

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Xiangping Chen</td> <td>12/16/2011</td> </tr> <tr> <td>Dennis Thomas Duprey</td> <td>12/15/2011</td> </tr> <tr> <td>Thomas E. Linnell</td> <td>12/16/2011</td> </tr> <tr> <td>Qin Tao</td> <td>12/16/2011</td> </tr> </tbody> </table>		Name	Execution Date	Xiangping Chen	12/16/2011	Dennis Thomas Duprey	12/15/2011	Thomas E. Linnell	12/16/2011	Qin Tao	12/16/2011
Name	Execution Date										
Xiangping Chen	12/16/2011										
Dennis Thomas Duprey	12/15/2011										
Thomas E. Linnell	12/16/2011										
Qin Tao	12/16/2011										
RECEIVING PARTY DATA											
Name:	EMC Corporation										
Street Address:	176 South Street										
Internal Address:	Office of the General Counsel										
City:	Hopkinton										
State/Country:	MASSACHUSETTS										
Postal Code:	01748										
PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13338140</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13338140						
Property Type	Number										
Application Number:	13338140										
CORRESPONDENCE DATA											
Fax Number:	(508)293-7189										
Phone:	508-435-1000										
Email:	Docketing@emc.com										
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>											
Correspondent Name:	EMC CORPORATION OFFICE OF THE GENERAL CO										
Address Line 1:	176 SOUTH STREET										
Address Line 4:	HOPKINTON, MASSACHUSETTS 01748										
ATTORNEY DOCKET NUMBER:	EMC-11-635										
NAME OF SUBMITTER:	Deepika Bhayana										

CH \$40.00 13338140

Total Attachments: 12

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ASSIGNMENT

WHEREAS, we, Xiangping Chen, Dennis Thomas Duprey, Thomas E. Linnell and Qin Tao 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 *MANAGING DATA PLACEMENT IN STORAGE SYSTEMS* (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 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;

AND, we hereby authorize our attorneys, EMC Corporation, to insert here in parentheses (_____) 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: 12/16/2011

Xiangping Chen
Inventor's Signature

Print full name of first inventor:

Xiangping Chen

Residence:

6 Chartwell Circle, Shrewsbury, MA 01545

Citizenship:

US

Mailing Address:

Same as above

STATE/COMMONWEALTH OF
COUNTY OF

Massachusetts
Middlesex

On this 16th day of December, 2011, then personally appeared before me the above-named Xiangping Chen 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.

Nancy E. Pion
Notary Public

Print Name: Nancy E. Pion

My Commission expires 04/27/2012

Date: _____

Inventor's Signature

Print full name of second inventor:

Dennis Thomas Duprey

Residence:

100 Tibury Court, Raleigh, NC 27615

Citizenship:

US

Mailing Address:

Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2011, then personally appeared before me the above-named Dennis Thomas Duprey 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.

Notary Public

Print Name: _____

My Commission expires ___ / ___ / ___

Date: DECEMBER 16, 2011

Thomas E. Linnell
Inventor's Signature

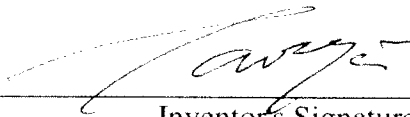
Print full name of third inventor: **Thomas E. Linnell**
Residence: 9 Bridle Path Drive, Northborough, MA 01532
Citizenship: US
Mailing Address: Same as above

STATE/Commonwealth of Massachusetts
COUNTY OF Middlesex

On this 16th day of December, 2011, then personally appeared before me the above-named Thomas E. Linnell 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.

Nancy E. Pior
Notary Public
Print Name: Nancy E. Pior
My Commission expires 01/27/2012

Date: 12/16/2011

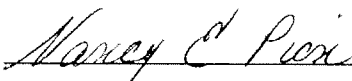


Inventor's Signature

Print full name of fourth inventor: **Qin Tao**
Residence: 6 Prestwick Drive, Hopkinton, MA 01748
Citizenship: CN
Mailing Address: Same as above

STATE/Commonwealth of Massachusetts
COUNTY OF Middlesex

On this 16th day of December, 2011, then personally appeared before me the above-named Qin Tao 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.



Notary Public
Print Name: Nancy E. Pion
My Commission expires 04/27/2012
2012

ASSIGNMENT

WHEREAS, we, Xiangping Chen, Dennis Thomas Duprey, Thomas E. Linnell and Qin Tao 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 *MANAGING DATA PLACEMENT IN STORAGE SYSTEMS* (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 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;

AND, we hereby authorize our attorneys, EMC Corporation, to insert here in parentheses (_____) 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: _____

Inventor's Signature

Print full name of first inventor:

Xiangping Chen

Residence:

6 Chartwell Circle, Shrewsbury, MA 01545

Citizenship:

US

Mailing Address:

Same as above

STATE/Commonwealth OF _____
COUNTY OF _____

On this _____ day of _____, 2011, then personally appeared before me the above-named Xiangping Chen 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.

Notary Public

Print Name: _____

My Commission expires ___ / ___ / ___

Date: 12/15/11

[Signature]
Inventor's Signature

Print full name of second inventor:

Dennis Thomas Duprey

Residence:

100 Tibury Court, Raleigh, NC 27615

Citizenship:

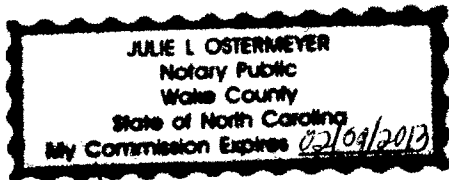
US

Mailing Address:

Same as above

STATE/Commonwealth of NORTH CAROLINA
COUNTY OF DURHAM

On this 15TH day of DECEMBER, 2011, then personally appeared before me the above-named Dennis Thomas Duprey 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.



[Signature]
Notary Public

Print Name: JULIE L. OSTERMEYER

My Commission expires 02/09/2013

Date: _____

Inventor's Signature

Print full name of third inventor:

Thomas E. Linnell

Residence:

9 Bridle Path Drive, Northborough, MA 01532

Citizenship:

US

Mailing Address:

Same as above

STATE/Commonwealth OF _____
COUNTY OF _____

On this _____ day of _____, 2011, then personally appeared before me the above-named Thomas E. Linnell 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.

Notary Public

Print Name: _____

My Commission expires ___ / ___ / ___

Date: _____

Inventor's Signature

Print full name of fourth inventor:

Qin Tao

Residence:

6 Prestwick Drive, Hopkinton, MA 01748

Citizenship:

CN

Mailing Address:

Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2011, then personally appeared before me the above-named Qin Tao 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.

Notary Public

Print Name: _____

My Commission expires ___ / ___ / ___