

U.S. PTO
12/004300
12/20/2007

01-08-2008

REI



12-20-07

103473674

Docket No.: EMS-182US1

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)/Execution Date(s):

(a) Rong YU (g) Qun FAN
(b) Orit LEVIN-MICHAEL (h) Stephen R. IVES
(c) John W. LEFFERTS
(d) Pei-Ching HWANG
(e) Peng YIN
(f) Yechiel YOCHAI

Execution Date(s): (a) 12/7/07(b) 12/6/07 (c) 12/7/07(d) 12/6/07
(e) 12/6/07(f) 12/12/07(g) 12/7/07(h) 12/10/07

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

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

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

Name: EMC Corporation

Internal Address:

Street Address: 176 South Street
Hopkinton, Massachusetts 01748

Country: United States of America

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application or patent number(s):

A. Patent Application No.(s)

☒ This document is being filed together with a new application

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Muirhead and Saturnelli, LLC

Internal Address:

Street Address: 200 Friberg Parkway
Suite 1001

City: Westborough

State: Massachusetts Zip: 01581

Fax Number: 508-898-8602

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41).....\$ 40.00

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

8. Payment Information

a. Credit Card Last 4 Numbers _____
Expiration Date _____

b. Deposit Account Number 05-0889

Authorized User Name Anne E. Saturnelli

9. Signature:

Anne E. Saturnelli, Reg. No. 41,290

Name of Person Signing

Signature

01 FC:8021

40.00 DA

December 20, 2007

Date

Total number of pages including cover sheet, attachments, and documents: 11

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:

Mail Stop Assignment Recordation Services
Director of the U.S. Patent and Trademark Office
P.O. Box 1450, Alexandria, VA 22313-1450

PATENT
REEL: 020340 FRAME: 0161

ASSIGNMENT

WHEREAS, we, Rong YU, Orit LEVIN-MICHAEL, John W. LEFFERTS, Pei-Ching HWANG, Peng YIN, Yechiel YOCHAI, Dan AHARONI, Qun FAN, and Stephen R. IVES, 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 **TECHNIQUES FOR DATA PREFETCHING**, 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.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals as set forth below:


Date: 12/7/07


Inventor's Signature

Print full name of first inventor: **Rong YU**
Residence: **32 Charles River Drive**
Franklin, MA 02038
Citizenship: **CHINA (People's Republic)**
Mailing Address: **Same**

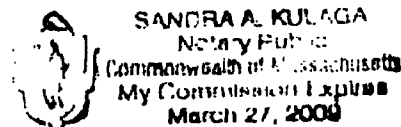
STATE OF MASSACHUSETTS
COUNTY OF MIDDLESEX

On this 7 day of DECEMBER, 2007, then personally appeared before me the above-named **Rong YU** known to me through satisfactory evidence of identification [☐] employee identification card; [☐] driver's license; [☒] (other) PERSONALLY KNOWN TO ME 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.

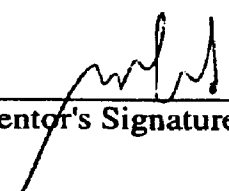

Notary Public

Print Name:

My Commission expires:



Date: 12/6/07


Inventor's Signature

Print full name of second inventor:

Orit LEVIN-MICHAEL

Residence:

37 Salisbury Road
Newton, MA 02458

Citizenship:

USA and ISRAEL


Mailing Address:

Same

COMMONWEALTH OF MASSACHUSETTS

COUNTY OF MIDDLESEX

On this 6 day of December, 2007, then personally appeared before me the above-named **Orit LEVIN-MICHAEL** known to me through satisfactory evidence of identification [☐] employee identification card; [☐] driver's license; [☒] (other) PERSONALLY KNOWN TO ME 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:



SANDRA A. KULAGA
Notary Public
Commonwealth of Massachusetts
My Commission Expires
March 27, 2009

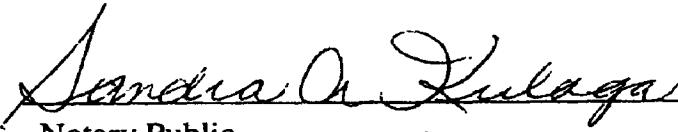
Date: Dec 7 '07


Inventor's Signature

Print full name of third inventor: **John W. LEFFERTS**
Residence: 59 Dodge Hill Road
Sutton, MA 01590
Citizenship: USA
Mailing Address: Same

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF MIDDLESEX

On this 7 day of DECEMBER 2007, then personally appeared before me the above-named **John W. LEFFERTS** 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:



SANDRA A. KULAGA
Notary Public
Commonwealth of Massachusetts
My Commission Expires
March 27, 2009

Date: 12/6/07


Inventor's Signature

Print full name of fourth inventor:

Pei-Ching HWANG

Residence:

34 Camelot Drive

Shrewsbury, MA 01545

Citizenship:

U.S.A.

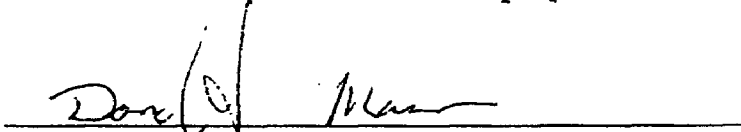
Mailing Address:

Same

COMMONWEALTH OF MASSACHUSETTS

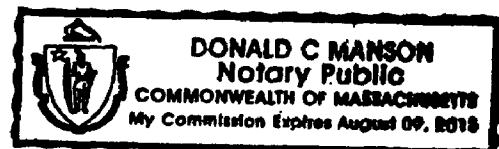
COUNTY OF MIDDLESEX

On this 6 day of December, 2007, then personally appeared before me the above-named **Pei-Cheng HWANG** 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: Donald Manson

My Commission expires:



Date: 12/6/07

[Signature]
Inventor's Signature

Print full name of fifth inventor: **Peng YIN**
Residence: 12 Blackstone Lane
South Grafton, MA 01545
Citizenship: China (People's Republic)
Mailing Address: Same

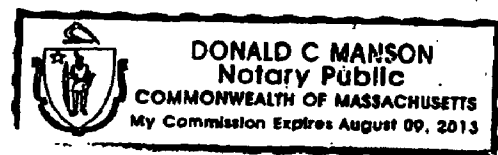
COMMONWEALTH OF MASSACHUSETTS
COUNTY OF MIDDLESEX

On this 6 day of December, 2007, then personally appeared before me the above-named **Peng YIN** 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: Donald Manson

My Commission expires:



Date: 12/12/07


Inventor's Signature

Print full name of sixth inventor:

Yechiel YOCHAI

Residence:

4 Lladnar Drive
Lincoln, RI 02865

Citizenship:

ISRAEL


Mailing Address:

Same

COMMONWEALTH OF MASSACHUSETTS

COUNTY OF MIDDLESEX

On this 12 day of December, 2007, then personally appeared before me the above-named **Yechiel YOCHAI** known to me through satisfactory evidence of identification ☐ employee identification card; ☐ driver's license; ☒ (other) PERSONALLY KNOWN TO ME 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:



SANDRA A. KULAGA
Notary Public:
Commonwealth of Massachusetts
My Commission Expires
March 27, 2009

Date: _____

Inventor's Signature

Print full name of sixth inventor:

Dan AHARONI

Residence:

35 Vernon Street
Newton, MA 02458

Citizenship:

ISRAEL

Mailing Address:

Same

COMMONWEALTH OF MASSACHUSETTS

COUNTY OF _____

On this ____ day of _____, 2007, then personally appeared before me the above-named **Dan AHARONI** 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: 12/7/07


Inventor's Signature

Print full name of sixth inventor:

Qun FAN

Residence:

211 Howard Street

Northborough, MA 01532

Citizenship:

CHINA (People's Republic)

Mailing Address:

Same

COMMONWEALTH OF MASSACHUSETTS

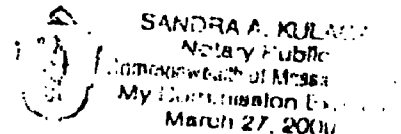
COUNTY OF MIDDLESEX

On this 7 day of DECEMBER, 2007, then personally appeared before me the above-named **Qun FAN** known to me through satisfactory evidence of identification ☐ employee identification card; ☐ driver's license; ☒ (other) PERSONALLY KNOWN TO ME 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: 12/10/07

[Signature]
Inventor's Signature

SRI ninth
Print full name of ~~sixth~~ inventor:

SRI Stephen
~~Steven R. IVES~~

Residence: 26 Shrewsbury Street
West Boylston, MA 01583
Citizenship: U.S.A.
Mailing Address: Same

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF _____

Lak
STEPHEN On this 10 day of December, 2007, then personally appeared before me the above-named ~~Steven R. IVES~~ known to me through satisfactory evidence of identification ☐ employee identification card; ☐ driver's license; ☒ (other) PERSONALLY KNOWN TO ME 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:

My Commission expires:



SANDRA A. KULAGA
Notary Public
Commonwealth of Massachusetts
My Commission Expires
March 27, 2009