

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

| 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>Qing Liu</td> <td>09/24/2010</td> </tr> <tr> <td>Qi Zhang</td> <td>09/27/2010</td> </tr> <tr> <td>Peter Tolvanen</td> <td>09/24/2010</td> </tr> <tr> <td>T. David Evans</td> <td>09/24/2010</td> </tr> <tr> <td>Hongliang Tang</td> <td>09/24/2010</td> </tr> </tbody> </table> | | Name | Execution Date | Qing Liu | 09/24/2010 | Qi Zhang | 09/27/2010 | Peter Tolvanen | 09/24/2010 | T. David Evans | 09/24/2010 | Hongliang Tang | 09/24/2010 |
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| Qing Liu | 09/24/2010 | | | | | | | | | | | | |
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| T. David Evans | 09/24/2010 | | | | | | | | | | | | |
| Hongliang Tang | 09/24/2010 | | | | | | | | | | | | |
| 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>12892333</td> </tr> </tbody> </table> | | Property Type | Number | Application Number: | 12892333 | | | | | | | | |
| Property Type | Number | | | | | | | | | | | | |
| Application Number: | 12892333 | | | | | | | | | | | | |
| CORRESPONDENCE DATA | | | | | | | | | | | | | |
| Fax Number: | (508)293-7189 | | | | | | | | | | | | |
| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> | | | | | | | | | | | | | |
| Phone: | 508-435-1000 | | | | | | | | | | | | |
| Email: | docketing@emc.com | | | | | | | | | | | | |
| Correspondent Name: | EMC Corporation | | | | | | | | | | | | |
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| Address Line 2: | Office of the General Counsel | | | | | | | | | | | | |
| Address Line 4: | Hopkinton, MASSACHUSETTS 01748 | | | | | | | | | | | | |
| ATTORNEY DOCKET NUMBER: | EMC-10-114 | | | | | | | | | | | | |

CH \$40.00 12892333

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**PATENT
 REEL: 025862 FRAME: 0521**

NAME OF SUBMITTER:

Jason A. Reyes

Total Attachments: 7

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ASSIGNMENT

WHEREAS, we, Qing Liu, Qi Zhang, Peter Tolvanen, T. David Evans and Hongliang Tang 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 **DETERMINING ALTERNATE PATHS IN FAULTED SYSTEMS** (Application), the specification of which:

- [X] 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 parenthesis (12/892,333 Filed 09/28/2010) 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: 9/24/2010

[Signature]
Inventor's Signature

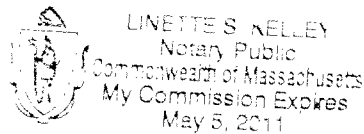
Print full name of first inventor: **Qing Liu**
Residence: 43 Lincoln Lane, North Grafton, MA 01536
Citizenship: Canada
Mailing Address: 43 Lincoln Lane, North Grafton, MA 01536

STATE/Commonwealth of Massachusetts
COUNTY OF Worcester

On this 24th day of September, 2010, 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.

[Signature]
Notary Public

Print Name: Linette S. Kelley
My Commission expires 05/05/2011



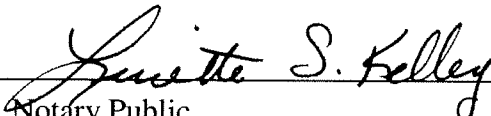
Date: 9/27/2010


Inventor's Signature

Print full name of second inventor: **Qi Zhang**
Residence: 61 Valentine Road, Northborough, MA 01532
Citizenship: China
Mailing Address: 61 Valentine Road, Northborough, MA 01532

STATE/Commonwealth of Massachusetts
COUNTY OF Worcester

On this 27th day of September, 2010, 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.


Notary Public

Print Name: Linette S. Kelley
My Commission expires 05/05/2011

Date: 9/24/2010

Peter Tolvanen
Inventor's Signature

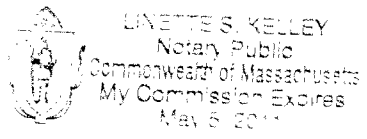
Print full name of third inventor: **Peter Tolvanen**
Residence: 400 Foxboro Blvd Apt. 4307, Foxborough, MA
02035
Citizenship: USA
Mailing Address: 400 Foxboro Blvd Apt. 4307, Foxborough, MA
02035

STATE/Commonwealth of Massachusetts
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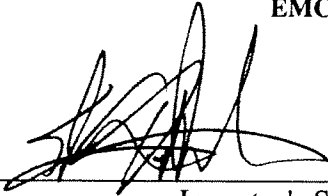
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Linette S. Kelley
Notary Public

Print Name: Linette S. Kelley
My Commission expires 05/05/2011



Date: 24 SEP 2010

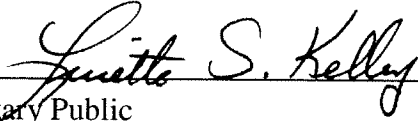


Inventor's Signature

Print full name of fourth inventor: **T. David Evans**
Residence: 122 Barre Paxton Road, Rutland, MA 01543
Citizenship: USA
Mailing Address: 122 Barre Paxton Road, Rutland, MA 01543

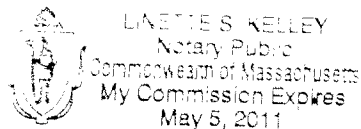
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Notary Public

Print Name: Linette S. Kelley
My Commission expires 05/05/2011



Date: 9/24/10

[Handwritten Signature]
Inventor's Signature

Print full name of fifth inventor:

Hongliang Tang

Residence:

4 Aspen Road, Shrewsbury, MA 01545

Citizenship:

China

Mailing Address:

4 Aspen Road, Shrewsbury, MA 01545

STATE/Commonwealth OF Massachusetts
COUNTY OF Worcester

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_____ 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.

[Handwritten Signature: Linette S. Kelley]
Notary Public

Print Name: Linette S. Kelley

My Commission expires 05/05/2011

