PATENT ASSIGNMENT

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| SUBMISSION TYPE: | | NEW ASSIGNMEN | NEW ASSIGNMENT | | |
|---|-----------------------|-----------------------|-------------------------------|--|--|
| NATURE OF CONVEYANCE: | | ASSIGNMENT | ASSIGNMENT | | |
| CONVEYING PART | TY DATA | | | | |
| | | Name | Execution Date | | |
| Ying Xie | | | 02/02/2012 | | |
| Curtis Christian An | derson | 03/13/2012 | | | |
| Nitin Garg | | 02/02/2012 | | | |
| Dheer Moghe | | | 02/02/2012 | | |
| | Y DATA | | | | |
| I | | | | | |
| Name: | | EMC Corporation | | | |
| Street Address: | 176 South Street | | | | |
| City: | | Hopkinton | | | |
| State/Country: | MASSACHUSETTS | | | | |
| Postal Code: 01748 | | | | | |
| Property Type | | | Number | | |
| Application Number | er: | 13332132 | | | |
| CORRESPONDEN | CE DATA | | | | |
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| Correspondent Name: VAN PELT, YI & JAMES LLP | | | | | |
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| ATTORNEY DOCKET NUMBER: | | EMCCP239 | | | |
| NAME OF SUBMIT | TER: | Christopher C. Tan | | | |
| | | пп | PATENT | | |
| 501859665 | | | REFL: 027895 FRAME: 0273 | | |

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| Total Attachments: 6 |
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ASSIGNMENT

WHEREAS, we, Ying Xie, Curtis Christian Anderson, Nitin Garg and Dheer Moghe 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 *RECOVERING DATA LOST IN DATA DE-DUPLICATION SYSTEM*, the specification of which:

- [] is being executed on even date herewith and is about to be filed in the United States Patent Office;
- [X] was filed on December 20, 2011 as U.S. Application No. 13/332,132;
- [] 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:

PATENT REEL: 027895 FRAME: 0276

PATENT/Joint Assignment Attorney Docket No.: EMCCP239 EMC Docket No.: EMC-10-241

Date: 2/2/2012

Ying Xie

Print full name of first inventor:

Residence: Citizenship:

Mailing Address:

Cupertino, California China 176 South Street, Hopkinton, MA 01748

STATE OF <u>CA</u> DUNTY OF <u>Santa</u> Gara COUNTY OF

On this 2 day of February, 2012, before me appeared Ving Xie who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

Ying Xie

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Deanna J. Santas Notary Public Print Name: Deanna L. Santas My Commission expires 8/21/2012



PATENT/Joint Assignment Attorney Docket No.: EMCCP239 EMC Docket No.: EMC-10-241

Date:

Curris Christian Anderson

Print full name of second inventor:

Residence:

Citizenship:

Mailing Address:

Saratoga, California United States of America 13074 Montrose St., Saratoga, CA 95070

Curtis Christian Anderson

STATE OF COUNTY OF Unistic And 2012, before me appeared On this who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public Print Name: My Commission expires 2



PATENT/Joint Assignment Attorney Docket No.: EMCCP239 EMC Docket No.: EMC-10-241

Date: 2/2/2012

Nitin Garg

Print full name of third inventor: Residence: Citizenship: Mailing Address:

Sunnyvale, California India 176 South Street, Hopkinton, MA 01748

STATE OF <u>CA</u> OUNTY OF Santa Clara COUNTY OF

On this 2 day of February, 2017, before me appeared Nitin Garg who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

Nitin Garg

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Deanue J. Santos Notary Public

Print Name: Deanna L. Santos My Commission expires 8/2/2012



Date: 2 2 2012

Print full name of fourth inventor: Residence: Citizenship: Mailing Address:

Dheer Moghe Sunnyvale, California United States of America 176 South Street, Hopkinton, MA 01748

| STATE OF | CA | |
|-----------|-------|--|
| COUNTY OF | Santa | |

On this 2 day of February , 2012, before me appeared <u>Dheer Moghe</u> who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

-6-

Deanna J. Santos Notary Public Print Name: Deanna L. Santos

My Commission expires <u>8</u> / <u>H</u> / 2017

