

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT4111386

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ANDRES GARCIA SAAVEDRA	10/13/2016
MOHAMMAD KARZAND	10/19/2016
DOUGLAS LEITH	10/18/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	NATIONAL UNIVERSITY OF IRELAND, MAYNOOTH
<b>Street Address:</b>	COMMERCIALISATION OFFICE
<b>Internal Address:</b>	JOHN HUME BUILDING, ROOM 3.18, MAYNOOTH
<b>City:</b>	CO. KILDARE
<b>State/Country:</b>	IRELAND
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15305893
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(781)401-9966
<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>	dm@dc-m.com
<b>Correspondent Name:</b>	DALY, CROWLEY, MOFFORD & DURKEE, LLP
<b>Address Line 1:</b>	354A TURNPIKE STREET
<b>Address Line 2:</b>	SUITE 301A
<b>Address Line 4:</b>	CANTON, MASSACHUSETTS 02021-2714
<b>ATTORNEY DOCKET NUMBER:</b>	HMC-004PUS
<b>NAME OF SUBMITTER:</b>	CHRISTOPHER S. DALY
<b>SIGNATURE:</b>	/csd/
<b>DATE SIGNED:</b>	10/24/2016
<b>Total Attachments: 9</b>	
source=TO_PTO_ASSIGN_MAYNOOTH#page1.tif	
source=TO_PTO_ASSIGN_MAYNOOTH#page2.tif	
source=TO_PTO_ASSIGN_MAYNOOTH#page3.tif	
source=TO_PTO_ASSIGN_MAYNOOTH#page4.tif	

source=TO\_PTO\_ASSIGN\_MAYNOOTH#page5.tif

source=TO\_PTO\_ASSIGN\_MAYNOOTH#page6.tif

source=TO\_PTO\_ASSIGN\_MAYNOOTH#page7.tif

source=TO\_PTO\_ASSIGN\_MAYNOOTH#page8.tif

source=TO\_PTO\_ASSIGN\_MAYNOOTH#page9.tif

## ASSIGNMENT

Whereas we, the undersigned, Andres Garcia Saavedra, Mohammad Karzand and Douglas Leith hereby have made certain inventions or discoveries (or both) set forth in an application for Letters Patent of the United States of America entitled: LOW-DELAY PACKET ERASURE CODING, identified as Attorney Docket No. HMC-004PUS, which application was filed as PCT Application No. PCT/EP2015/052890 on February 11, 2015, and was executed on ~~October 13, 2016; October 19, 2016; October 19, 2016~~ and entered the U.S. National Stage on ~~October 21, 2016~~ as Application No. 15/305,893. In the event that the execution date, filing date, National Stage entry date and/or Application No. are not entered above or are incorrect at the time we executed this document, and if such information is deemed necessary, we hereby authorize and request the attorneys at DALY, CROWLEY, MOFFORD & DURKBE, LLP, 354A Turnpike Street, Suite 301A, Canton, MA 02021-2714, to insert above the execution date, filing date and/or Application No. of said application.

Whereas NATIONAL UNIVERSITY OF IRELAND, MAYNOOTH, having a place of business at Commercialisation Office, John Hume Building, Room 3.18, Maynooth, Co. Kildare REPUBLIC OF IRELAND, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;


Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation:

1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, reissue, re-examination, PCT National Phase and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent and any provisional applications from which priority is claimed in said Letters Patent;
2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;
3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;
4. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to Assignee without encumbrance;

5. Bind my heirs, legal representatives and assigns, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to me or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to me relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives or assigns which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries.


In testimony of which we have each executed this Assignment as an instrument on the date indicated next to our name(s).

Dated: 15 OCT-2016

  
\_\_\_\_\_  
Andre Garcia Sasvedra

Witnessed by:

Dated: Oct. 13. 2016

  
\_\_\_\_\_  
First Witness Signature

Zi, Xi  
\_\_\_\_\_  
First Witness Printed Name

Dated: Oct 13. 2016

  
\_\_\_\_\_  
Second Witness Signature

FRANCO GUST  
\_\_\_\_\_  
Second Witness Printed Name

PATENT ASSIGNMENT  
Atty. Dckt. No.: HMC-004PUS

Dated: \_\_\_\_\_

\_\_\_\_\_  
Mohammed Karzand

Witnessed by:

Dated: \_\_\_\_\_

\_\_\_\_\_  
First Witness Signature

\_\_\_\_\_  
First Witness Printed Name

Dated: \_\_\_\_\_

\_\_\_\_\_  
Second Witness Signature

\_\_\_\_\_  
Second Witness Printed Name

Dated: \_\_\_\_\_

\_\_\_\_\_  
Douglas Leith

Witnessed by:

Dated: \_\_\_\_\_

\_\_\_\_\_  
First Witness Signature

\_\_\_\_\_  
First Witness Printed Name

Dated: \_\_\_\_\_

\_\_\_\_\_  
Second Witness Signature

\_\_\_\_\_  
Second Witness Printed Name

549926

## ASSIGNMENT

Whereas we, the undersigned, Andres Garcia Saavedra, Mohammad Karzand and Douglas Leith hereby have made certain inventions or discoveries (or both) set forth in an application for Letters Patent of the United States of America entitled: LOW-DELAY PACKET ERASURE CODING, identified as Attorney Docket No. HMC-004PUS, which application was filed as PCT Application No. PCT/EP2015/052890 on February 11, 2015, and was executed on ~~October 13, 2016~~, ~~October 19, 2016~~, ~~October 19, 2016~~ and entered the U.S. National Stage on ~~October 21, 2016~~ as Application No. 15/1205,893. In the event that the execution date, filing date, National Stage entry date and/or Application No. are not entered above or are incorrect at the time we executed this document, and if such information is deemed necessary, we hereby authorize and request the attorneys at DALY, CROWLEY, MOFFORD & DURKEE, LLP, 354A Turnpike Street, Suite 301A, Canton, MA 02021-2714, to insert above the execution date, filing date and/or Application No. of said application.

Whereas NATIONAL UNIVERSITY OF IRELAND, MAYNOOTH, having a place of business at Commercialisation Office, John Hume Building, Room 3.18, Maynooth, Co. Kildare REPUBLIC OF IRELAND, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation:

1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, reissue, re-examination, PCT National Phase and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent and any provisional applications from which priority is claimed in said Letters Patent;
2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;
3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;
4. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to Assignee without encumbrance;

5. Bind my heirs, legal representatives and assigns, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to me or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to me relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives or assigns which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries.

In testimony of which we have each executed this Assignment as an instrument on the date indicated next to our name(s).

Dated: .....

.....  
Andres Garcia Saavedra

Witnessed by:

Dated: .....

.....  
First Witness Signature

.....  
First Witness Printed Name

Dated: .....

.....  
Second Witness Signature

.....  
Second Witness Printed Name



Dated: 19/Oct/2016

Mohammad Karzand  
Mohammad Karzand

Witnessed by:

Dated: 19-10-16

Scott Nowson  
First Witness Signature

SCOTT NOWSON  
First Witness Printed Name

Dated: 19/10/16

Finbarr Tarrant  
Second Witness Signature

FINBARR TARRANT  
Second Witness Printed Name

PATENT ASSIGNMENT  
Atty. Dckt. No.: HMC-004PUS

Dated: .....

.....  
Douglas Leith

Witnessed by:

Dated: .....

.....  
First Witness Signature

.....  
First Witness Printed Name

Dated: .....


.....  
Second Witness Signature

.....  
Second Witness Printed Name

549926

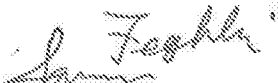
PATENT ASSIGNMENT  
Atty. Dekt. No.: HMC-004PUS

Dated: 12/19/16

  
\_\_\_\_\_  
Douglas Leith

Witnessed by:

Dated: 18/10/2016

  
\_\_\_\_\_  
First Witness Signature

Samar Feghli  
\_\_\_\_\_  
First Witness Printed Name

Dated: 18/10/2016

  
\_\_\_\_\_  
Second Witness Signature

VICTOR JALLS

\_\_\_\_\_  
Second Witness Printed Name

549926