

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
JUNPING FRANK ZHAO	08/24/2017
LAYNE LIN PENG	11/08/2017
YU CAO	08/22/2017
SANPING LI	08/30/2017
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:	15455709
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>	
Email:	amanda.bernier@emc.com
Correspondent Name:	EMC IP HOLDING COMPANY LLC
Address Line 1:	176 SOUTH STREET
Address Line 4:	HOPKINTON, MASSACHUSETTS 01748
ATTORNEY DOCKET NUMBER:	EMC-15-1152-US-1
NAME OF SUBMITTER:	AMANDA M. BERNIER
SIGNATURE:	/Amanda M. Bernier/
DATE SIGNED:	11/14/2017
Total Attachments: 6	
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ASSIGNMENT

WHEREAS, we, Junping Frank Zhao, Layne Lin Peng, Yu Cao, Sanping Li, and Zhe Dong and 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 *METHODS AND APPARATUSES FOR DATA MIGRATION OF A STORAGE DEVICE* (Application), the specification of which:

- is being executed on even date herewith and is about to be filed in the United States Patent Office;
- was filed on March 10, 2017 as U.S. Application No. 15/455,709;
- was patented under U.S. Patent No. _____ on _____.

WHEREAS, EMC IP HOLDING COMPANY LLC (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the State 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 our attorneys, EMC IP HOLDING COMPANY LLC, to insert here in parenthesis (15/455,709 filed March 10, 2017) 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: 2017, 8, 24 Zhao Junping
Inventor's Signature

Print full name of inventor Junping Frank Zhao
Residence Block D, Tsinghua SciencePark, 18 Floor
No.1, Zhong Guan Cun East Road
10084 Beijing, CN
Citizenship CN
Mailing Address Same as above


I, GENG YU (name of first witness), whose residential address is
81F, Block D, Tsinghua Science Park, No.1 ZGC East Road
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.

Geng Yu (Signature of first witness)
Signed at Beijing (location of witness signature)
on this day, 08-24, 2017 (date of signature).

I, Lin Fucui (name of second witness), whose residential address is
81F, Block D, Tsinghua Science Park, No.1 ZGC East Road
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.

Lin Fucui (Signature of second witness)
Signed at Beijing (location of witness signature)
on this day, 8-24, 2017 (date of signature).

Date: 2017. 11. 8



Inventor's Signature

Print full name of inventor

Layne Lin Peng

Residence

Level 2 and 3, KIC Plaza

No. 252, SongHu Road, Yang Pu Distinction

200120 Shanghai, CN

Citizenship

CN

Mailing Address

Same as above

I, Wu, Pengfei (name of first witness), whose residential address is
Level 5, KIC Plaza, No. 252, SongHu Road, Shanghai, CN
was personally present and did see Layne Lin Peng (name of person signing the assignment),
who is personally known to me, execute the above assignment.

吴鹏飞 (Signature of first witness)
Signed at: Level 5, KIC Plaza, No. 252, SongHu Road, Shanghai, CN (location of witness signature)
on this day, Nov 8, 2017 (date of signature).

I, Ying, Zha (name of second witness), whose residential address is
Level 5, KIC Plaza No. 252, Songhu Rd. Shanghai P.R.C.
was personally present and did see Layne Lin Peng (name of person signing the assignment),
who is personally known to me, execute the above assignment.

郑颖 (Signature of second witness)
Signed at Level 5, KIC No 252, Songhu Rd. Shanghai P.R.C. (location of witness signature)
on this day, Nov 8, 2017 (date of signature).

Date: 22 Aug 2017

Cao Yu
Inventor's Signature

Print full name of inventor Yu Cao
Residence Level 08, Block D, SP Tower,
No 1 Zhongguancun Dong Road
Beijing, CN
Citizenship CN
Mailing Address Same as above

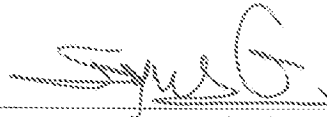
I, Jia Bin (name of first witness), whose residential address is
Beijing, P.R. China
was personally present and did see Yu Cao (name of person signing the assignment), who is
personally known to me, execute the above assignment.

[Signature] (Signature of first witness)
Signed at office (location of witness signature)
on this day, 22 Aug, 2017 (date of signature).

I, Yuzhi He (name of second witness), whose residential address is
Beijing, P.R. China
was personally present and did see Yu Cao (name of person signing the assignment), who is
personally known to me, execute the above assignment.

[Signature] (Signature of second witness)
Signed at office (location of witness signature)
on this day, 22 Aug, 2017 (date of signature).

Date: 08/30/2017



Inventor's Signature

Print full name of inventor

Sanping Li

Residence

Kexueyuannanli Sec 3, Chaoyang Dist

100101 Beijing, CN

Citizenship

CN

Mailing Address

Same as above

I, Fan Guo (name of first witness), whose residential address is
8F, Building D, Tsinghua Science Park, Beijing
was personally present and did see Sanping Li (name of person signing the assignment), who is
personally known to me, execute the above assignment.

Fan Guo (Signature of first witness)
Signed at Beijing (location of witness signature)
on this day, Aug. 30, 20 17 (date of signature).

I, Fei Chen (name of second witness), whose residential address is
8F, Building D, Tsinghua Science Park, Beijing
was personally present and did see Sanping Li (name of person signing the assignment), who is
personally known to me, execute the above assignment.

Fei Chen (Signature of second witness)
Signed at Beijing (location of witness signature)
on this day, Aug. 30, 20 17 (date of signature).