

PATENT ASSIGNMENT COVER SHEET

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|---|----------------------------------|
| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| KENNETH HU | 04/25/2017 |
| QI JIN | 04/27/2017 |
| WILLIAM WHITNEY | 04/27/2017 |
| KARL M. OWEN | 04/26/2017 |
| RECEIVING PARTY DATA | |
| Name: | EMC IP HOLDING COMPANY LLC |
| Street Address: | 176 SOUTH STREET |
| City: | HOPKINTON |
| State/Country: | MASSACHUSETTS |
| Postal Code: | 01748 |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 15499334 |
| CORRESPONDENCE DATA | |
| Fax Number: | |
| <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> | |
| Phone: | 508-898-8601 |
| Email: | docketing@WESTBORO-IP.COM |
| Correspondent Name: | MUIRHEAD AND SATURNELLI, LLC |
| Address Line 1: | 200 FRIBERG PARKWAY, SUITE 1001 |
| Address Line 4: | WESTBOROUGH, MASSACHUSETTS 01581 |
| ATTORNEY DOCKET NUMBER: | EMS-656US |
| NAME OF SUBMITTER: | ANNE E. SATURNELLI |
| SIGNATURE: | /Anne E. Saturnelli/ |
| DATE SIGNED: | 04/27/2017 |
| Total Attachments: 6 | |
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ASSIGNMENT

WHEREAS, we, Dmitry TYLIK, Kenneth HU, Qi JIN, William WHITNEY and Karl OWEN, 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 QUALITY OF SERVICE FOR STORAGE SYSTEM RESOURCES, 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 IP HOLDING COMPANY LLC (hereinafter "ASSIGNEE"), which is a corporation organized and existing under the laws of Delaware 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: _____

Inventor's Signature

Print full name of first inventor:

Dmitry Nikolayevich TYLIK

Residence:

607 Windsor Ridge Drive
Westborough, MA 01581

Citizenship:

Russian Federation

Mailing Address:

Same as above

I _____ (name) whose residential address is _____ was
personally present and did see _____ (name of person signing the
assignment) who is personally known to me, execute the above assignment.

_____ (signature of first witness)

Signed at _____ (location of witness signature)

on this day _____ of 20____. (date of signature)

I _____ (name) whose residential address is _____ was
personally present and did see _____ (name of person signing the
assignment) who is personally known to me, execute the above assignment.

_____ (signature of second witness)

Signed at _____ (location of witness signature)

on this day _____ of 20____. (date of signature)

Date: 4/25/2017


Inventor's Signature

Print full name of second inventor:

Kenneth HU

Residence:

161 Grant Street

Lexington, MA 02420

Citizenship:

US

Mailing Address:

Same as above

I Yingying Martin (name) whose residential address is 59 Pine Hill Rd. Southborough, MA 01772 was personally present and did see Kenneth HU (name of person signing the assignment) who is personally known to me, execute the above assignment.

Yingying Martin (signature of first witness)

Signed at Hopkinton, MA (location of witness signature)

on this day 4/25 of 2017. (date of signature)

I NIKHIL A. PATIL (name) whose residential address is 29 VILLAGE ROCK LN. APT 3 NATICK, MA 01760 was personally present and did see KENNETH HU (name of person signing the assignment) who is personally known to me, execute the above assignment.

 (signature of second witness)

Signed at HOPKINTON, MA (location of witness signature)

on this day 25th APRIL of 2017. (date of signature)

Attorney Docket No.: EMS-656US

EMC Docket No.: EMC-16-0351

Date:

4/27/2017

Inventor's Signature

Print full name of third inventor:

Qi JIN

Residence:

2 Meachen Lane

Sudbury, MA 01776

Citizenship:

US

Mailing Address:

Same as above

I, Xiaomin Wu (name) whose residential address is
15 Sunnyside Ave, Wellesley MA 02482 was
personally present and did see Qi Jin (name of person signing the
assignment) who is personally known to me, execute the above assignment.

Xiaomin Wu (signature of first witness)

Signed at 228 South St. Hopkinton (location of witness signature)

on this day April 27 of 2017. (date of signature)

I, Binbin Lin (name) whose residential address is
18 Trailside Cir, Sudbury, MA, 01776 was
personally present and did see Qi Jin (name of person signing the
assignment) who is personally known to me, execute the above assignment.

Binbin Lin (signature of second witness)

Signed at 228 South St. Hopkinton (location of witness signature)

on this day April 27 of 2017. (date of signature)

Attorney Docket No.: EMS-656US

EMC Docket No.: EMC-16-0351

Date: April 27, 2017William C Whitney
Inventor's Signature

Print full name of fourth inventor:

William WHITNEY

Residence:

78 Lamarre Drive

Marlborough, MA 01752

Citizenship:

US

Mailing Address:

Same as above

I, AL DARIAN (name) whose residential address is
15 Captains Rd. Salem NH 03079 was
personally present and did see William Whitney (name of person signing the
assignment) who is personally known to me, execute the above assignment.

AD (signature of first witness)Signed at Hopkinton (location of witness signature)on this day 4/27/17 of 2017. (date of signature)

I, JOSEPH BISIMSKA (name) whose residential address is
1 Appleson Dr. Woburn MA 01806 was
personally present and did see William Whitney (name of person signing the
assignment) who is personally known to me, execute the above assignment.

JSB (signature of second witness)Signed at Hopkinton (location of witness signature)on this day 4/27 of 2017. (date of signature)

Date: 4/26/17


Inventor's Signature

Print full name of fifth inventor:

Karl M. OWEN

Residence:

1502 Arboretum Drive

Chapel Hill, NC 27517

Citizenship:

US

Mailing Address:

Same as above

I Greg Jones (name) whose residential address is
8708 Montauk Drive, Raleigh, NC 27615 was
personally present and did see Karl Owen (name of person signing the
assignment) who is personally known to me, execute the above assignment.


(signature of first witness)

Signed at 62 TW Alexander Drive, 27709 (location of witness signature)

on this day April 26 of 2017. (date of signature)

I Robert Goudreau (name) whose residential address is
1603 Kilarney Drive, Cary, NC 27511 was
personally present and did see Karl Owen (name of person signing the
assignment) who is personally known to me, execute the above assignment.


(signature of second witness)

Signed at 62 TW Alexander Drive, 27709 (location of witness signature)

on this day April 26 of 2017. (date of signature)