereby acknowledged, the Assignor has sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, any previously or subsequently filed provisional applications, and in and to any and all applications claiming priority to said applications, including divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignee as the Assignee of said inventions, the Letters Patent to be issued for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

IN TESTIMONY WHEREOF, I have hereunto set my hand.

IN WITNESS WHEREOF, I hereto set my hand.

Michael Neil HANSON
4 Greenlaw Drive
Newton Mearns
G77 6NL Glasgow
Scotland

Signature: Michael N Hanson

Date: 12 Dec 2016

Witness Signature: Nadezha Sivarova

Date: 12 Dec 2016

Witness Name: NADEZHDA SIVAROVA

Witness Signature: John O'Sullivan

Date: 12 DEC 16

Witness Name: John O'Sullivan

IN TESTIMONY WHEREOF, I have hereunto set my hand.

IN WITNESS WHEREOF, I hereto set my hand.

Garrey William RICE
Flat 1/2, 31 Dundrennan Road
G42 9SB Glasgow
Scotland

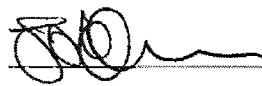
Signature: 

Date: 12 Dec 2016

Witness Signature:  _____

Date: 12 Dec 2016

Witness Name: NADEZHDA SHIVAROVA

Witness Signature:  _____

Date: 12 DEC 2016

Witness Name: JOHN O'SULLIVAN

IN TESTIMONY WHEREOF, I have hereunto set my hand.

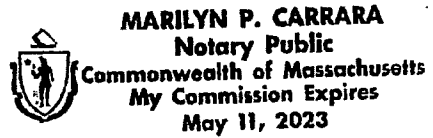
IN WITNESS WHEREOF, I hereto set my hand.

Brian K. OGILVIE
3 Partridge Way
Holliston, MA 01746 US

Signature: B K Ogilvie
Date: December 14, 2016

State of Massachusetts)
County of Middlesex) ss: Ogilvie

On this 14th day of December, 2016, before me, Marilyn P. Carrara Notary Public, personally appeared Brian K. personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity, and that by his/her/their signature on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



[Notary's Seal Here]

WITNESS my hand and official seal.
Marilyn P. Carrara
Signature of Notary Public
My Commission Expires: May 11, 2023

IN TESTIMONY WHEREOF, I have hereunto set my hand.

IN WITNESS WHEREOF, I hereto set my hand.

Witold R. JACHIMCZYK
81 Hartness Road
Sutton, MA 01590 US

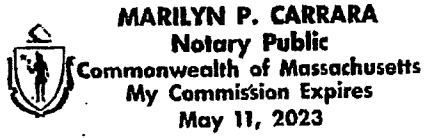
Signature: Witold Jachimczyk
Date: 12/13/2016

State of Massachusetts

County of Middlesex)
) ss: Jachimczyk

Carrara

On this 13th day of December, 2016, before me, Marilyn P. Carrara, Notary Public, personally appeared Witold R. Jachimczyk personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity, and that by his/her/their signature on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Marilyn P. Carrara
Signature of Notary Public
My Commission Expires: May 11, 2023

[Notary's Seal Here]