

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
QICHAO XIA	01/11/2017
WEI ZHENG	12/23/2016
COLIN YONG ZOU	01/10/2017
PHOEBE NINGNING CHENG	01/11/2017
MAN LV	01/10/2017
MENGWEI JIAO	01/10/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	EMC IP HOLDING COMPANY LLC
<b>Street Address:</b>	176 SOUTH STREET
<b>City:</b>	HOPKINTON
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	01748
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15388034
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>	
<b>Phone:</b>	5082936774
<b>Email:</b>	amanda.bernier@emc.com
<b>Correspondent Name:</b>	AMANDA BERNIER, PARALEGAL
<b>Address Line 1:</b>	176 SOUTH STREET
<b>Address Line 4:</b>	HOPKINTON, MASSACHUSETTS 01748
<b>ATTORNEY DOCKET NUMBER:</b>	EMC-15-0726(CN1)US
<b>NAME OF SUBMITTER:</b>	AMANDA BERNIER
<b>SIGNATURE:</b>	/Amanda Bernier/
<b>DATE SIGNED:</b>	01/11/2017
<b>Total Attachments: 8</b>	

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ASSIGNMENT

WE: 12/23/2016  
Wei Zheng

WHEREAS, we, Qichao Xia, ~~Wayne Wei Zheng~~, Colin Yong Zou, Phoebe Ningning Cheng, Man Lv and Mengwei Jiao 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 *METHOD AND APPARATUS FOR BACKUP COMMUNICATION* (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 December 22, 2016 as U.S. Application No. 15/388,034;
- 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 (15/388,034 filed December 22, 2016) 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: 01/11/2017 Qichao Xia  
Inventor's Signature

Print full name of inventor Qichao Xia  
Residence Hou Chang Cun East Road, Haidian District Room 302, Unit 1,  
100144 Beijing, CN Building 6, No. 9, Jion Cai West Road,  
Citizenship CN Xisanqi Street, Haidian District, Beijing  
Mailing Address Same as above

I, Xingxing Ni (name of first witness), whose residential address is  
Room 552, Building 8, Zhanchuangyuan Community, Haidian District Beijing  
was personally present and did see Qichao Xia (name of person signing the assignment), who is  
personally known to me, execute the above assignment.

Xingxing Ni (Signature of first witness)  
Signed at Suite 3201, Caizhi International Building C, Zhongguancun East Road No. 18 Haidian Beijing (location of witness signature)  
on this day, 01/11, 20 17 (date of signature).

I, Chonglin Cai (name of second witness), whose residential address is  
Room 552, Building 8, Zhanchuangyuan Community, Haidian District, Beijing  
was personally present and did see Qichao Xia (name of person signing the assignment), who is  
personally known to me, execute the above assignment.

Chonglin Cai (Signature of second witness)  
Signed at Suite 3201, Caizhi International Building C, Zhongguancun East Road No. 18, Haidian Beijing (location of witness signature)  
on this day, 01/11, 20 17 (date of signature).

Date: 12/23/2016

Wei Zheng  
Inventor's Signature

Print full name of inventor

~~Wayne Wei Zheng~~ Wei Zheng <sup>WZ, 12/23/2016</sup>

Residence

~~2F, Building #2, KIC Plaza, No. 252 Songhu Rd.  
200433 Shanghai, CN~~ 66-2102, No 22 Baoju Rd.  
201907 Shanghai, CN

Citizenship

CN

Mailing Address

Same as above

<sup>WZ, 12/23/2016</sup>

I, YANG TAO (name of first witness), whose residential address is

No.100 YIN XIAO Road, Pu Dong District, Shanghai CHINA

was personally present and did see Wayne Wei Zheng (name of person signing the assignment),

who is personally known to me, execute the above assignment.

Yang Tao (Signature of first witness)

Signed at 2F, Building #2, KIC PLAZA, No 252 Songhu Rd, Shanghai (location of witness signature)

on this day, 12/23, 2016 (date of signature).

I, Greg Ge (name of second witness), whose residential address is

Room 701, No. 478, Fanghua Rd. Pu Dong District, Shanghai, China

was personally present and did see Wayne Wei Zheng (name of person signing the assignment),

who is personally known to me, execute the above assignment.

Greg Ge (Signature of second witness)

Signed at 2F, Building #2, KIC PLAZA, No 252 Songhu Rd, Shanghai (location of witness signature)

on this day, 12/23, 2016 (date of signature).

Date: 1/10/2017

Colin Zou  
Inventor's Signature

Print full name of inventor

**Colin Yong Zou**

Residence

Building 2-2-702, Yard 1, LiShuiLianHua

Residential, Xicheng District

100055 Beijing, CN

Citizenship

CN

Mailing Address

Same as above

I, Peng Wu (name of first witness), whose residential address is  
Building 33#, Beijinrenjia, Huilongguan Town, Changping District,  
was personally present and did see Colin Yong Zou (name of person signing the assignment),  
who is personally known to me, execute the above assignment.

Peng Wu (Signature of first witness)

Signed at Beijing (location of witness signature)

on this day, 1/10, 20 17 (date of signature).

I, Lin Xiao (name of second witness), whose residential address is  
Building 32, Section 4 of Longyueyan, Huilongguan Town, Changping District  
was personally present and did see Colin Yong Zou (name of person signing the assignment),  
who is personally known to me, execute the above assignment.

Lin Xiao (Signature of second witness)

Signed at Tsinghua Science Park, Haidian District, Beijing (location of witness signature)

on this day, 01/10/2017, 20 17 (date of signature).

Date: 1/11/2017

Phoebe Cheng

Inventor's Signature

Print full name of inventor

**Phoebe Ningning Cheng**

Residence

No. 18, Nanjing Yan Road, 69 Lane, M

Shanghai, CN

Citizenship

CN

Mailing Address

Same as above

I, Alfred Zhang (name of first witness), whose residential address is  
2F, ~~100~~ building #2 KIC Plaza, No. 252 Songhu Road, Yangpu District, Shanghai  
was personally present and did see Phoebe Ningning Cheng (name of person signing the  
assignment), who is personally known to me, execute the above assignment.

Alfred Zhang

(Signature of first witness)

Signed at Shanghai (location of witness signature)

on this day, Jan 11th, 2017 (date of signature).

I, Yang Tao (name of second witness), whose residential address is  
#100, YENXIAO Rd, Pudong District, Shanghai  
was personally present and did see Phoebe Ningning Cheng (name of person signing the  
assignment), who is personally known to me, execute the above assignment.

Yang Tao

(Signature of second witness)

Signed at 2F, building #2, KIC PLAZA, NO. 252 Songhu Rd, Shanghai (location of witness signature)

on this day, Jan 11th, 2017 (date of signature).



Date: 01/10/2017

Man Lv

Inventor's Signature

Print full name of inventor

**Man Lv**

Residence

Tsinghua Science Park

100084 Beijing, CN

Citizenship

CN

Mailing Address

Same as above

I, Eric Song (name of first witness), whose residential address is

Building 24, Longhuayuan, Changping District, Beijing, P.R. China

was personally present and did see Man Lv (name of person signing the assignment), who is personally known to me, execute the above assignment.

Eric Song (Signature of first witness)

Signed at Block D, Tsinghua Science Park, Beijing, P.R. China (location of witness signature)

on this day, Jan. 10th, 2017 (date of signature).

I, Kevin Ge (name of second witness), whose residential address is

Room 708, Building 11, Jinquanjiayuan, Chaoyang District, Beijing, P.R. China

was personally present and did see Man Lv (name of person signing the assignment), who is personally known to me, execute the above assignment.

Kevin Ge (signature of second witness)

Signed at Block D, Tsinghua Science Park, Beijing, P.R. China (location of witness signature)

on this day, Jan. 10th, 2017 (date of signature).

Date: 01/10/2017

Mengwei Jiao

Inventor's Signature

Print full name of inventor

**Mengwei Jiao**

Residence

28# 1-301 Tiantongyuan Bei Er Qu, Changping

102218 Beijing, CN

Citizenship

CN

Mailing Address

Same as above

I, Peng Wu (name of first witness), whose residential address is  
33# Building, Beijingrenjia, Huilongguan Town, Changping District.  
was personally present and did see Mengwei Jiao (name of person signing the assignment), who  
is personally known to me, execute the above assignment.

Peng Wu (Signature of first witness)

Signed at Beijing (location of witness signature)

on this day, 01/10/2017, 2017 (date of signature).

I, Lin Xiao (name of second witness), whose residential address is  
Building 32, Section 4 of Longyueguan, Huilongguan Town, Changping District  
was personally present and did see Mengwei Jiao (name of person signing the assignment), who  
is personally known to me, execute the above assignment.

Lin Xiao (signature of second witness)

Signed at Beijing (location of witness signature)

on this day, 01/10/2017, 2017 (date of signature).