10-05-2007

EET

Name: EMC Corporation

Internal Address:

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

Street Address: 176 South Street

Hopkinton, Massachusetts 01748

Country: United States of America

Docket No.: EMC-177US

thed documents or the new address(es) below.

Γο the Director of the U.S. Patent a	103450791

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

(a) Alexandr VEPRINSKY

(b) Ofer E. MICHAEL (c) Michael J. SCHARLAND

Execution Date(s): 09/25/07

3. Nature of conveyance:

\boxtimes	Assignment
K-71	rissignment

Other:

Merger

Security Agreement

Change of Name

☐ Government Interest Assignment

Executive Order 9424, Confirmatory License

4. Application or patent number(s):

This document is being filed together with a new application

B. Patent No.(s)

A. Patent Application No.(s)

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

9. Signature:

Zip: 01581

Fax Number: 508-898-8602

6. Total number of applications and patents involved: 1

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

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 Donald W&Muirhead

Donald W. MUIRHEAD, Reg. No. 33,978 Name of Person Signing

Signature

September 25, 2007 Date \(\bullet \)

DA

40.00

Total number of pages including cover sheet, attachments, and documents: 5

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

Attorney Docket No.: EMS-177US EMC Docket No.: EMC-07-204

ASSIGNMENT

WHEREAS, we, Alexandr VEPRINSKY, Ofer E, MICHAEL and Michael J. SCHARLAND, 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 DATA DE-DUPLICATION USING THIN PROVISIONING, the specification of which:

[X]	is being executed on even date herewith and is about to be filed in the U States Patent Office;		nited
[]	was filed on	as U.S. Application No;	
[]	was patented under U.S. Pate	ent Noon	

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

PATENT REEL: 019946 FRAME: 0547 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: 9/25/2w7

Inventor's Signature

Print full name of first inventor:

Alexandr VEPRINSKY

Residence:

145 Babcock Street

Brookline, MA 02446

Citizenship:

Israel

Mailing Address:

Same

COMMONWEALTH OF MASSACHUSETTS COUNTY OF MIDDLESEX

On this <u>\$25</u> day of <u>SPIEMBER</u>, 2007, then personally appeared before me the above-named Alexandr VEPRINSKY known to me through satisfactory evidence of identification [__] employee identification card; [__] driver's license; [X] (other) | LINCONALLY 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
Commonweath of Massachusetts
My Commission Expires
March 27, 2006

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Date: 9125/07	Inventor's Signature	
Print full name of second inventor:	Ofer E. MICHAEL	
Residence:	37 Salisbury Road	
	Newton, MA 02458	
Citizenship:	U.S.A.	
Mailing Address:	Same	
On this <u>25</u> day of <u>SEPTEMBER</u> , 2007, to above-named Ofer E. MICHAEL known to a	then personally appeared before me the me through satisfactory evidence of	
identification [] employee identification card; [X] 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.		
	Sandia a Julaga	
	Notary Public Print Name: SANDRA A. KULAGA Notary Public Commonwealth of Massechusetts My Commission Expires March 27, 2000	

My Commission expires:

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Date: 9-25-07

Print full name of third inventor:

Michael J. SCHARLAND

Residence:

20 Jefferson Road

Franklin, MA 02038

Citizenship:

U.S.A.

Mailing Address:

Same

COMMONWEALTH OF MASSACHUSETTS COUNTY OF MIDDLESEX

RECORDED: 09/25/2007

On this <u>25</u> day of <u>SEDTEN BER</u> 2007, then personally appeared before me the above-named Michael J. SCHARLAND known to me through satisfactory evidence of identification [__] employee identification card; [__] driver's license; [X] (other) PERSONALLY KNOWN TOME 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.

Print Name:

My Commission expires: