505303507 01/30/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5350287

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HONGRU XU	12/13/2018
FEI LONG	12/13/2018
TIANFANG XIONG	12/13/2018

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:	16222072

CORRESPONDENCE DATA

Fax Number: (508)366-4688

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: 508-616-2900

Email: Docket@BainwoodHuang.com

Correspondent Name: BAINWOOD, HUANG & ASSOCIATES, LLC

Address Line 1: 2 CONNECTOR ROAD

Address Line 4: WESTBOROUGH, MASSACHUSETTS 01581

ATTORNEY DOCKET NUMBER:	1003-633
NAME OF SUBMITTER:	DAVID E. HUANG, ESQ.
SIGNATURE: /David E. Huang, Reg. No. 39,229/	
DATE SIGNED:	01/30/2019

Total Attachments: 9

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> PATENT REEL: 048187 FRAME: 0267

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> PATENT REEL: 048187 FRAME: 0268

PATENT ASSIGNMENT Attorney Docket No.: 1003-633

Client Docket No.: 110224.02

ASSIGNMENT

WHEREAS, I, Hongru Xu, as the original inventor or an original joint inventor 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, DEVICE AND COMPUTER READABLE MEDIUM FOR DATA SYNCHRONIZATION

which is further identified by Attorney Docket Number 1003-633;

WHEREAS, EMC IP Holding Company LLC (hereinafter "ASSIGNEE"), a limited liability company organized and existing under the laws of the state of Delaware and having a usual place of business at 176 South Street, Hopkinton, MA, 01748, USA, desires to acquire an interest therein in accordance with agreements duly entered into with me;

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 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 had this assignment and sale not been made; I 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 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 hereby further agree for myself and my executors and administrators to execute upon request any other lawful documents and likewise to perform any other

PATENT ASSIGNMENT Attorney Docket No.: 1003-633

Client Docket No.: 110224.02

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, I 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 I hereby authorize the attorneys at Bainwood Huang & Associates LLC to insert here in parentheses

(16/222,072, filed 12/17/2018)

the application number and filing date of said application (or foreign counterpart application) to facilitate the recording or other official processing of this Assignment.

Attorney Docket No.: 1003-633 Client Docket No.: 110224.02

Date: 2018.12.13	Hongru Хи Inventor's Signature
	Inventor's Signature
Legal name of inventor:	Hongru Xu
Residence:	Room 401, Unit 24, No. 410 Shangpu Road, Pudong New District Shanghai, 200124 China (People's Republic)
Mailing Address: Citizenship:	Same as Above CN
1 Mertin h	(name) whose residential address is
assignment) who is personally known	fongru Xu (name of person signing the to me, execute the above assignment.
	(signature of first witness)
Signed at K1C1,252 Southur Road, S	MM/MUlocation of witness signature)
on this day	(signature of first witness) www.ll. (location of witness signature) of 20 18. (date of signature)
Charry Song. KICI 252 Song hu Road.	(name) whose residential address is
was personally present and did see <u>h</u> assignment) who is personally known	longru Xu (name of person signing the to me, execute the above assignment.
Cherry Song	(signature of second witness)
Signed at KICI 252 Soryhu	(signature of second witness) Road Sharphy (location of witness signature) of 20/8. (date of signature)
on this day	of 20 <u>/</u> 8. (date of signature)

Attorney Docket No.: 1003-633 Client Docket No.: 110224.02

ASSIGNMENT

WHEREAS, I, Fei Long, as the original inventor or an original joint inventor 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, DEVICE AND COMPUTER READABLE MEDIUM FOR DATA SYNCHRONIZATION

which is further identified by Attorney Docket Number 1003-633;

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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 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 had this assignment and sale not been made; I 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 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 hereby further agree for myself and my executors and administrators to execute upon request any other lawful documents and likewise to perform any other

Attorney Docket No.: 1003-633 Client Docket No.: 110224.02

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, I 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;

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PATENT ASSIGNMENT Attorney Docket No.: 1003-633 Client Docket No.: 110224.02

Date: 2018.12.13	Te' Long .	
	Inventor's Signature	
Legal name of inventor:	Fei Long	
Residence:	Room 503, Building 54, Yongtai Road 2079 Nong Pudong New District Shanghai, 200123 China (People's Republic)	
Mailing Address: Citizenship:	Same as Above CN	
1 Mertin li	(name) whose residential address is	
was personally present and did see <u>Fei Long</u> (name of person signing the assignment) who is personally known to me, execute the above assignment.		
Marlan Li	(signature of first witness)	
Signed at KIG, 25) Sow hu Road, Show hai (location of witness signature)		
on this day (2/13	of 20 <u>l</u> . (date of signature)	
Cherry Song, KICI 252 Songhu Road.	(name) whose residential address is,	
was personally present and did see <u>Fei Long</u> (name of person signing the assignment) who is personally known to me, execute the above assignment.		
Chery Song	(signature of second witness)	
Signed at KIU. 252. Song hu Ku	(location of witness signature)	
on this day of 20/8. (date of signature)		

Attorney Docket No.: <u>1003-633</u> Client Docket No.: <u>110224.02</u>

ASSIGNMENT

WHEREAS, I, <u>Tianfang Xiong</u>, as the original inventor or an original joint inventor 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, DEVICE AND COMPUTER READABLE MEDIUM FOR DATA SYNCHRONIZATION

which is further identified by Attorney Docket Number 1003-633;

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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 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 had this assignment and sale not been made; I 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 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 hereby further agree for myself and my executors and administrators to execute upon request any other lawful documents and likewise to perform any other

Attorney Docket No.: 1003-633 Client Docket No.: 110224.02

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AND, I 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 I hereby authorize the attorneys at Bainwood Huang & Associates LLC to insert here in parentheses

(16/222,072, filed 12/17/2018)

the application number and filing date of said application (or foreign counterpart application) to facilitate the recording or other official processing of this Assignment.

Attorney Docket No.: 1003-633 Client Docket No.: 110224.02

Date: Dec. 13, 2018	Jianking Kong Wentor's Signature	
Legal name of inventor:	Tianfang Xiong	
Residence:	3-6A, No. 977 Hong Qiao Road Changning District Shanghai, 200051 China (People's Republic)	
Mailing Address: Citizenship:	Same as Above CN	
1 Yibing Peng Room 501, No. 49, Luoyin	(name) whose residential address is go Road, shanghai, P. R. China	
was personally present and did see \underline{T}	ianfang Xiong (name of person signing the to me, execute the above assignment.	
Yihing, pang	(signature of first witness)	
Signed at KIC 1-3F, No. 234, Seng Hu Remonstration of witness signature)		
on this day Dec : 13		
1 Luna Kuang	(name) whose residential address is is in the control of the	
was personally present and did see \underline{T}	ianfang Xiong (name of person signing the to me, execute the above assignment.	
Luna Kuang	(signature of second witness)	
	f, Songhuld (location of witness signature)	
on this day <u>Dec. 13</u>	of 20 <u>8</u> . (date of signature)	

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PATENT REEL: 048187 FRAME: 0277