U.S. PTO 12/586765 09/28/2009

F 10-07	-2009	
	Docket No.: EMS-323US	
To the Director of the U.S. Patent and Tra 10357	locuments or the new address(es) below.	
1. Name of conveying party(ies)/Execution Date(s):	2. Name and address of receiving party(ies):	
(a)John F. MADDEN, Jr. (b) Violet S. BECKETT (c) Michael J. SCHARLAND (d) Arieh DON	Name: EMC Corporation Internal Address:	
Execution Date(s): (a), (b) September 21, 2009 (c), (d) September 25, 2009	Street Address: 176 South Street Hopkinton, MA 01748	
Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No		
3. Nature of conveyance:	Country: USA	
	Additional name(s) & address(es) attached? Yes No	
4. Application or patent number(s):	s document is being filed together with a new application	
A. Patent Application No.(s)	B. Patent No.(s)	
Additional numbers atta 5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:	
Name: Muirhead and Saturnelli, LLC	7. Total fee (37 CFR 1.21(h) & 3.41)	
Internal Address:	Authorized to be charged to deposit account	
Street Address: 200 Friberg Parkway	☐ Enclosed	
Suite 1001	None required (government interest not affecting title)	
City: Westborough	Payment Information a. Credit Card Last 4 Numbers Details Date	
State: Massachusetts Zip: 01581	Expiration Date b. Deposit Account Number05-0889	
Fax Number: 508-898-8602	Authorized User NameAnne E. Saturnelli 18/96/2909 HJAHA1 89999044 959889 12586765	
9. Signature:	01 FC:8021 40.00 DA	
Trume of 1 erosis er British	September 28,2009 Date	
Total number of pages including cover sheet, attachments, and documents: 15		
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

ASSIGNMENT

WHEREAS, we, Patrick Brian RIORDAN, John F. MADDEN, Jr., Michael J. SCHARLAND, Arieh DON, Kevin MARTIN, and Violet S. BECKETT, 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 STORAGE CONFIGURATION, 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 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: 023343 FRAME: 0189

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: ______

	Inventor's Signature
Print full name of first inventor:	Patrick Brian Riordan
Residence:	27 Howland Road
	Newton, MA 02465
Citizenship:	IRELAND
Mailing Address:	Same
Patrick Brian Riordan known to me th	hen personally appeared before me the above-named hrough satisfactory evidence of identification []
employee identification card; [] drive	er's license; [] (other) to be the person whose name is subscribed to the
oregoing Assignment and acknowledge leed for the purposes therein contained.	ed that he/she executed the same as his/her free act and
	Notary Public
•	Print Name:

My Commission expires:

PATE

Date: 9/2//09	Jal F Mal 5 Inventor's Signature
Print full name of second inventor:	John F. Madden, Jr.
Residence:	28 Steppingstone Drive
	Holden, MA 01520
Citizenship:	USA
Mailing Address:	Same
COMMONWEALTH OF MASSACHUSE COUNTY OF MIDDLE	
John F. Madden, Jr. known to me through employee identification card; [] driver's l to be foregoing Assignment and acknowledged the	personally appeared before me the above-named satisfactory evidence of identification [X_] icense; [] (other) the person whose name is subscribed to the lat he/she executed the same as his/her free act and
leed for the purposes therein contained.	Sandra a Kulaga
	Notary Public Print Name: My Commission expires April 1, 2016

Date:	-
	Inventor's Signature
Print full name of third inventor:	Michael J. Scharland
Residence:	23 Jefferson Road
	Franklin, MA 02038
Citizenship:	USA
Mailing Address:	Same
On this day of <u>September</u> , 2009, t. Michael J. Scharland known to me thr	hen personally appeared before me the above-named rough satisfactory evidence of identification []
Michael J. Scharland known to me thr	rough satisfactory evidence of identification []
employee identification card; [] drive	er's license; [] (other) to be the person whose name is subscribed to the
foregoing Assignment and acknowledge	ed 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:

PATENT

REEL: 023343 FRAME: 0192

Date:	
	Inventor's Signature
Print full name of fourth inventor:	Arieh Don
Residence:	45 Dexter Road
	Newton, MA 02460
Citizenship:	USA
Mailing Address:	Same
	hen personally appeared before me the above-named
	actory evidence of identification [] employee ; [] (other)
be the person whose name is subscribed	to the foregoing Assignment and acknowledged that act and deed for the purposes therein contained.
	Notary Public
	Print Name:
	My Commission expires:

Date:	
	Inventor's Signature
Print full name of fifth inventor:	Kevin Martin
Residence:	52 Cottonwood Drive
	Dracut, MA 01826
Citizenship:	U.S.A.
Mailing Address:	Same
Kevin Martin known to me through sadentification card; [] driver's license the person whose name is subscribed	then personally appeared before me the above-named atisfactory evidence of identification [] employee e; [] (other) to d to the foregoing Assignment and acknowledged that e act and deed for the purposes therein contained.
	Notary Public
	Print Name:
	My Commission expires:

Date: 9/21/09	Inventor's Signature
Print full name of sixth inventor:	Violet S. Beckett
Residence:	156 Stone School Road
	Sutton, MA 01590
Citizenship:	USA
Mailing Address:	Same
COMMONWEALTH OF MASSACHU COUNTY OF <u>MÍD</u>	
Violet S. Beckett known to me through identification card; [] driver's license be the person whose name is subscribed	hen personally appeared before me the above-named satisfactory evidence of identification [X] employee; [] (other) to to the foregoing Assignment and acknowledged that act and deed for the purposes therein contained. Notary Public
	SANDRA A. KULAGA
	Print Name:

My Commission expire

ASSIGNMENT

WHEREAS, we, Patrick Brian RIORDAN, John F. MADDEN, Jr., Michael J. SCHARLAND, Arieh DON, Kevin MARTIN, and Violet S. BECKETT, 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 STORAGE CONFIGURATION, 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. Pa	atent 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

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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:

Data.

	Inventor's Signature
	211 VOLICO 2 D 23 3 -1-0-1-1-1
Print full name of first inventor:	Patrick Brian Riordan
Residence:	27 Howland Road
	Newton, MA 02465
Citizenship:	IRELAND
Mailing Address:	Same
COUNTY OF	the state of the s
Patrick Brian Riordan known to me	then personally appeared before me the above-named through satisfactory evidence of identification []
Patrick Brian Riordan known to me employee identification card; [] dri	through satisfactory evidence of identification [] ver's license; [] (other)
Patrick Brian Riordan known to me employee identification card; [] dri	through satisfactory evidence of identification [] ver's license; [] (other) _ to be the person whose name is subscribed to the lged that he/she executed the same as his/her free act and
Patrick Brian Riordan known to me employee identification card; [] dri	through satisfactory evidence of identification [] ver's license; [] (other) _ to be the person whose name is subscribed to the lged that he/she executed the same as his/her free act and
Patrick Brian Riordan known to me employee identification card; [] dri	through satisfactory evidence of identification [] ver's license; [] (other) _ to be the person whose name is subscribed to the lged that he/she executed the same as his/her free act and ed.

Date:	
	Inventor's Signature
Print full name of second inventor:	John F. Madden, Jr.
Residence:	28 Steppingstone Drive
	Holden, MA 01520
Citizenship:	USA
Mailing Address:	Same
	nen personally appeared before me the above-named ugh satisfactory evidence of identification []
On this day of September, 2009, th	en personally appeared before me the above-named
John F. Madden, Jr. known to me thro employee identification card; [] drive	
t	o be the person whose name is subscribed to the
foregoing Assignment and acknowledge deed for the purposes therein contained.	d that he/she executed the same as his/her free act and
	Notary Public
	·
	Print Name:
	My Commission expires:

Date: 9-25-09		
		Inventor's Signature
Print full name of third inventor:		Michael J. Scharland
Residence:	1	c 23 Jefferson Road
Citizenship:	mps 9/25	Franklin, MA 02038 USA
Mailing Address:		Same
COUNTY OF 1		
Michael J. Scharland known to nemployee identification card; [_] ERSONALLY KNOWN TO N	ne through driver's l <u>DE</u> to be dedged th	personally appeared before me the above-named h satisfactory evidence of identification [] license; [X] (other) e the person whose name is subscribed to the nat he/she executed the same as his/her free act and Notary Public Richary Public Commonwealth of Massachus My Commission Explose
		Print Name: April 1, 2016

My Commission expires:

Date: 9.15.4	
	Inventor's Signature
Print full name of fourth inventor:	Arieh Don
Residence:	45 Dexter Road
·	Newton, MA 02460
Citizenship:	USA
Mailing Address:	Same
COMMONWEALTH OF MASSACHUSE COUNTY OF MIDDLE	
Arieh Don known to me through satisfacto identification card; [_] driver's license; [\) be the person whose name is subscribed to	personally appeared before me the above-named bry evidence of identification [] employee [_] (other) FESONALLY KNOWN TO ME to the foregoing Assignment and acknowledged that and deed for the purposes therein contained. Notary Public SANDRAA, KUACA

Print Name:

My Commission expin

-5-

Date:	
	Inventor's Signature
Print full name of fifth inventor:	Kevin Martin
Residence:	52 Cottonwood Drive
	Dracut, MA 01826
Citizenship:	U.S.A.
Mailing Address:	Same
Kevin Martin known to me through sa identification card; [] driver's license	
	e act and deed for the purposes therein contained.
	Notary Public
	Print Name:
	My Commission expires:

Date:	
	Inventor's Signature
Print full name of sixth inventor:	Violet S. Beckett
Residence:	156 Stone School Road
	Sutton, MA 01590
Citizenship:	USA
Mailing Address:	Same
Violet S. Beckett known to me through identification card; [_] driver's licen be the person whose name is subscrib	then personally appeared before me the above-named gh satisfactory evidence of identification [] employee se; [] (other) to ed to the foregoing Assignment and acknowledged that ree act and deed for the purposes therein contained.
	Notary Public
	Print Name:
	My Commission expires:

-7-

PATENT REEL: 023343 FRAME: 0202

RECORDED: 09/28/2009