

**RECORDATION FOR
PATENTS**

01-04-2008



103472549

To the Director of the U.S. Patents and Trademarks Office: Please print

1. Name of conveying party(ies)Ashok Tamilarasan
Michael Manning
Naizhong QiuAdditional name(s) of conveying party(ies) attached? ☐ Yes ☒ No**3. Nature of Conveyance/Execution Date(s):**

Execution Date: 12/17/07

- ☒ Assignment ☐ Merger
- ☐ Security Agreement ☐ Change of Name
- ☐ Government Interest Assignment
- ☐ Executive Order 9424, Confirmation License
- ☐ Other _____

2. Name and address of receiving party(ies):Name: EMC CorporationInternal Address: Office of the General CounselStreet Address: 176 South StreetCity: HopkintonState: MassachusettsCountry: USA Zip: 01748Additional name(s) and address(es) attached? ☐ Yes ☒ No**4. Application or patent number(s):**☒ This document is being filed together with a new application.

A. Patent Application No.(s) _____

B. Patent No.(s) _____

Additional numbers attached? ☐ Yes ☐ No**5. Name and address to whom correspondence concerning document should be mailed:**Name: Jason A. ReyesInternal Address: EMC CorporationOffice of the General CounselStreet Address: 176 South StreetCity: Hopkinton State: MA Zip: 01748Phone Number: 508-293-7074Fax Number: 508-293-7189Email Address: Reyes Jason@emc.com**6. Total number of applications and patents involved:**
1**7. Total fee (37 CFR 1.21(h) & 3.41):** \$ 40.00

- ☐ Authorized to be charge by credit card
- ☒ Authorized to be charged to deposit account
- ☐ Enclosed
- ☐ None required (government interest not affecting title)

8. Payment Informationa. Credit Card Last 4 Numbers _____
Expiration Date _____b. Deposit account number 05-0889Authorized User Name Jason A. Reyes**9. Signature:**

Signature

Jason A. Reyes

Name of Person Signing

12/20/2007

PTO/USPTO

12/20/2007

USPTO

Date

Total number of pages including cover
sheet, attachments, and documents: []

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop: Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria VA 22313-1450

ASSIGNMENT

WHEREAS, we, Ashok Tamilarasan, Michael Manning and Naizhong Qiu 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 LOOP INTERFACE FAILURE*, 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;

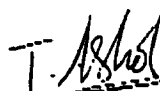
AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution,

PATENT/Joint Assignment
EMC Docket No.: EMC-07-313

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: Dec. 17, 2007

Inventor's Signature

Print full name of first inventor:

Ashok Tamilarasan

Residence:

57 Georgetown Drive, Apt. #8, Framingham, MA
01702

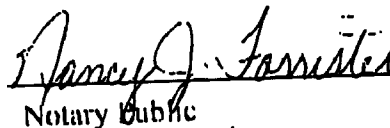
Citizenship:

India

Mailing Address:

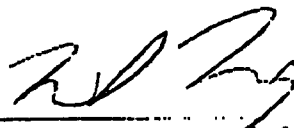
57 Georgetown Drive, Apt. #8, Framingham, MA
01702STATE/COMMONWEALTH OF
COUNTY OFMassachusetts
Worcester

On this 17th day of December, 2007, then personally appeared before me the above-named Ashok Tamilarasan 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 PublicPrint Name: Nancy J. ForresterMy Commission expires 03/07/2008

PATENT/Joint Assignment
EMC Docket No.: EMC-07-313

Date:

December 17, 2007
Inventor's Signature

Print full name of second inventor:

Michael Manning

Residence:

32 Briarcliff Drive, Hopkinton, MA 01748

Citizenship:

United States of America

Mailing Address:

32 Briarcliff Drive, Hopkinton, MA 01748

STATE/Commonwealth of
COUNTY OFMassachusetts
Sherborn

On this 17th day of December, 2007, then personally appeared before me the above-named Michael Manning 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 J. ForresterMy Commission expires 03/01/2008

PATENT/Joint Assignment
EMC Docket No.: EMC-07-313

Date:

12-17-2007
Inventor's Signature

Print full name of third inventor:

Naizhong Qiu

Residence:

90 West Plain Street, Wayland, MA 01778

Citizenship:

Peoples Republic of China

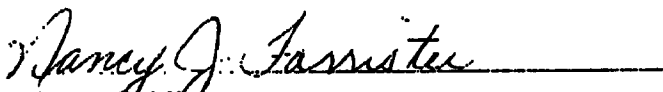
Mailing Address:

90 West Plain Street, Wayland, MA 01778

STATE/COMMONWEALTH OF
COUNTY OF*Massachusetts*
Sherborn

On this 17th day of December, 2007, then personally appeared before me the
above-named Naizhong Qiu 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 PublicPrint Name: Nancy J. FarristerMy Commission expires 03/07/2008