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PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
R. Hugo Patterson	12/06/2010

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:	13865931

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	DDOMP044C1	
NAME OF SUBMITTER:	Terrence L. Wong	
Signature:	/Terrence L. Wong/	
Date: 08/27/2013		

Total Attachments: 3

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> PATENT REEL: 031089 FRAME: 0936

PATENT/Sole Assignment Attorney Docket No.: DDOMP044 EMC Docket No.: EMC-09-210(PRO)ORD3

ASSIGNMENT

WHEREAS, I, R. Hugo Patterson, 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 PERFORMANCE IMPROVEMENT OF A CAPACITY
OPTIMIZED STORAGE SYSTEM INCLUDING A DETERMINER, 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 September 21, 2010 as U.S. Application No. 12/887,414;
	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, I 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 me had this assignment and sale not been made; I 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. I 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, I hereby further agree for me and my 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,

PATENT REEL: 031089 FRAME: 0937

PATENT/Sole Assignment
Attorney Docket No.: DDOMP044

EMC Docket No.: EMC-09-210(PRO)ORD3

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, I 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, I have hereunto set my hand and affixed my seal as set forth below:

PATENT/Sole Assignment Attorney Docket No.: DDOMP044 EMC Docket No.: EMC-09-210(PRO)ORD3

Date: $12/b/lo$	Inventor's Signature			
Print full name of sole inventor:	R. Hugo Patterson			
Residence:	Los Altos, CA			
Citizenship:	United States of America			
Mailing Address:	2421 Mission College Boulevard, Santa Clara, CA 95054			
STATE OF CA COUNTY OF Santa				
On this 6 day of December . 20 10, before me appeared R. Hugo Pattersor 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 und foregoing paragraph is true and correct.	der the laws of the State of California that the			
WITNESS my hand and official seal.				
	neanna J. Santas			
	Notary Public			
	Print Name: Deanna L. Santos			
	My Commission expires 8 / 21 / 2012			
	DEANNA L. SANTOS COmmission # 1807272			

RECORDED: 08/27/2013