OMB No. 0851-0027(exp. 6/30/2009)

DMB No. 0651-0027(exp. 6/30/2008)	EMC-03-000	
RECORDATION FORM COVER SHEET PATENTS ONLY		
To the Director of the U.S. Patents and Trademarks Office: Please record the attached documents or the new address(es) below.		
1. Name of conveying party(ies) 1. Michael John Dutch 2. Christopher Hercules Claudatos 3. William Dale Andruss 4. Bruce David Leetch Additional name(s) of conveying party(ies) attached? Additional name(s) of conveying party(ies) attached? Yes No 3. Nature of Conveyance/Execution Date(s): Execution Date: 1, 4/9/09 2, 4/9/09 3, 4/10/09 4. 5/9/09 Assignment	2. Name and address of receiving party(ies): Name: EMC Corporation Internal Address: Street Address: 176 South Street City: HopkInton State: MA Country: USA Zip: 01748 Additional 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) 12/416,144 ☐ B. Patent No.(s) ☐ Additional numbers attached? ☐ Yes ☒ No		
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:	
Name: Theodore A. Chen, Esq.	7. Total fee (37 CFR 1.21(h) & 3.41): \$ 40.00	
Internal Address: EMC Corporation	□ Authorized to be charge by credit card □ Authorized to be charged to deposit account □ Enclosed	
Street Address: 6801 Koll Center Parkway	None required (government interest not affecting title)	
City: Pleasanton State: CA ZIp: 94566 Phone Number: 925-600-5681	Reyment Information a. Credit Card	
Fax Number: 925-600-5682	b. Deposit account number 05-0889	
Email Address: chen theodore@emc.com	Authorized User Name	
9. Signature: /Theodore A. Chen/	May 27, 2009	
Signature	Date	
Theodore A. Chen	Total number of pages including cover	
Name of Person Signing	sheet, attachments, and documents: [8]	

Decuments to be recorded (including cover sheet) should be faxed to (671) 273-0140, or mailed to: Mail Stop: Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria VA 22313-1460

PATENT/Joint Assignment EMC Docket No.: EMC-09-066

ASSIGNMENT

WHEREAS, we, Michael John Dutch, Christopher Hercules Claudatos, William Dale Andruss and Bruce David Leetch 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 COMPLEMENTARY SPACE REDUCTION, the specification of which:

[]	is being executed on even date herewith and is about to be filed in the United States Patent Office;
[X]	was filed on March 31, 2009 as U.S. Application No. 12/416,144;
[]	was patented under U.S. Patent Noonon

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 REEL: 022754 FRAME: 0501 MAY.29.2009 9:08AM

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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:

-2-

PATENT REEL: 022754 FRAME: 0502

PATENT/Joint Assignment EMC Docket No.: EMC-09-066

Date: 4/9/2009	Inventor's Signature
Print full name of first inventor:	Michael John Dutch 21010 Bank Mill Road, Saratoga, CA 95070
Residence: Citizenship:	USA
Mailing Address:	Same as above
STATE OF COUNTY OF Santa Clara On this 09 day of Pori , 2009, before me appeared Michael John Dutch who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.	
I certify under PENALTY OF PERJURY un foregoing paragraph is true and correct.	nder the laws of the State of California that the
WITNESS my hand and official seal.	7
AFRIM HAROUNI Commission # 1834513 Nickary Public - California Santa Clara County My Comm. Expires Feb 13, 2013	Notary Public Print Name: <u>APRIM HARGUNI</u> My Commission expires <u>0</u> 2/ <u>13</u> / <u>20</u> 13

PATENT/Joint Assignment _ EMC Docket No.: EMC-09-066

Date:

Print full name of second inventor:

Christopher Hercules Claudatos

Residence:

842 Portswood Circle, San Jose, CA 95120

Inventor's Signature

Citizenship:

USA

Mailing Address:

Same as above

STATE OF

COUNTY OF

_____, 2009, before me appeared <u>Chris</u> Claudatas On this _09 day of _ Anoril who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public

Print Name: APRIM

HAROUNL

My Commission expires 02/13/2013



PATENT/Joint Assignment EMC Docket No.: EMC-09-066

Date:

4110109

Print full name of third inventor:

William Dale Andruss

Residence:

4144 Aldrich Avenue South, Minneapolis, MN

55409

Citizenship:

USA

Mailing Address:

Same as above

STATE OF

COUNTY OF

On this day of Affic , 2009, before me appeared who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Manes Ha

WITNESS my hand and official seal.

Notary Public

My Commission expires <u>0/ 131</u> / <u>20</u>

PATENT/Joint Assignment EMC Docket No.: EMC-09-066

Date: <u> </u>	B Lte Inventor's Signature	
Print full name of fourth inventor:	Bruce David Leetch	
Residence:	9572 Fox Run Drive, Mason, OH 45040	
Citizenship:	USA	
Mailing Address:	Same as above	
On this		
I certify under PENALTY OF PERJURY foregoing paragraph is true and correct.	under the laws of the State of California that the	
WITNESS my hand and official seal.		
rd	Motary Public	

Michele Weaver, Notary Publicant Name: <u>In April 12012</u>
In and for the State of Ohio_{My Commission} expires <u>7 /25 / 2012</u>
My Commission Expires
July 25th 2012

TE OT

RECORDED: 05/29/2009