505510403 06/05/2019 PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE: | | NEW ASSIGNMENT | | |
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| NATURE OF CONVEYANCE: | | ASSIGNMENT | | |
| CONVEYING PART | Υ DATA | | | |
| | | Name | Execution Date | |
| GRANT R. WALLACE | | | 06/28/2016 | |
| PHILIP N. SHILANE | | | 06/26/2016 | |
| RECEIVING PARTY | DATA | | | |
| Name: | EMC C | EMC CORPORATION | | |
| Street Address: | 176 SC | 176 SOUTH STREET | | |
| City: | НОРК | HOPKINTON | | |
| State/Country: | MASS | MASSACHUSETTS | | |
| Postal Code: | 01748 | 01748 | | |
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| Application Numbe CORRESPONDENC Fax Number: <i>Correspondence wi</i> <i>using a fax number</i> Email: Correspondent Nan Address Line 1: Address Line 2: | E DATA ill be sent to , if provided ne: | (801)328-1707 o the e-mail address first; if that is uns d; if that is unsuccessful, it will be sen docketing@wnlaw.com CARL T. REED 60 EAST SOUTH TEMPLE SUITE 1000 SALT LAKE CITY, UTAH 84111 | | |
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PATENT Assignment EMC Docket Nu.: EMC-16-0588 Atty Docket No.: 20721.13

ASSIGNMENT

WHEREAS, I/we, Grant R. Wallace and Philip N. Shilane 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 BLOOM FILTERS IN A FLASH MEMORY, 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 me/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/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 me/us had this assignment and sale not been made; I/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. I/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, I/we hereby further agree for myself/ourselves and my/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

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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/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, I/we have hereunto set my/our hands and affixed my/our seals as set forth below:

6/28/2016 Date:

Zalt.

Inventor's Signature

Print full name of first inventor:

Residence:

Citizenship:

Mailing Address:

Grant R. Wallace Pennington, NJ U.S. 405 Oak Street Pennington, NJ 08534

STATE/COMMONWEALTH OF COUNTY OF

Then personally appeared before me the above-named $(\mathcal{A} \cap \mathcal{B}, \mathcal{U} \cap \mathcal{C})$ and acknowledged that he she executed the foregoing instrument as his/her free act and deed this $\mathcal{A} \cap \mathcal{A} \cap \mathcal{A}$, $\mathcal{A} \cap \mathcal{A}$,

Notary Public

~2-

Print Name: § My Commission expire (2)/2

ia ricker ID # 2400539 NOTARY PUBLIC STATE OF NEW JERSEY ly Commission Expires Sept. 21, 2020

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Date: chane di

Anventor's Signature

Print full name of second inventor: Residence: Citizenship: Mailing Address: Philip N. Shilane Newtown, PA U.S.

131 Pheasant Lane Newtown, PA 18940

STATE/COMMONWEALTH OF COUNTY OF

Mecar

Then personally appeared before me the above-named <u>Prilip Stillent</u> and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this <u>ack</u> day of <u>June</u>, 2010.

Maida

Print Name: Zakiyyar Silandor My Commission expires 25 16/201

ZAKIYYAH SALAHUOOIN Notary Public Stats of New Jersey My Commission Expires May 16, 2017 1.0.4 2420094

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RECORDED: 06/05/2019