

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT3028072

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|---|----------------------------------|
| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                   |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                       |
| <b>CONVEYING PARTY DATA</b>   |                                  |
| <b>Name</b>   | <b>Execution Date</b>            |
| MARIK MARSHAK   | 09/23/2010                       |
| ADNAN SAHIN   | 09/22/2010                       |
| HUI WANG  | 09/22/2010                       |
| XIAOMEI LIU   | 09/22/2010                       |
| SACHIN S. MORE  | 09/22/2010                       |
| <b>RECEIVING PARTY DATA</b>   |                                  |
| <b>Name:</b>  | EMC CORPORATION                  |
| <b>Street Address:</b>  | 176 SOUTH STREET                 |
| <b>City:</b>  | HOPKINTON                        |
| <b>State/Country:</b>   | MASSACHUSETTS                    |
| <b>Postal Code:</b>   | 01748                            |
| <b>PROPERTY NUMBERS Total: 1</b>  |                                  |
| <b>Property Type</b>  | <b>Number</b>                    |
| <b>Application Number:</b>  | 14489757                         |
| <b>CORRESPONDENCE DATA</b>  |                                  |
| <b>Fax Number:</b>  |                                  |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> |                                  |
| <b>Phone:</b>   | 508-898-8601                     |
| <b>Email:</b>   | docketing@westboro-ip.com        |
| <b>Correspondent Name:</b>  | MUIRHEAD AND SATURNELLI, LLC     |
| <b>Address Line 1:</b>  | 200 FRIBERG PARKWAY, SUITE 1001  |
| <b>Address Line 4:</b>  | WESTBOROUGH, MASSACHUSETTS 01581 |
| <b>ATTORNEY DOCKET NUMBER:</b>  | EMS-356USCON1                    |
| <b>NAME OF SUBMITTER:</b>   | ANNE E. SATURNELLI               |
| <b>SIGNATURE:</b>   | /Anne E. Saturnelli/             |
| <b>DATE SIGNED:</b>   | 09/18/2014                       |
| <b>Total Attachments: 6</b>   |                                  |
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ASSIGNMENT

WHEREAS, we, Marik Marshak, Adnan Sahin, Hui Wang, Xiaomei Liu and Sachin S. More, 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 MODELING DISK PERFORMANCE**, the specification of which:

- ☒ [ X ] is being executed on even date herewith and is about to be filed in the United States Patent Office;
- ☐ [ ] was filed on as U.S. Application No. ;
- ☐ [ ] 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.

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

Date: SEP 23, 2010

[Signature]  
Inventor's Signature

Print full name of first inventor: Marik Marshak  
Residence: 36 Tanglewood Road  
Newton, MA 02459  
Citizenship: Israel  
Mailing Address: Same

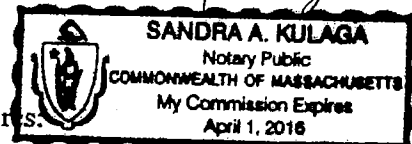
COMMONWEALTH OF MASSACHUSETTS  
COUNTY OF MIDDLESEX

On this 23 day of SEPTEMBER, 2010, then personally appeared before me the above-named Marik Marshak 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 deed for the purposes therein contained.

[Signature]  
Notary Public

Print Name:

My Commission expires:



Date: 9/22/10

Adnan Sahin  
Inventor's Signature

Print full name of second inventor: Adnan Sahin  
Residence: 140 Pine Grove Street  
Needham, MA 02494  
Citizenship: USA  
Mailing Address: Same

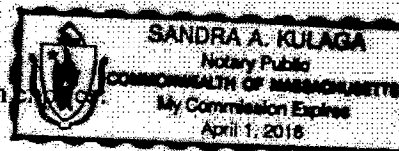
COMMONWEALTH OF MASSACHUSETTS  
COUNTY OF MIDDLESEX

On this 22 day of SEPTEMBER, 2010, then personally appeared before me the above-named Adnan Sahin known to me through satisfactory evidence of identification ☐ employee identification card; ☐ driver's license; ☒ (other) PERSONALLY KNOWN TO ME 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.

Sandra A. Kulaga  
Notary Public

Print Name:

My Commission



Date: 9/22/2010

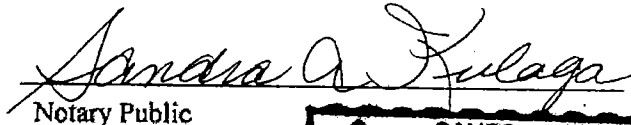


Inventor's Signature

Print full name of third inventor: **Hui Wang**  
Residence: **60 South Street**  
**Upton, MA 01568**  
Citizenship: **USA**  
Mailing Address: **Same**

COMMONWEALTH OF MASSACHUSETTS  
COUNTY OF MIDDLESEX

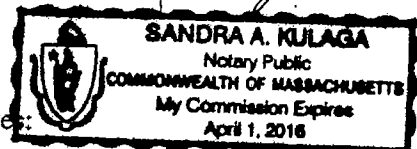
On this 22 day of SEPTEMBER 2010, then personally appeared before me the above-named Hui Wang known to me through satisfactory evidence of identification ☐ employee identification card; ☐ driver's license; ☒ (other) PERSONALLY KNOWN TO ME to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained.



Notary Public

Print Name:

My Commission expires:



Date: SEP. 22, 2010

Xiaomei Li  
Inventor's Signature

Print full name of fourth inventor: **Xiaomei Liu**  
Residence: **19 Lakeview Gardens, Apt. 910**  
**Natick, MA 01760**  
Citizenship: **P.R. China**  
Mailing Address: **Same**

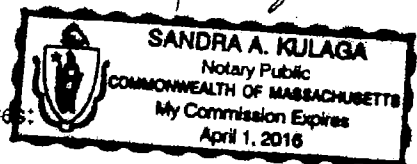
COMMONWEALTH OF MASSACHUSETTS  
COUNTY OF MIDDLESEX

On this 22 day of SEPTEMBER 2010, then personally appeared before me the above-named **Xiaomei Liu** known to me through satisfactory evidence of identification ☐ employee identification card; ☐ driver's license; ☒ (other) PERSONALLY KNOWN TO ME 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.

Sandra A. Kulaga  
Notary Public

Print Name:

My Commission expires:



Date: 9/22/2010



Inventor's Signature

Print full name of fifth inventor: **Sachin S. More**  
Residence: **141 Howard Street**  
**Northborough, MA 01532**  
Citizenship: **India**  
Mailing Address: **Same**

COMMONWEALTH OF MASSACHUSETTS  
COUNTY OF MIDDLESEX

On this 22 day of SEPTEMBER 2010, then personally appeared before me the above-named **Sachin S. More** known to me through satisfactory evidence of identification ☐ employee identification card; ☐ driver's license; ☒ (other) PERSONALLY KNOWN TO ME 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:

My Commission expires:

