

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT2999094

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JOHN M. BENT	08/18/2014
SORIN FAIBISH	07/23/2014
ZHENHUA ZHANG	07/24/2014
XUEZHAO LIU	07/24/2014
JINGWANG ZHANG	07/24/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	EMC Corporation
<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>
Application Number:	14319647
<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>	203-255-6560
<b>Email:</b>	bab@rml-law.com
<b>Correspondent Name:</b>	KEVIN M. MASON
<b>Address Line 1:</b>	1175 POST ROAD EAST, 2ND FLOOR
<b>Address Line 2:</b>	RYAN, MASON & LEWIS, LLP
<b>Address Line 4:</b>	WESTPORT, CONNECTICUT 06880
<b>ATTORNEY DOCKET NUMBER:</b>	EMC-13-1069
<b>NAME OF SUBMITTER:</b>	KEVIN M. MASON
<b>SIGNATURE:</b>	/Kevin M. Mason/
<b>DATE SIGNED:</b>	08/27/2014
<b>Total Attachments: 8</b>	
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**RECORDATION FORM COVER SHEET  
PATENTS ONLY**

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

**1. Name of conveying party(ies):**  
**John M. Bent, Sorin Faibish, Zhenhua Zhang,**  
**Xuezhao Liu, Jingwang Zhang,**  
**Additional name(s) of conveying party(ies)**  
**attached?**  
 \_\_\_ Yes  No

**2. Name and address of receiving party(ies)**

**Name: EMC Corporation**

**Internal Address:**

**Street Address: 176 South Street**

**City: Hopkinton State: MA ZIP: 01748**

**Additional name(s) & address(es) attached? \_\_\_ Yes  No**

**3. Nature of conveyance:**  
 Assignment \_\_\_ Merger  
 \_\_\_ Security Agreement \_\_\_ Change of Name  
 \_\_\_ Other

**Execution Date: 8/18/14, 7/23/14, 7/24/14,**  
**7/24/14, 7/24/14**

**4. Application number(s) or patent number(s):**

**If this document is being filed together with a new application, the execution date of the application is:**

**A. Patent Application No.(s) 14/319,647 Filed June 30, 2014 B. Patent No.(s)**

**Additional numbers attached? \_\_\_ Yes  No**

**5. Name and address of party to whom**  
**correspondence concerning document should be**  
**mailed:**

**Name: Kevin M. Mason**

**Internal Address: Ryan, Mason & Lewis, LLP**

**Street Address: 1300 Post Road, Suite 205**

**City: Fairfield State: CT ZIP: 06824**

**6. Total number of applications and patents**  
**involved: 1**

**7. Total Fee (37 CFR 3.41)..... \$ 40.00**

Enclosed

Authorized to be charged to deposit account

**8. Deposit account number 50-0762**

**DO NOT USE THIS SPACE**

**9. Statement and signature.**

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

**Kevin M. Mason**

**/Kevin M. Mason/**

**August 27, 2014**

**Reg. No. 36,597**

**Signature**

**Date**

Total number of pages including cover sheet, attachments, and document: 8

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EMC-13-1069

**PATENT  
 REEL: 033620 FRAME: 0324**

ASSIGNMENT

WHEREAS, we, John M. Bent, Sorin Faibish, Zhenhua Zhang, Xuezhao Liu and Jingwang Zhang, 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 **END-TO-END DATA INTEGRITY IN PARALLEL STORAGE SYSTEMS**, 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 June 30, 2014 as U.S. Application No. 14/319,647;
- was patented under U.S. Patent No. \_\_\_\_\_ on \_\_\_\_\_.

WHEREAS, EMC Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts 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:

8/18/14

*John M. Bent*  
Inventor's Signature

Print full name of first inventor:

John M. Bent

Residence:

Los Alamos, New Mexico

Citizenship:

United States of America

Mailing Address:

1902 Camino Durasnilla

Los Alamos, New Mexico 87544

STATE/COMMONWEALTH OF

New Mexico

COUNTY OF

Los Alamos

On this 18 day of August, 20 14, then personally appeared before me the above-named John M. Bent known to me through satisfactory evidence of identification [ ] employee identification card; [X] driver's license; [ ] (other) \_\_\_\_\_ to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained.

*Lynn Strass*

Notary Public

Print Name: Lynn Strass

My Commission expires 04/01/2017



Date: 07/23/2014

Sorin Faibish  
Inventor's Signature

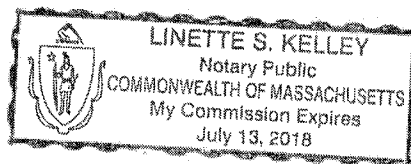
Print full name of second inventor: Sorin Faibish  
Residence: Newton, Massachusetts  
Citizenship: United States of America  
Mailing Address: 11 Selwyn Road  
Newton, Massachusetts 02461

STATE/Commonwealth of Massachusetts  
COUNTY OF Middlesex

On this 23<sup>rd</sup> day of July, 2014, then personally appeared before me the above-named Sorin Faibish known to me through satisfactory evidence of identification [ ] employee identification card; [] driver's license; [ ] (other) \_\_\_\_\_ to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained.

Linette S. Kelley  
Notary Public

Print Name: Linette S. Kelley  
My Commission expires 07/13/2018



Date: 2014, 7, 24

Zhenhua Zhang  
Inventor's Signature

Print full name of third inventor:

Zhenhua Zhang

Residence:

Beijing, China

Citizenship:

China

Mailing Address:

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Beijing China 100084

Harriet Qiu

Witness

Caiping Zheng

Witness



Date: July 24, 2014

Xuezhao Liu  
Inventor's Signature

Print full name of fourth inventor: Xuezhao Liu  
Residence: Beijing, China  
Citizenship: China  
Mailing Address: Qing Yuan Xi Li, 2#1708, (Shui Mu Tian Cheng)  
Qing He, Haidian District  
Beijing, China 100192

Haiying Tong

Witness  
Haiyun Bao.

Witness

Date: July 24, 2014

Jingwang Zhang  
Inventor's Signature

Print full name of fifth inventor:

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Residence:

Beijing, China

Citizenship:

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SP Tower, Tsinghua Science Park, Haidian  
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Beijing, China 100084

Haiyun Bao

Witness

Harnet Qin

Witness