

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4886513

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
XIANGPING CHEN	03/26/2018
ANTON KUCHEROV	03/26/2018
DAVID MEIRI	03/26/2018
SVETLANA KRONROD	03/26/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	EMC IP HOLDING COMPANY LLC
<b>Street Address:</b>	176 SOUTH 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>
<b>Application Number:</b>	15936694
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(631)393-6271
<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>	631-393-6270
<b>Email:</b>	nyoffice@rml-law.com
<b>Correspondent Name:</b>	JOSEPH B. RYAN
<b>Address Line 1:</b>	48 SOUTH SERVICE ROAD, SUITE 100
<b>Address Line 2:</b>	RYAN, MASON & LEWIS, LLP
<b>Address Line 4:</b>	MELVILLE, NEW YORK 11747
<b>ATTORNEY DOCKET NUMBER:</b>	110540.01
<b>NAME OF SUBMITTER:</b>	JOSEPH B. RYAN
<b>SIGNATURE:</b>	/joseph b. ryan/
<b>DATE SIGNED:</b>	03/28/2018
<b>Total Attachments: 6</b>	
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### ASSIGNMENT

WHEREAS, we, Xiangping Chen, Anton Kucherov, David Meiri and Svetlana Kronrod, 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 **STORAGE SYSTEM WITH FAST RECOVERY AND RESUMPTION OF PREVIOUSLY-TERMINATED SYNCHRONOUS REPLICATION**, 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 limited liability company 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.

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

Date: 03/26/18

  
Inventor's Signature

Print full name of first inventor: Xiangping Chen  
Residence: Sherborn, Massachusetts  
Citizenship: United States of America  
Mailing Address: 22 Harrington Ridge Road  
Sherborn, Massachusetts 01770

I Ying Hu (name) whose residential address is

52 little pond rd, Northborough, MA 01532  
was personally present and did see Xiangping Chen (name of person signing the assignment)  
who is personally known to me, execute the above assignment.


 (signature of first witness)

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

on this day Mar 26th of 2018. (date of signature)

I William Strouge (name) whose residential address is

5 Woodland Drive Westford, MA  
was personally present and did see Xiangping Chen (name of person signing the assignment)  
who is personally known to me, execute the above assignment.

 (signature of second witness)

Signed at Hopkinton MA (location of witness signature)

on this day March 26 of 2018. (date of signature)

Date: 3/26/2018

[Signature]  
Inventor's Signature

Print full name of second inventor: Anton Kucherov  
Residence: Dudley, Massachusetts  
Citizenship: United States of America  
Mailing Address: 72 Flaxfield Road  
Dudley, Massachusetts 01571

I Ying Hu (name) whose residential address is

52 Little pond rd, Northborough, MA 01532  
was personally present and did see Anton Kucherov (name of person signing the assignment)  
who is personally known to me, execute the above assignment.

[Signature] (signature of first witness)

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

on this day Mar 26th of 2018. (date of signature)

I William Storge (name) whose residential address is

5 Woodland Drive Westford MA  
was personally present and did see Anton Kucherov (name of person signing the assignment)  
who is personally known to me, execute the above assignment.

[Signature] (signature of second witness)

Signed at March 26 Hopkinton MA (location of witness signature)

on this day March 26 of 2018 (date of signature)

Date: 3/26/18

D. Meiri  
Inventor's Signature

Print full name of third inventor: David Meiri  
Residence: Somerville, Massachusetts  
Citizenship: United States of America  
Mailing Address: 29 Highland Road  
Somerville, Massachusetts 02144

I Ying Hu (name) whose residential address is

52 Littlepond rd Northborough, MA 01532  
was personally present and did see David Meiri (name of person signing the assignment) who is personally known to me, execute the above assignment.

Ying Hu (signature of first witness)

Signed at 228 South Street, Houghton MA (location of witness signature)

on this day Mar 26th of 2018. (date of signature)

I William Stouge (name) whose residential address is

5 Woodland Drive Woburn MA  
was personally present and did see David Meiri (name of person signing the assignment) who is personally known to me, execute the above assignment.

William Stouge (signature of second witness)

Signed at Houghton MA (location of witness signature)

on this day March 26 of 2018. (date of signature)

Date: 3/26/18

[Signature]  
Inventor's Signature

Print full name of fourth inventor: Svetlana Kronrod  
Residence: Concord, Massachusetts  
Citizenship: United States of America  
Mailing Address: 18 Wright Farm  
Concord, Massachusetts 01742

I Ive Ying Hu (name) whose residential address is

52 Littlewood Rd. Northborough, MA 01532  
was personally present and did see Svetlana Kronrod (name of person signing the assignment)  
who is personally known to me, execute the above assignment.

[Signature] (signature of first witness)

Signed at 228 South St Hopkinton MA (location of witness signature)

on this day Mar 26th of 2018. (date of signature)

I William Stonge (name) whose residential address is

5 Woodland Drive Woodford MA  
was personally present and did see Svetlana Kronrod (name of person signing the assignment)  
who is personally known to me, execute the above assignment.

[Signature] (signature of second witness)

Signed at Hopkinton MA (location of witness signature)

on this day March 26 of 2018 (date of signature)