U.S. PTO 12/800448 05/14/2010 Form PTO-1595 (Rev. 07/05) U.S. DEPARTMENT OF COMMERCE 06-01-2010 OMB No. 0651-0027 (exp. 6/30/2008) United States Patent and Trademark Office 103598524 To the Director of the U.S. Patent cuments or the new address(es) below. Name and address of receiving party(ies) 1. Name of conveying party(ies,. Mark O'Connell **EMC Corporation** Internal Address: x No Additional name(s) of conveying party(ies) attached? Street Address: 3. Nature of conveyance/Execution Date(s): 176 South Street Execution Date(s): May 14, 2010 x Assignment Merger Change of Name Security Agreement Joint Research Agreement Hopkinton City: Government Interest Assignment Massachusetts State: Executive Order 9424, Confirmatory License Country: United States of America Zip: 01748 Additional name(s) & address(es) attached: 4. Application or patent number(s): | x | This document is being filed together with a new application. A. Patent Application No.(s) B. Patent No.(s) This application Additional numbers attached? 5. Name and address to whom correspondence 6. Total number of applications and concerning document should be mailed: patents involved: Name: Richard F. Giunta WOLF, GREENFIELD & SACKS, P.C. 7. Total fee (37 CFR 1.21(h) & 3.41) \$ Internal Address: Authorized to be charged by credit card Street Address: 600 Atlantic Avenue Authorized to be charged to deposit account **Enclosed** None required (government interest not affecting title)

May 14, 2010

Signature

Scott J. Gerwin - 57,866

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

05/28/2010 MJAMA1 00000039 232623

01 FC:8021

49.00 DA

Zip: 02210-2206

617.646.8000

rgiunta@wolfgreenfield.com

617.646.8646

8. Payment Information

b. Deposit Account Number

Last 4 Numbers

Expiration Date

Authorized User Name Richard F. Giunta

a. Credit Card

City:

State:

Phone Number:

Fax Number:

Email Address: 9. Signature: MA

Express Mail Label No. EM 130434136US Oated: May 14, 2010

E0295.70366US00 1977834.1

42800448

23/2825

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned Assignor, hereby:

- Sell, assign and transfer to EMC Corporation, a Massachusetts corporation having a place of business at 176 South Street; Hopkinton, Massachusetts 01748, its successors, assigns and legal representatives, all hereinafter referred to as the Assignee, my entire right, title and interest for the United States and all foreign countries, in and to any and all inventions and designs which are disclosed in the application for United States Letters Patent filed Concurrently Herewith, bearing Attorney Docket No. E0295.70366US00, entitled METHODS AND APPARATUS FOR MANAGING OBJECTS IN A STORAGE ENVIRONMENT, and naming Mark O'Connell as the inventor, and in and to the application and all corresponding provisional. non-provisional, divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent, utility models, industrial designs or similar intellectual property rights which have been or shall be filed in the United States, internationally, and in any foreign country, including but not limited to China, Japan and Korea, on any of the inventions; and in and to all original and reissued patents which have been or shall be issued in the United States or any other jurisdiction on the inventions, including the right to apply for patent rights in each foreign country and all rights to priority, including the right to claim priority for China, Japan and Korea, as well as the right to sue in its own name and recover damages for past infringement of any United States Letters Patent and foreign patent:
- 2. Agree that the Assignee may apply for and receive Letters Patent and utility model and industrial design registrations for the inventions in its own name; and when requested, without charge to but at the expense of the Assignee, I agree to carry out in good faith the intent and purpose of this assignment, by executing all non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent, utility model and industrial design applications on any and all the inventions, by executing all rightful oaths, assignments, powers of attorney and other papers, by communicating to the Assignee all facts known to me relating to the inventions and the history thereof, and generally by doing everything reasonably possible which the Assignee shall consider desirable for aiding in securing and maintaining proper protection for the inventions and for vesting title to the inventions and all applications for patents and all patents on the inventions, in the Assignee;
- 3. Request the Director of the United States Patent and Trademark Office and non-US patent authorities to issue the Letters Patent to the Assignee;
- 4. Authorize and request Wolf, Greenfield & Sacks, P.C. to supply any missing patent/application identification information or correct any errors in the patent/application identification information provided above, whether discovered prior to or after recordation;
- 5. Covenant with the Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me; and
- Appoint Assignee, through its designee, my attorney-in-fact to execute, in my name and on my behalf, any and all documents required to effectuate this Assignment, specifically including, but not limited to, those documents specified above and any necessary corrective assignments.

Móc

Page 1 of 2

This instrument is executed under seal and signed under the pains and penalties of perjury under the laws of the United States of America. Inventor: Mark O'Connell Address: 18 Phylmor Drive Westborough, Massachusetts 01581 Citizenship: US STATE/COMMONWEALTH OF Missing Line Ct. COUNTY OF SALLY COME day of 1/201 , 2011, before me, the undersigned notary public, personally appeared Mark O'Connell , proved to me through satisfactory evidence of identification, which were Hit Lance Are to be the person who signed the preceding or attached document in my presence and swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his) (her) knowledge and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose. SEAL Notary Public My commission expires: FAYE M. HAUGE

NOTARY PUBLIC
COMMONNEALTH OF MASSACHUSETTS
My Commission Expires Fob. 7, 2004

Page 2 of 2

RECORDED: 05/14/2010