506139556 07/06/2020

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HAOHAN ZHANG	05/14/2020
DEZHENG ZHANG	05/15/2020
LIANGLIANG LIU	05/18/2020
LEI SHI	05/14/2020
WANGYUAN LI	05/05/2020

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:	16884226

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:	1003-1075
NAME OF SUBMITTER:	DAVID E. HUANG, ESQ.
SIGNATURE:	/David E. Huang, Reg. No. 39,229/
DATE SIGNED:	07/06/2020

Total Attachments: 10

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PATENT REEL: 053126 FRAME: 0914

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Attorney Docket No.: 1003-1075 Client Docket No.: 116830.02

ASSIGNMENT

WHEREAS, I, <u>Haohan Zhang</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 PROGRAM PRODUCT FOR PROCESSING DATA

which is further identified by Attorney Docket Number 1003-1075;

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.: 1003-1075

Client Docket No.: 116830.02

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

16/884, 226 , filed 5/27/20

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

Date: 2020-5-14

Haohan Zhang
Inventor's Signature

Legal name of inventor:

Haohan Zhang

Residence:

Apartment 113-101, Lane 500, Wanding Road

Minghang District Shanghai, 201100

China (People's Republic)

Mailing Address:

Same as Above

Citizenship:

Attorney Docket No.: 1003-1075 Client Docket No.: 116830.02

<u>ASSIGNMENT</u>

WHEREAS, I, <u>Dezheng Zhang</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 PROGRAM PRODUCT FOR PROCESSING DATA

which is further identified by Attorney Docket Number 1003-1075;

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

Attorney Docket No.: 1003-1075 Client Docket No.: 116830.02

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

16/884, 226 , filed 5/27/20

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

Date: _5/15/2020 Dezheng Zhang
Inventor's Signature

Legal name of inventor:

Dezheng Zhang

Residence:

6-502, Lane 1888, Yinggangdong Rd.

Shanghai, 201702

China (People's Republic)

Mailing Address:

Same as Above

Citizenship:

Attorney Docket No.: 1003-1075 Client Docket No.: 116830.02

ASSIGNMENT

WHEREAS, I, Liangliang Liu, 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 PROGRAM PRODUCT FOR PROCESSING DATA

which is further identified by Attorney Docket Number 1003-1075;

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

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Attorney Docket No.: 1003-1075

Client Docket No.: 116830.02

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

> 16/884, 286 , filed \$\frac{907/20}{20})

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

ling ling Liu
Inventor's Signature Date: 5/18/2020

Legal name of inventor:

Liangliang Liu

Residence:

Room 302, No.36, Lane 28, Chuangxinxi Road

Pudong District

Shanghai,

China (People's Republic)

Mailing Address:

Same as Above

Citizenship:

Attorney Docket No.: 1003-1075 Client Docket No.: 116830.02

ASSIGNMENT

WHEREAS, I, <u>Lei Shi</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 PROGRAM PRODUCT FOR PROCESSING DATA

which is further identified by Attorney Docket Number 1003-1075;

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

Attorney Docket No.: 1003-1075

Client Docket No.: 116830.02

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

> 16/884, 206 , filed 5/37/30)

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

Date: May 14th 2020

Legal name of inventor:

Lei Shi

Residence:

Room 505, Building 1, Zhengtong Road No. 29

Yangpu District

Shanghai,

China (People's Republic)

Mailing Address:

Same as Above

Citizenship:

Attorney Docket No.: <u>1003-1075</u> Client Docket No.: <u>116830.02</u>

ASSIGNMENT

WHEREAS, I, Wangyuan Li, 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 PROGRAM PRODUCT FOR PROCESSING DATA

which is further identified by Attorney Docket Number 1003-1075;

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

Attorney Docket No.: <u>1003-1075</u> Client Docket No.: <u>116830.02</u>

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

(16/884, 326 , filed 5/27/20)

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

Date: <u>Nay 5</u>, 2020

Inventor's Signature

Legal name of inventor:

Wangyuan Li

Residence:

401, No. 15, Alley 20, Dezhou Road

Pudong New District

Shanghai,

China (People's Republic)

Mailing Address:

Citizenship:

Same as Above