501941317 06/01/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Victor SALAMON	04/27/2012
Ashish A. PALEKAR	04/30/2012
Roel van der GOOT	04/27/2012
David L. BLACK	04/30/2012

RECEIVING PARTY DATA

Name:	EMC CORPORATION
Street Address:	176 South Street
City:	Hopkinton
State/Country:	MASSACHUSETTS
Postal Code:	01748

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13433885

CORRESPONDENCE DATA

Fax Number: (508)898-8602 **Phone**: (508) 898-8601

Email: Docketing@westboro-ip.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

Correspondent Name: Donald W. Muirhead

Address Line 1: Muirhead and Saturnelli, LLC
Address Line 2: 200 Friberg Parkway, Suite 1001

Address Line 4: Westborough, MASSACHUSETTS 01581

ATTORNEY DOCKET NUMBER: EMS-441US

NAME OF SUBMITTER: Donald W. Muirhead

PATENT

REEL: 028304 FRAME: 0293

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Total Attachments: 9 source=EMS-441US, Executed Assignment#page1.tif source=EMS-441US, Executed Assignment#page2.tif source=EMS-441US, Executed Assignment#page3.tif source=EMS-441US, Executed Assignment#page4.tif source=EMS-441US, Executed Assignment#page5.tif source=EMS-441US, Executed Assignment#page6.tif source=EMS-441US, Executed Assignment#page7.tif source=EMS-441US, Executed Assignment#page8.tif source=EMS-441US, Executed Assignment#page9.tif

PATENT REEL: 028304 FRAME: 0294

ASSIGNMENT

WHEREAS, we, Victor SALAMON, Ashish A. PALEKAR, Roel van der GOOT and David L. BLACK 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 ASYMMETRIC ASYNCHRONOUS MIRRORING FOR HIGH AVAILABILITY, the specification of which:

	is being executed on even date herewith and is about to be filed in the Uni	ted
	States Patent Office;	
[X]	was filed on March 29, 2012 as U.S. Application No. 13/433,885;	
[]	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 giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

PATENT REEL: 028304 FRAME: 0295

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. AND, we hereby authorize attorneys of Muirhead and Saturnelli, LLC to insert here in parenthesis (
Date: April 27, 2012	Jalan for	
	Inventor's Signature	
Print full name of first inventor:	Victor SALAMON	
Residence:	12011 18 Avenue SW	
	Edmonton, AB, T6W 1W3, Canada	
Citizenship:	Canada	
Mailing Address:	Same as above	
I ANGELA COUTINHO 8552 64 Avenue NW	(name) whose residential address is Edmonton, 4B 76EOH3	
the assignment) who is personally known to		
Mishup (5	signature of first witness)	
<u> </u>	(location of witness signature)	
on this day April 27, of 2	20 <u>12</u> . (date of signature)	
I ROEL VAN DER GOOT 408, 10610 83 AVE NW, EDM	(name) whose residential address is ONTON AB TEELEL CTOR SALAMON (name of person signing)	
was personally present and did see Vio the assignment) who is personally known to	me, execute the above assignment.	
(signature of first witness)	
Signed at EDMONTON	(location of witness signature)	
on this day APRIL 27 of 2	20 /2. (date of signature)	

Date:	
	Inventor's Signature
Print full name of second inventor:	Ashish A. PALEKAR
Residence:	20 Benjamin Landing Lane
	Franklin, MA 02038
Citizenship:	India
Mailing Address:	Same
named Ashish A. PALEKAR known to:	12, then personally appeared before me the aboveme through satisfactory evidence of identification river's license; [] (other)
to be the person whose	name is subscribed to the foregoing Assignment and ame as his/her free act and deed for the purposes therein
	Notary Public
	Print Name:
	My Commission expires:

Date: 2012-4-27	Atroot
	irventor's Signature
Print full name of third inventor:	Roel van der GOOT
Residence:	408, 10610 83 Avenue NW
	Edmonton, AB, T6E 2E2, Canada
Citizenship:	Netherlands
Mailing Address:	Same as above
the assignment) who is personally known to	(signature of first witness) Imonton (location of witness signature)
the assignment) who is personally known to	(signature of first witness)
Signed at Edmonton	
on this day $\frac{Apri/27}{}$ of	20/1. (date of signature)

ASSIGNMENT

WHEREAS, we, Victor SALAMON, Ashish A. PALEKAR, Roel van der GOOT and David L. BLACK 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 ASYMMETRIC ASYNCHRONOUS MIRRORING FOR HIGH AVAILABILITY, 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 29, 2012 as U.S. Application No. 13/433,885;
[]	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 giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

PATENT REEL: 028304 FRAME: 0299

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.		
AND, we hereby authorize atto parenthesis (orneys of Muirhead and Saturnelli, LLC to insert her) the application number sign counterpart application) to facilitate the recording nument.	e in r and ng or
IN TESTIMONY WHEREO set forth below:	PF , we have hereunto set our hands and affixed our se	eals as
Date:		
	Inventor's Signature	
Print full name of first inventor:	Victor SALAMON	
Residence:	12011 18 Avenue SW	
	Edmonton, AB, T6W 1W3, Canada	
Citizenship:	Canada	
Mailing Address:	Same as above	
I	(name) whose residential address is	
was personally present and did see the assignment) who is personally know	wn to me, execute the above assignment.	ing
	(signature of first witness)	
Signed at	(location of witness signature)	
on this day	_ of 20 (date of signature)	
I	(name) whose residential address is	
was personally present and did see the assignment) who is personally know	(name of person signi wn to me, execute the above assignment.	ing
	(signature of first witness)	
Signed at	(location of witness signature)	
on this day	of 20 . (date of signature)	

Date: April 30th 2012	Malin
	Inventor's Signature
Print full name of second inventor:	Ashish A. PALEKAR
Residence:	20 Benjamin Landing Lane
	Franklin, MA 02038
Citizenship:	India
Mailing Address:	Same
employee identification card; [] dr to be the person whose	12, then personally appeared before me the aboveme through satisfactory evidence of identification iver's license; [] (other)personally Known name is subscribed to the foregoing Assignment and me as his/her free act and deed for the purposes therein
	Myrary Public
	Print Name: Jeannette M. Thomas My Commission expires: 1/31/2014
	Jeannette M. Thomas NOTARY PUBLIC COMMONWEALTH OF MASSACHUSETTS My Commission Expires Jan. 31, 2014

Date:	
	Inventor's Signature
Print full name of third inventor:	Roel van der GOOT
Residence:	408, 10610 83 Avenue NW
	Edmonton, AB, T6E 2E2, Canada
Citizenship:	Netherlands
Mailing Address:	Same as above
I	(name) whose residential address is
was personally present and did see the assignment) who is personally know	(name of person signing vn to me, execute the above assignment.
who is personally know	vii to me, execute the above assignment.
	(signature of first witness)
Signed at	(location of witness signature)
on this day	of 20 (date of signature)
I	(name) whose residential address is
was personally present and did see the assignment) who is personally know	(name of person signing
	(signature of first witness)
Signed at	(location of witness signature)
on this day	of 20 (date of signature)

Date: 30 Apr. 1 2012	Lowist & Black
	Inventor's Signature
Print full name of fourth inventor:	David L. BLACK
Residence:	237 Central Street
	Acton, MA 01720
Citizenship:	U.S.A.
Mailing Address:	Same
On this day of, 2012, then personally appeared before me the above-named David L. BLACK known to me through satisfactory evidence of identification [] employee identification card; [] driver's license; [] (other) known 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: Jeannette M. Thomas My Commission expires: 1/31/2014
	Jeannette M. Thomas NOTARY PUBLIC COMMONWEALTH OF MASSACHUSETTS My Commission Expires Jan. 31, 2014