

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT						
NATURE OF CONVEYANCE:	ASSIGNMENT						
CONVEYING PARTY DATA							
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Ron BIGMAN</td> <td>06/30/2013</td> </tr> <tr> <td>Adi HIRSCHTEIN</td> <td>06/30/2013</td> </tr> </tbody> </table>		Name	Execution Date	Ron BIGMAN	06/30/2013	Adi HIRSCHTEIN	06/30/2013
Name	Execution Date						
Ron BIGMAN	06/30/2013						
Adi HIRSCHTEIN	06/30/2013						
RECEIVING PARTY DATA							
Name:	EMC Corporation						
Street Address:	176 South Street						
City:	Hopkinton						
State/Country:	MASSACHUSETTS						
Postal Code:	01748						
PROPERTY NUMBERS Total: 1							
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13525816</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13525816		
Property Type	Number						
Application Number:	13525816						
CORRESPONDENCE DATA							
Fax Number:	5088988602						
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>							
Phone:	5088988601						
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Correspondent Name:	Muirhead and Saturnelli, LLC						
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Address Line 2:	Suite 1001						
Address Line 4:	Westborough, MASSACHUSETTS 01581						
ATTORNEY DOCKET NUMBER:	EMS-450US; EMC-12-227						
NAME OF SUBMITTER:	Anne E. Saturnelli						
Signature:	/Anne E. Saturnelli/						
Date:	07/10/2013						
Total Attachments: 3 source=assignment#page1.tif source=assignment#page2.tif source=assignment#page3.tif							

CH \$40.00 13525816

ASSIGNMENT

WHEREAS, we, Ron BIGMAN and Adi HIRSCHTEIN 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 PROVIDING STORAGE HINTS FOR USE IN CONNECTION WITH DATA MOVEMENT OPTIMIZATIONS**, the specification of which:

- is being executed on even date herewith and is about to be filed in the United States Patent Office;
- was filed on June 18, 2012 as U.S. Application No. 13/525,816;
- was patented under U.S. Patent No. _____ on _____.

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;

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 () the application number and filing date of said Application (or foreign counterpart application) to facilitate the recording or other official processing of this Assignment.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals as set forth below:

Date: 30.6.2013


Inventor's Signature

Print full name of first inventor: **Ron BIGMAN**
Residence: Harav Kapach 17
Holon, Israel 58248
Citizenship: Israel
Mailing Address: Same as above

I Morina Shapiro (name) whose residential address is Ha-Yovel St 3111, Ramat Gan was personally present and did see Ron Bigman (name of person signing the assignment) who is personally known to me, execute the above assignment.

 (signature of first witness)

Signed at EMC COE Kerenia (location of witness signature)

on this day 30 June of 20 13. (date of signature)

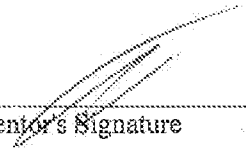
I Tomer Kushnir (name) whose residential address is 97 Elysee St Ramat Gan Israel was personally present and did see Ron Bigman (name of person signing the assignment) who is personally known to me, execute the above assignment.

 (signature of second witness)

Signed at EMC COE Kerenia (location of witness signature)

on this day 30/06/2013 of 20 13. (date of signature)

Date: 30/06/13


Inventor's Signature

Print full name of second inventor:

Adi HIRSCHTEIN

Residence:

19 Borochov
Givataim, Israel 53204


Citizenship:

Israel

Mailing Address:

Same as above

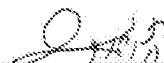
I Merrina Shapiro (name) whose residential address is
Ha-Yovel 311, Raanana
was personally present and did see Adi Hirschtein (name of person signing
the assignment) who is personally known to me, execute the above assignment.

 (signature of first witness)

Signed at EMC COE Herzliya (location of witness signature)

on this day 30 June of 2013. (date of signature)

I Lonev Mushiniv (name) whose residential address is
47 Elnsee st, Ramat-Gan, Israel
was personally present and did see Adi Hirschtein (name of person signing
the assignment) who is personally known to me, execute the above assignment.

 (signature of second witness)

Signed at EMC COE Herzliya (location of witness signature)

on this day 30/06/2013 of 2013. (date of signature)