#### 504212125 02/03/2017

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4258802

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
JEAN-PIERRE BONO	05/18/2016
XIAOYE JIANG	05/24/2016
PHILIPPE ARMANGAU	03/28/2016

### **RECEIVING PARTY DATA**

Name:	EMC CORPORATION	
Street Address:	176 SOUTH STREET	
City:	HOPKINTON	
State/Country:	MASSACHUSETTS	
Postal Code:	01748	

### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	15085289

### 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

BAINWOOD, HUANG & ASSOCIATES, LLC **Correspondent Name:** 

Address Line 1: 2 CONNECTOR ROAD

Address Line 4: WESTBOROUGH, MASSACHUSETTS 01581

ATTORNEY DOCKET NUMBER:	1003-412	
NAME OF SUBMITTER:	JAMES F. THOMPSON, ESQ.	
SIGNATURE:	/James F. Thompson/	
DATE SIGNED:	02/03/2017	

## **Total Attachments: 9**

source=1003-412-ExecutedAssignment-Inv1#page1.tif source=1003-412-ExecutedAssignment-Inv1#page2.tif source=1003-412-ExecutedAssignment-Inv1#page3.tif source=1003-412-ExecutedAssignment-Inv2#page1.tif

**PATENT** REEL: 041168 FRAME: 0981 504212125

PATENT REEL: 041168 FRAME: 0982

PATENT ASSIGNMENT Attorney Docket No.: 1003-412

EMC Docket No.: EMC-14-0026

#### **ASSIGNMENT**

WHEREAS, I, <u>Jean-Pierre Bono</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

### DATA STORAGE SYSTEM EMPLOYING SPACE RECLAIM APPROXIMATION

which is further identified by Attorney Docket Number 1003-412;

WHEREAS, EMC Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts and having a usual place of business at 176 South Street, Hopkinton, Massachusetts, 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 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

PATENT ASSIGNMENT Attorney Docket No.: 1003-412

EMC Docket No.: EMC-14-0026

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 (15/185, 289 Filed on 3/30/16 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, I have hereunto set my hand and affixed my seal as set forth below:

PATENT ASSIGNMENT Attorney Docket No.: 1003-412 EMC Docket No.: EMC-14-0026

Date: 05/18/16	NA	
·	Invertidas Signature	
Legal name of inventor:	Jean-Pierre Bono √N	
Residence:	33 Wachusett View Drive	
	Westborough, MA 01581	
Citizenship:	US	
Mailing Address:	Same as above	
	ssachusetts Adlesex	
On this 18th day of May, 2016, then personally appeared before me the above-named Jean-Pierre Bono known to me through satisfactory evidence of identification [X] employee identification card; [_] driver's license; [_] (other) to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained.		
	South S. Holles	
	Notary Public Kelley	
	Print Name:  Line He S. Kelley  My Commission expires 07/13/20/8	
	LINETTE S. KELLEY  Notary Public  COMMONWEALTH OF MASSACHUSETTS  My Commission Expires  July 13, 2018	

Attorney Docket No.: 1003-412 EMC Docket No.: EMC-14-0026

### **ASSIGNMENT**

WHEREAS, I, Xiaoye Jiang, 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

### DATA STORAGE SYSTEM EMPLOYING SPACE RECLAIM APPROXIMATION

which is further identified by Attorney Docket Number 1003-412;

WHEREAS, EMC Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts and having a usual place of business at 176 South Street, Hopkinton, Massachusetts, 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 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

Attorney Docket No.: 1003-412 EMC Docket No.: EMC-14-0026

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 (15/085, 280 Taled on 3/30/16) 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, I have hereunto set my hand and affixed my seal as set forth below:

PATENT ASSIGNMENT Attorney Docket No.: 1003-412 EMC Docket No.: EMC-14-0026

Date: 5/24/2016 Inventor's Signature Legal name of inventor: Xiaoye Jiang Residence: 4 King Arthur Road Shrewsbury, MA 01545 Citizenship: US Mailing Address: Same as above STATE/COMMONWEALTH OF Massachusetts
COUNTY OF Middlesex On this <u>Juth</u>day of <u>May</u>, 2016, then personally appeared before me the above-named <u>Xiaoye Jiang</u> known to me through satisfactory evidence of identification [X] employee identification card; [\_\_] driver's license; [\_\_] (other) to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained.

Print Name:

My Commission expires <u>0713112018</u>

LINETTE S. KELLEY

Notary Public

COMMONWEALTH OF MASSACHUSETTS

My Commission Expires

July 13, 2018

Attorney Docket No.: 1003-412 EMC Docket No.: EMC-14-0026

#### **ASSIGNMENT**

WHEREAS, I, <u>Philippe Armangau</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

## DATA STORAGE SYSTEM EMPLOYING SPACE RECLAIM APPROXIMATION

which is further identified by Attorney Docket Number 1003-412;

WHEREAS, EMC Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts and having a usual place of business at 176 South Street, Hopkinton, Massachusetts, 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 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

Attorney Docket No.: 1003-412 EMC Docket No.: EMC-14-0026

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;

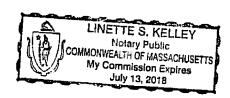
AND I hereby authorize the attorneys at Bainwood Huang & Associates LLC to insert here in parentheses (\_15/1) 85, 289 Filed on 3/3 o//6 ) the application number and filing date of said application (or foreign counterpart application) to facilitate the recording or other official processing of this Assignment.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my seal as set forth below:

PATENT ASSIGNMENT Attorney Docket No.: 1003-412

EMO Docket No.: EMC-14-0026

Date: 3/28/16 Legal name of inventor: Philippe Armangau Residence: 51 Seminole Road Acton, MA 01720 Citizenship: US Mailing Address: Same as above STATE/COMMONWEALTH OF COUNTY OF On this 28<sup>th</sup> day of March, 2016, then personally appeared before me the above-named Philippe Armangau known to me through satisfactory evidence of identification [X] employee identification card; [\_] driver's license; [\_] (other) to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained. Print Name:



My Commission expires \_\_\_/\_