PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6040201

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------|----------------|
| YUHONG NIE | 03/31/2020 |
| WUICHAK WONG | 03/31/2020 |
| SANPING LI | 03/18/2020 |
| XUWEI TANG | 03/31/2020 |

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: | 16825389 |

CORRESPONDENCE DATA

Fax Number: (631)393-6271

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: (631)393-6270

Email: nyoffice@rml-law.com
Correspondent Name: JOSEPH B. RYAN

Address Line 1: 48 SOUTH SERVICE ROAD, SUITE 100

Address Line 2: RYAN, MASON & LEWIS, LLP
Address Line 4: MELVILLE, NEW YORK 11747

| ATTORNEY DOCKET NUMBER: | 118210.02 |
|-------------------------|------------------|
| NAME OF SUBMITTER: | JOSEPH B. RYAN |
| SIGNATURE: | /Joseph B. Ryan/ |
| DATE SIGNED: | 03/31/2020 |

Total Attachments: 8

source=4414-1570.Assignment#page1.tif source=4414-1570.Assignment#page2.tif

PATENT 505993491 REEL: 052274 FRAME: 0956



PATENT REEL: 052274 FRAME: 0957

ASSIGNMENT

WHEREAS, we, YuHong Nie, WuiChak Wong, Sanping Li and Xuwei Tang, 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 FOR SOLVING PROBLEM, COMPUTING SYSTEM AND PROGRAM PRODUCT, the specification of which:

| [X] | States Patent Office; |
|-----|--------------------------------------|
| [] | was filed on as U.S. Application No; |
| [] | was patented under U.S. Patent No on |

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, 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

PATENT/Joint Assignment Attorney Docket No.: 118210.02

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.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals as set forth below:

PATENT/Joint Assignment Attorney Docket No.: 118210.02

| Date: | |
|-------------------------------|---|
| | Inventor's Signature |
| Full name of first inventor: | YuHong Nie |
| Residence: | Shanghai, China |
| Citizenship: | China |
| Mailing Address: | Shanghai Pudong New District Zhoupu Tower |
| | Shanghai, China 200135 |
| | |
| Date: | |
| | Inventor's Signature |
| Full name of second inventor: | WuiChak Wong |
| Residence: | Xiamen, China |
| Citizenship: | China |
| Mailing Address: | Room 2601, No. 40, Wuyuan South Lane Heshan Street, China World Trade Center Tianqin Bay, Huli District Xiamen, China 361000 |
| Date: 03/18/2s 20 | Syps |
| | Inventor's Signature |
| Full name of third inventor: | Sanping Li |
| Residence: | Beijing, China |
| Citizenship: | China |
| Mailing Address: | Kexueyuannanli Sec. 3 Chaoyang District Beijing, China 100101 |

| Date: | |
|-------------------------------|---|
| | Inventor's Signature |
| Full name of fourth inventor: | Xuwei Tang |
| Residence: | Nanjing, China |
| Citizenship: | China |
| Mailing Address: | Jiangning Campus Nanjing University of Aeronautics and Astronautics Nanjing, China 210000 |

ASSIGNMENT

WHEREAS, we, YuHong Nie, WuiChak Wong, Sanping Li and Xuwei Tang, 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 FOR SOLVING PROBLEM, COMPUTING SYSTEM AND PROGRAM PRODUCT, the specification of which:

| [] | is being executed on even date herewith and is about to be filed in the United States Patent Office; |
|-----|--|
| [X] | was filed on March 20, 2020 as U.S. Application No. 16/825,389; |
| [] | was patented under U.S. Patent No on |

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, 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

PATENT/Joint Assignment Attorney Docket No.: 118210.02

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.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals as set forth below:

| Date: 31/3/2020 | Inventor's Signature |
|-------------------------------|---|
| Full name of first inventor: | YuHong Nie |
| Residence: | Shanghai, China |
| Citizenship: | China |
| Mailing Address: | Shanghai Pudong New District Zhoupu Tower |
| | Shanghai, China 200135 |
| Date: 21/2/20142 | |
| Date: 3//3/2020 | Wui Chak Wong Inventor's Signature |
| \mathcal{M} | Inventor's Signature |
| Full name of second inventor: | WuiChak Wong |
| Residence: | Xiamen, China |
| Citizenship: | China |
| Mailing Address: | Room 2601, No. 40, Wuyuan South Lane Heshan Street, China World Trade Center Tianqin Bay, Huli District Xiamen, China 361000 |
| Date: | Inventor's Signature |
| | |
| Full name of third inventor: | Sanping Li |
| Residence: | Beijing, China |
| Citizenship: | China Kawayananii Saa 2 |
| Mailing Address: | Kexueyuannanli Sec. 3 Chaoyang District Beijing, China 100101 |

Date:

31/3/2020

Kuwer Tong

Inventor's Signature

Full name of fourth inventor:

Residence:

Citizenship:

Mailing Address:

Xuwei Tang

Nanjing, China

China

Jiangning Campus

Nanjing University of Aeronautics and

Astronautics

Nanjing, China 210000

-4-