PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3661026

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHEN GONG	12/16/2015
JUNPING FRANK ZHAO	12/11/2015
LESTER MING ZHANG	12/16/2015
JOE JIAN LIU	12/15/2015
DENNY DENGYU WANG	12/16/2015
WALTER LEI WANG	12/16/2015

RECEIVING PARTY DATA

Name:	EMC CORPORATION
Street Address:	176 SOUTH STREET
City:	HOPKINTON
State/Country:	MASSACHUSETTS
Postal Code:	01748

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14971043

CORRESPONDENCE DATA

Fax Number:

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.

Phone: 508-435-1000
Email: Docketing@emc.com
Correspondent Name: EMC CORPORATION OFFICE OF THE GENERAL CO
Address Line 1: 176 SOUTH STREET
Address Line 4: HOPKINTON, MASSACHUSETTS 01748

ATTORNEY DOCKET NUMBER:	EMC-14-0855(CN)US1
NAME OF SUBMITTER:	KONRAD R. LEE
SIGNATURE:	/Konrad R. Lee/
DATE SIGNED:	12/16/2015

Total Attachments: 8

source=EMC-14-0855_CN_US1_Assignment_FINAL#page1.tif
source=EMC-14-0855_CN_US1_Assignment_FINAL#page2.tif
source=EMC-14-0855_CN_US1_Assignment_FINAL#page3.tif
source=EMC-14-0855_CN_US1_Assignment_FINAL#page4.tif
source=EMC-14-0855_CN_US1_Assignment_FINAL#page5.tif
source=EMC-14-0855_CN_US1_Assignment_FINAL#page6.tif
source=EMC-14-0855_CN_US1_Assignment_FINAL#page7.tif
source=EMC-14-0855_CN_US1_Assignment_FINAL#page8.tif

ASSIGNMENT

WHEREAS, we, Chen Gong, Junping Frank Zhao, Lester Ming Zhang, Joe Jian Liu, Denny Dengyu Wang and Walter Lei Wang 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 REUSING STORAGE BLOCKS OF A FILE SYSTEM (Application), 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;

AND, we hereby authorize our attorneys, EMC Corporation, 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: 2015. 12. 16

Gong Chen
Inventor's Signature

Print full name of inventor Chen Gong

Residence 7-2-503 Jin Yu Hua Fu
Long Yu Middle Road
Beijing, China 100083

Citizenship China

Mailing Address Same as above

I, Leon Zhang (name of first witness), whose residential address is
7F. blockD, Tsinghua Science Park. No.1 zhongguancun East Road HaiDian District. Beijing. 100084. P.R.C.
was personally present and did see Chen Gong (name of person signing the assignment), who is personally known to me, execute the above assignment.

张[illegible] (signature of first witness)
Signed at 7F. block D, Tsinghua Science Park. No.1. Zhongguancun East Road, HaiDian District. BeiJing. 100084. P.R.C. (location of witness signature)
on this day, Dec. 16th, 20 15 (date of signature).

I, Chao han (name of second witness), whose residential address is
7F, block D, Tsinghua Science Park, No.1 ZhongguanCun East Road, HaiDian District, Beijing, 100084 P.R.C
was personally present and did see Chen Gong (name of person signing the assignment), who is personally known to me, execute the above assignment.

韩超 (signature of second witness)
Signed at 7F, block D, Tsinghua Science Park, No.1 ZhongguanCun East Road, HaiDian District, Beijing, 100084, P.R.C (location of witness signature)
on this day, Dec. 16th, 20 15 (date of signature).

Date: Dec 11, 2015

Zhao Junping
Inventor's Signature

Print full name of inventor	**Junping Frank Zhao**
Residence	Level 18, Block D, Tsinghua Science Park, No. 1, ZhongGuanCun East Road, Haidian Beijing, China 100084
Citizenship	China
Mailing Address	Same as above

I, Sanping Li (name of first witness), whose residential address is
Apt 307-212, Kexueyuannanli Quarter, Chaoyang Dist. Beijing 100084, China
was personally present and did see **Junping Frank Zhao** (name of person signing the assignment), who is personally known to me, execute the above assignment.

(signature of first witness)
Signed at Beijing 100101, China (location of witness signature)
on this day, Dec 11, 20 15 (date of signature).

I, Zhe Dong (name of second witness), whose residential address is
Level 8, Block D, Tsinghua Science Park, No.1 ZhongGuanCun East Road, Haidian, Beijing, China 100084
was personally present and did see **Junping Frank Zhao** (name of person signing the assignment), who is personally known to me, execute the above assignment.

董哲 (signature of second witness)
Signed at Beijing 100101, China (location of witness signature)
on this day, Dec 11, 20 15 (date of signature).

Date: Dec 16th. 2015

Lester Ming Zhang
Inventor's Signature

Print full name of inventor **Lester Ming Zhang**

Residence Wangjingyan, Wangjing Zhong Huan Sou
Beijing, China 100084

Citizenship China

Mailing Address Same as above

I, Leon zhang (name of first witness), whose residential address is 7F. block D. Tsinghua Science Park. NO.1 zhongguanCun East Road HaiDian District. BeiJing 100084. P.R.C was personally present and did see **Lester Ming Zhang** (name of person signing the assignment), who is personally known to me, execute the above assignment.

(signature of first witness)

Signed at 7F. block D. Tsinghua Science Park. NO.1. zhongguanCun East Road HaiDian District. BeiJing. 100084. P.R.C (location of witness signature)

on this day, Dec. 16th, 20 15 (date of signature).

I, Chao han (name of second witness), whose residential address is 7F. block D. Tsinghua Science Park. No.1 zhongguanCun East Road HaiDian District. Beijing. 100084. PR was personally present and did see **Lester Ming Zhang** (name of person signing the assignment), who is personally known to me, execute the above assignment.

韩超 (signature of second witness)

Signed at 7F. block D. Tsinghua Science Park No.1 ZhongguanCun East Road HaiDian District. Beijing. 100084. P.R.C (location of witness signature)

on this day, Dec. 16th, 20 15 (date of signature).

Date: Dec 15, 2015

Liu Jian
Inventor's Signature

Print full name of inventor	**Joe Jian Liu**
Residence	Rm 1401, Unit 1, Dingxiuqingxi Dong Xiaokou, Changping Beijing, China 100192
Citizenship	China
Mailing Address	Same as above

I, Ted Zhang (name of first witness), whose residential address is Level 8, Block D, Tsinghua Science Park, No. 1 Zhongguancun East Road, Haidian, Beijing, China, 100084 was personally present and did see **Joe Jian Liu** (name of person signing the assignment), who is personally known to me, execute the above assignment.

Ted Zhang (signature of first witness)

Signed at 8/F, Block D, Tsinghua Science Park, No.1 Zhongguancun East Road, Hai'Dian, Beijing 100084, P.R.C. (location of witness signature)

on this day, Dec. 15th, 20 15 (date of signature).

I, Leon Zhang (name of second witness), whose residential address is 8/F, Block D, Tsinghua Science Park, No 1 Zhongguancun East Road, HaiDian District, BeiJing, 100084, P.R. was personally present and did see **Joe Jian Liu** (name of person signing the assignment), who is personally known to me, execute the above assignment.

(signature of second witness)

Signed at 8/F, Block D, Tsinghua Science Park, No.1 Zhongguancun East Road, HaiDian District, BeiJing, 100084, P.R.C. (location of witness signature)

on this day, Dec. 15th, 20 15 (date of signature).

Date: 2015.12.14

Denny Dengyu Wang
Inventor's Signature

Print full name of inventor	**Denny Dengyu Wang**
Residence	Liu Xing Hua Yuan 22-5-302, Chanpi Beijing, China 100086
Citizenship	China
Mailing Address	Same as above

I, Ted Zhang (name of first witness), whose residential address is 7F, Block D, Tsinghua Science Park, No.1 Zhongguancun East Road, HaiDian District, Beijing, 100084 P.R.C was personally present and did see **Denny Dengyu Wang** (name of person signing the assignment), who is personally known to me, execute the above assignment.

Ted Zhang (signature of first witness)
Signed at 7F, Block D, Tsinghua Science Park, No.1 Zhongguancun East Road, HaiDian District, Beijing, 100084 P.R.C (location of witness signature)
on this day, Dec. 14th, 20 15 (date of signature).

I, Qiaosheng Zhou (name of second witness), whose residential address is 7F, Block D. Tsinghua Science Park, No.1 Zhongguancun East Road, HaiDian District, Beijing 100084 P.R.C was personally present and did see **Denny Dengyu Wang** (name of person signing the assignment), who is personally known to me, execute the above assignment.

Qiaosheng Zhou (signature of second witness)
Signed at 7F, Block D, Tsinghua Science Park, No.1 Zhongguancun East Road, HaiDian District, Beijing, 100084, P.R.C (location of witness signature)
on this day, Dec 14th, 20 15 (date of signature).

Date: Dec. 16th. 2015

Walter Lei Wang
Inventor's Signature

Print full name of inventor	**Walter Lei Wang**
Residence	Floor 3, Building 1 KIC Plaza, No.234 Songhu Road Shanghai, China 200433
Citizenship	China
Mailing Address	Same as above

I, Yun zhang (name of first witness), whose residential address is Floor 2. Building 2. KIC Plaza, No.252 Songhu Road. Shanghai was personally present and did see **Walter Lei Wang** (name of person signing the assignment), who is personally known to me, execute the above assignment.

Yun zhang (signature of first witness)
Signed at Floor 2. Building 2. KIC Plaza, No.252. Songhu Road, Shanghai (location of witness signature)
on this day, Dec. 16th, 20 15 (date of signature).

I, Xue Dong Gao (name of second witness), whose residential address is Floor 2 Building 2 KIC Plaza No.252 Songhu Road, Shanghai was personally present and did see **Walter Lei Wang** (name of person signing the assignment), who is personally known to me, execute the above assignment.

Xue Dong Gao (signature of second witness)
Signed at Floor 2 Building 2. KIC Plaza. No 252 Songhu Road. Shanghai (location of witness signature)
on this day, Dec 16th, 20 15 (date of signature).