

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>Dean D Throop</td> <td>01/03/2012</td> </tr> <tr> <td>Dennis T Duprey</td> <td>01/03/2012</td> </tr> <tr> <td>Miles de Forest</td> <td>01/03/2012</td> </tr> <tr> <td>Michael D Haynes</td> <td>01/03/2012</td> </tr> </tbody> </table>		Name	Execution Date	Dean D Throop	01/03/2012	Dennis T Duprey	01/03/2012	Miles de Forest	01/03/2012	Michael D Haynes	01/03/2012
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Dean D Throop	01/03/2012										
Dennis T Duprey	01/03/2012										
Miles de Forest	01/03/2012										
Michael D Haynes	01/03/2012										
RECEIVING PARTY DATA											
Name:	EMC Corporation										
Street Address:	176 South Street										
Internal Address:	Jason A. Reyes										
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>13340912</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13340912						
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Application Number:	13340912										
CORRESPONDENCE DATA											
Fax Number:	(508)293-7189										
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										
Address Line 1:	176 South Street										
Address Line 2:	Jason A. Reyes										
Address Line 4:	Hopkinton, MASSACHUSETTS 01748										
ATTORNEY DOCKET NUMBER:	EMC-10-019CIP1										
NAME OF SUBMITTER:	Jason A. Reyes										

CH \$40.00 13340912

Total Attachments: 6

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ASSIGNMENT

WHEREAS, we, Dean D. Throop, Dennis T. Duprey, Miles de Forest and Michael D. Haynes 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 STORAGE*, 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 December 30, 2011 as U.S. Application No. 13/340,912;
- 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 parenthesis (13/340,912 December 30, 2011) 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:

1/3/2012

Dean D. Throop
Inventor's Signature

Print full name of first inventor:

Dean D. Throop

Residence:

3601 Jordan Oaks Drive, Efland, NC 27243

Citizenship:

US

Mailing Address:

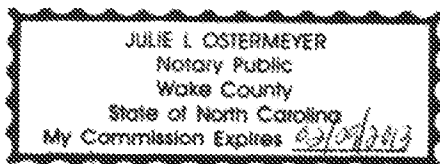
Same as above

STATE/Commonwealth of
COUNTY OF

NORTH CAROLINA
DURHAM

On this 3rd day of JANUARY, 2012, then personally appeared before me the
above-named _____ 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.



Julie L. Ostermeyer

Notary Public

Print Name:

JULIE L. OSTERMEYER

My Commission expires

08/09/2013

Date: 1/3/12

[Signature]
Inventor's Signature

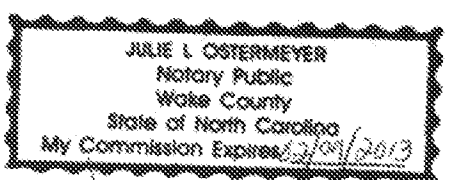
Print full name of second inventor:
Residence:
Citizenship:
Mailing Address:

Dennis T. Duprey
100 Tibury Court, Raleigh, NC 27615
US
Same as above

STATE/Commonwealth of NORTH CAROLINA
COUNTY OF DURHAM

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[Signature]
Notary Public
Print Name: JULIE L. OSTERMEYER
My Commission expires 08/09/2013



Date: 1/3/2012

Miles de Forest
Inventor's Signature

Print full name of third inventor:

Miles de Forest

Residence:

6921 Iron Gate Drive, Durham NC 27503

Citizenship:

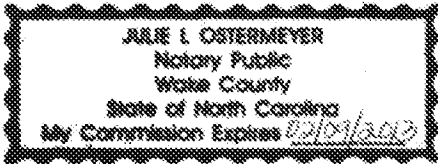
US

Mailing Address:

Same as above

STATE/Commonwealth of NORTH CAROLINA
COUNTY OF DURHAM

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Julie L. Ostermeyer
Notary Public

Print Name: JULIE L. OSTERMEYER

My Commission expires 02/01/2013

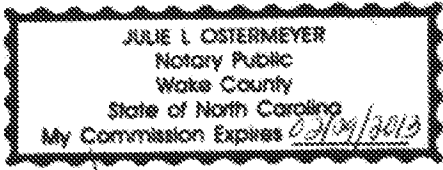
Date: 1/3/2012

Michael D. Haynes
Inventor's Signature

Print full name of third inventor: **Michael D. Haynes**
Residence: 8513 Woodlawn Drive, Raleigh, NC 27613
Citizenship: US
Mailing Address: Same as above

STATE/Commonwealth of NORTH CAROLINA
COUNTY OF DURHAM

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Julie L. Ostermeyer
Notary Public
Print Name: JULIE L. OSTERMEYER
My Commission expires 02/09/2013