Substitute Form PTO-1595 Attorney Docket No.: 07072-161001 Client's Ref. No.: EMC-04-058

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06/30/04 Commissioner for Patents: Please record the attached original document(s) or copy(ies). 2. Name and address of receiving party(ies): 1. Name of conveying party(ies): **EMC Corporation** Steven T. Mcclure, Scott B. Gordon, Robert 176 South Street Decrescenzo, Timothy M. Johnson, and Zhi-Hopkinton, MA 01748-9103 Gang Liu Additional name(s) attached? ☐ Yes 図 No 3. Nature of conveyance: ☑ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name ☐ Other: Additional names/addresses attached? ☐ Yes ☑ No Execution Date: 6/28/2004; 6/28/2004; 6/28/2004; 6/28/2004; and 6/28/2004 4. Application number(s) or patent number(s): If this document is being filed with a new application, the execution date of the application is: 6/30/2004 A. Patent Application No(s).: B: Patent No(s).: Additional numbers attached? ☐ Yes 図 No 5., Name/address of party to whom correspondence concerning 6. Total number of applications/patents involved: 1 document should be mailed: FAUSTINO A. LICHAUCO 7. Total fee (37 CFR §3.41): \$40 Fish & Richardson P.C. ☑ Enclosed 225 Franklin Street ☐ Authorized to charge Deposit Account. Boston, MA 02110-2804 8. Deposit Account No.: 06-1050 Please apply any additional charges, or any credits, to our Deposit Account No. 06-1050. DO NOT USE THIS SPACE 9. Statement and Signature: To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Faustino A. Lichauco Reg. No. 41,942 Name of Person Signing Total number of pages including coversheet, attachments and document: 7 20890415.doc 07/09/2004 GTUN11 00000093 10881131 01 FC:8021 CERTIFICATE OF MAILING BY EXPRESS MAIL Express Mail Label No. <u>EV303680875US</u>

> PATENT REEL: 015542 FRAME: 0787

June 30, 2004

Date of Deposit:

ASSIGNMENT

WHEREAS, we, Steven T. Mcclure, Scott B. Gordon, Robert Decrescenzo, Timothy M. Johnson, and Zhi-Gang Liu, 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 *DETERMINING ENVIRONMENTAL AVAILABILITY IN A STORAGE SUBSYSTEM*, the specification of which:

[X]	is being executed on even date herewith and is about to be filed in the Unite 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: 015542 FRAME: 0788 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: 6/78/04	Stet Min			
	Inventor's Signature			
Print full name of first inventor:	Steven T. McClure			
Residence:	142 East Main Street, Northboro, MA 01532			
Citizenship:	USA			
Mailing Address:	142 East Main Street, Northboro, MA 01532			
COUNTY OF $MIDD$ On this $\frac{\partial \delta}{\partial t}$ day of $\frac{\partial t}{\partial t}$	ACHUSETTS OLESEX 2004, then personally appeared before me the me through satisfactory evidence of identification			
[X] 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 Sandra A. Kulaga NOTARY PUBLIC Print Name: My Commission Expires March 27, 2009 My Commission expires//			

Attorney Docket No: 07072-161001/EMC-04-058

Date: 6/28/2004	Inventor's Signature
Print full name of second inventor:	Scott B. Gordon
Residence:	158 Pleasant Street, Upton, MA 01568
Citizenship:	USA
Mailing Address:	158 Pleasant Street, Upton, MA 01568
On this <u>Hondard</u> day of <u>fund</u> , above-named Scott B. Gordon known to me employee identification card; [X] driver's licentification card; [X]	2004, then personally appeared before me the through satisfactory evidence of identification [] tense; [] (other) the person whose name is subscribed to the
	Sandra Or Kulaga
	Notary Public Sandra A. Kulaga
	Print Name: NOTARY PUBLIC My Commission Expires March 27, 2009
	My Commission expires / / /

Attorney Docket No: 07072-161001/EMC-04-058

Date: 6/28/2004	Inventor's Signature
Print full name of third inventor:	Robert DeCrescenzo
Residence:	12 Corey Way, Franklin, MA 02038
Citizenship:	USA 34 High Ridge Circle Franklin Ma 02
Mailing Address:	1 2 Corey Way, Franklin, MA 020 38
STATE/COMMONWEALTH OF COUNTY OF	MASSACHUSETTS MIDDLESEX
On this <u>28</u> day of <u>fune</u> above-named Robert DeCrescenzo [] employee identification card; [2]	, 2004, then personally appeared before me the known to me through satisfactory evidence of identification driver's license; [] (other) to be the person whose name is subscribed to the
foregoing Assignment and acknowle deed for the purposes therein contain	edged that he/she executed the same as his/her free act and
	Dandra a. Xulaga
	Notary Public Sandra A. Kulaga NOTARY PUBLIC Print Name: My Commission Expires March 27, 2009
	My Commission expires//

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Date: 6/28/2004	Limite Of John				
	Inventor's Signature				
Print full name of third inventor:	Timothy M. Johnson				
Residence:	12 Mt. Pleasant Avenue, Leicester, MA 01524				
Citizenship:	USA				
Mailing Address:	12 Mt. Pleasant Avenue, Leicester, MA 01524				
STATE/COMMONWEALTH OF MASSACHUSETTS					
COUNTY OF MI	DDLESEX				
On this 26 day of, 2004, then personally appeared before me the above-named Timothy M. Johnson 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 leed for the purposes therein contained.					
	Sandia a Kulaga				
	Notary Public				
	Print Name: Sandra A. Kulaga NOTARY PUBLIC My Commission Expires March 27, 2009				
	My Commission expires//				

Attorney Docket No: 07072-161001/EMC-04-058

Date: 06/28/2004	Thisay -
	Inventor's Signature
Print full name of third inventor:	Zhi-Gang Liu
Residence:	6 Baron Park Ln., #1, Burlington, MA 01803
Citizenship:	P.R. of China
Mailing Address:	6 Baron Park Ln., #1, Burlington, MA 01803
STATE/COMMONWEALTH OF Z	MASSACHUSETTS MIDDLESEX
above-named Zhi-Gang Liu known to memployee identification card; [2] driver	, 2004, then personally appeared before me the se through satisfactory evidence of identification [] r's license; [] (other) to be the person whose name is subscribed to the
	d that he/she executed the same as his/her free act and Sandra Or Kulaga
	Notary Public Sandra A. Kulaga Print Name: NOTARY PUBLIC My Commission Expires March 27, 2009 My Commission expires//

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RECORDED: 06/30/2004