

## PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT6231776

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
SORIN FAIBISH	05/03/2019
PHILIP SHILANE	05/03/2019
IVAN BASOV	05/03/2019
ISTVAN GONCZI	05/03/2019
PHILIPPE ARMANGAU	05/03/2019
VAMSI VANKAMAMIDI	05/02/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	EMC IP HOLDING COMPANY, LLC
<b>Street Address:</b>	176 HOPKINTON STREET
<b>City:</b>	HOPKINTON
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	01748
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16983410
<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>Phone:</b>	617-523-2700
<b>Email:</b>	patentdocketing@hklaw.com, jonathan.leach@hklaw.com
<b>Correspondent Name:</b>	HOLLAND & KNIGHT LLP
<b>Address Line 1:</b>	10 ST. JAMES AVENUE
<b>Address Line 4:</b>	BOSTON, MASSACHUSETTS 02116
<b>ATTORNEY DOCKET NUMBER:</b>	113454.00528/115080.02
<b>NAME OF SUBMITTER:</b>	JONATHAN N. LEACH
<b>SIGNATURE:</b>	/JONATHAN N. LEACH/
<b>DATE SIGNED:</b>	08/03/2020
<b>Total Attachments: 8</b>	

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## ASSIGNMENT

WHEREAS, we, Sorin Faibish, Philip Shilane, Ivan Basov, Istvan Gonczi, Philippe Arnangau, and Vamsi Vankamamidi have invented an invention comprising and/or embodying certain improvements or discoveries or both as described in an application for Letters Patent of the United States entitled SYSTEM AND METHOD FOR HASH-BASED ENTROPY CALCULATION (Application), the specification of which:

- is being executed on even date herewith and is about to be filed in the United States Patent Office;
- was filed on \_\_\_\_\_ as U.S. Application No. \_\_\_\_\_;
- was patented under U.S. Patent No. \_\_\_\_\_ on \_\_\_\_\_.

WHEREAS, EMC IP Holding Company, LLC (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the State of Delaware and having a usual place of business at 176 South Street, Hopkinton, Massachusetts 01748 desires to acquire an 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, the 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 the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; 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 to ASSIGNEE 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 the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for 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;

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 substitution,

reissue, divisional or continuation 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 the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives;

AND, we hereby authorize our attorneys, EMC Corporation, to insert here in parenthesis (16/403,026 May 3, 2019) the application number and filing date of said Application (or foreign counterpart application) to facilitate the recording or other official processing of this Assignment.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals as set forth below:

Date: 05/03/2019

Faibish  
Inventor's Signature

Print full name of first inventor: Sorin Faibish

Residence: 11 Selwyn Road,  
Newton, MA 02461

Citizenship: USA

Mailing Address: Same as Above

I, Christina Turcotte (name of first witness), whose residential address is  
16 Temple St., Milford, MA 01757

was personally present and did see Sorin Faibish (name of person signing the assignment), who  
is personally known to me, execute the above assignment.

Christina Turcotte (signature of first witness)

Signed at 228 South St. (location of witness signature)

on this day, 05/03, 2019 (date of signature).

I, Jill Kelly (name of second witness), whose residential address is  
Shrewsbury, MA

was personally present and did see Sorin Faibish (name of person signing the assignment), who  
is personally known to me, execute the above assignment.

Jill Kelly (signature of second witness)

Signed at 228 South St. (location of witness signature)

on this day, 05/03, 2019 (date of signature)

Date: May 3, 2019

Philip Shilane  
Inventor's Signature

Print full name of inventor Philip Shilane

Residence Newtown, PA

Citizenship USA

Mailing Address 131 Pheasant Lane  
Newtown, PA 18940

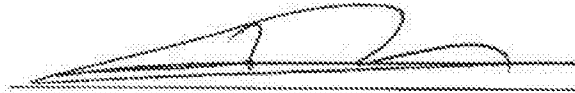
I, Yance M. Jones (name of first witness), whose residential address is  
734 Cedar Lane, Perkasie PA 18944  
was personally present and did see Philip Shilane (name of person signing the assignment), who  
is personally known to me, execute the above assignment.

Yance M. Jones (signature of first witness)  
Signed at Bucks Co, PA (location of witness signature)  
on this day, May 3, 2019 (date of signature).

I, Julie M. Shilane (name of second witness), whose residential address is  
131 Pheasant Lane, Newtown, PA 18940  
was personally present and did see Philip Shilane (name of person signing the assignment), who  
is personally known to me, execute the above assignment.

Julie M. Shilane (signature of second witness)  
Signed at Bucks Co, PA (location of witness signature)  
on this day, May 3, 2019 (date of signature).

Date: 05/03/2019



Inventor's Signature

Print full name of inventor

Ivan Basov

Residence

Brookline, MA

Citizenship

USA

Mailing Address

55 Harvard Ave, Apt. 3  
Brookline, MA 02446

I, Olga Basova (name of first witness), whose residential address is  
19 Willow St Apt 504, Lynn, MA 01901

was personally present and did see Ivan Basov (name of person signing the assignment), who is personally known to me, execute the above assignment.

 (signature of first witness)

Signed at Lynn, MA (location of witness signature)

on this day, May 3, 2019 (date of signature).

I, Vladimir Basov (name of second witness), whose residential address is  
19 Willow St Apt 504, Lynn, MA 01901

was personally present and did see Ivan Basov (name of person signing the assignment), who is personally known to me, execute the above assignment.

 (signature of second witness)

Signed at Lynn, MA (location of witness signature)

on this day, May 3, 2019 (date of signature).

Date: May 3 2019

[Signature]  
Inventor's Signature

Print full name of inventor

Istvan Goncezi

Residence

Berkley, MA

Citizenship

US.

Mailing Address

18 Osprey Drive  
Berkley, MA 02779

- I, William E. Kanuse (name of first witness), whose residential address is
  - 12 Osprey Dr Berkley Mass 02779
- was personally present and did see Istvan Goncezi (name of person signing the assignment), who is personally known to me, execute the above assignment.

[Signature] (signature of first witness)

Signed at Berkley, MA 02779 USA (location of witness signature)

on this day, May 3 2019, 2019 (date of signature).

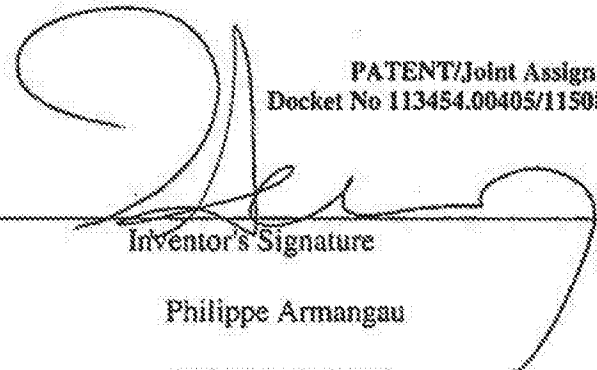
- I, Barbara L Kanuse (name of second witness), whose residential address is
  - 12 Osprey Dr, Berkley, ma 02779
- was personally present and did see Istvan Goncezi (name of person signing the assignment), who is personally known to me, execute the above assignment.

[Signature] (signature of second witness)

Signed at Berkley, MA 02779 USA (location of witness signature)

on this day, May 3, 2019, 2019 (date of signature).





Date: 05/03/2019

Inventor's Signature

Print full name of first inventor:

Philippe Armangau

Residence:

61 Seminole Road

Acton, MA 01720

Citizenship:

USA

Mailing Address:

Same as Above

I, Christina Turcotte (name of first witness), whose residential address is

16 Temple St., Milford, MA 01757

was personally present and did see Philippe Armangau (name of person signing the assignment),

who is personally known to me, execute the above assignment.

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I, Jill Kelly (name of second witness), whose residential address is

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Jill Kelly (signature of second witness)

Signed at 228 South St. (location of witness signature)

on this day, 05/03, 2019 (date of signature)

5/2/2019

Vamsi V  
Inventor's Signature

Print full name of inventor	Vamsi Vankamamidi
Residence	Hopkinton, MA
Citizenship	<u>INDIA</u>
Mailing Address	21 Spruce Street Hopkinton, MA 01748

I, SHUYU LEE (name of first witness), whose residential address is  
99 SKYLINE DRIVE, ACTON, MA 01720  
 was personally present and did see Vamsi Vankamamidi (name of person signing the  
 assignment), who is personally known to me, execute the above assignment.

Shuyu Lee (signature of first witness)  
 Signed at 228 SOUTH ST, HOPKINTON, MA (location of witness signature)  
 on this day, May 3, 2019 (date of signature).

I, Ron Proulx (name of second witness), whose residential address is  
50 Whitney Lane, Buxborough, MA 01770  
 was personally present and did see Vamsi Vankamamidi (name of person signing the  
 assignment), who is personally known to me, execute the above assignment.

Ronald P Proulx (signature of second witness)  
 Signed at 228 South St. Hopkinton, MA (location of witness signature)  
 on this day, May 3, 2019 (date of signature).