504524498 08/29/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4571204

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PHILIPPE ARMANGAU	08/21/2017
CHRISTOPHER A. SEIBEL	08/28/2017

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:	15668388

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.

508-616-2900 Phone:

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:	1003-558	
NAME OF SUBMITTER:	M. ARI BEHAR, ESQ.	
SIGNATURE:	/Michael Ari Behar #58,203/	
DATE SIGNED:	08/29/2017	

Total Attachments: 6

source=1003-558-Inv1-assignment-ARMANGAU#page1.tif source=1003-558-Inv1-assignment-ARMANGAU#page2.tif source=1003-558-Inv1-assignment-ARMANGAU#page3.tif source=1003-558-Inv2-assignment-SEIBEL#page1.tif source=1003-558-Inv2-assignment-SEIBEL#page2.tif

PATENT 504524498

REEL: 043437 FRAME: 0750

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PATENT REEL: 043437 FRAME: 0751

PATENT ASSIGNMENT Attorney Docket No.: 1003-558

Client Docket No.: EMC-17-0159

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

SPEEDING DE-DUPLICATION USING A TEMPORAL DIGEST CACHE

which is further identified by Attorney Docket Number 1003-558;

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 lawful acts which may be deemed necessary to secure fully the aforesaid invention to

PATENT ASSIGNMENT Attorney Docket No.: 1003-558

Client Docket No.: EMC-17-0159

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

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.: 1003-558
Client Docket No.: EMC-17-0159 Date: 8/21/17 Inventor's Signatur Philippe Armangau Legal name of inventor: Residence: 51 Seminole Road Acton. MA 01720 United States of America Mailing Address: Same as Above Citizenship: US (name) whose residential address is was personally present and did see Philippe Armangau who is personally known to me, execute the above assignment. (signature of first witness) Signed at 23 (location of witness signature) of 20<u>//</u>. (date of signature) on this day 1 <u>KAMAKSH; Vi Sco BNADHA</u> (name) whose residential address is was personally present and did see Philippe Armangau who is personally known to me, execute the above assignment. (signature of second witness) Signed at 22k South St. Hopkinton Mt. (location of witness signature)

of 20 17. (date of signature)

on this day

PATENT ASSIGNMENT

PATENT ASSIGNMENT Attorney Docket No.: 1003-558

Client Docket No.: EMC-17-0159

ASSIGNMENT

WHEREAS, I, <u>Christopher A. Seibel</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

SPEEDING DE-DUPLICATION USING A TEMPORAL DIGEST CACHE

which is further identified by Attorney Docket Number 1003-558;

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 lawful acts which may be deemed necessary to secure fully the aforesaid invention to

PATENT ASSIGNMENT Attorney Docket No.: 1003-558

Client Docket No.: EMC-17-0159

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

$$(15/668,388)$$
, filed $8/3/3017$

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.: 1003-558 Client Docket No.: EMC-17-0159 Date: 8/28/2017 Inventor's Signature Christopher A. Seibel Legal name of inventor: Residence: 7 Jean Road Walpole, MA 02081 United States of America Mailing Address: Same as Above US Citizenship: (name) whose residential address is Keene was personally present and did see Christopher A. Seibel who is personally known to me, execute the above assignment. __ (signature of first witness) __ (location of witness signature) ___ of 20<u>17</u>. (date of signature) on this day _ Karaban (name) whose residential address is was personally present and did see Christopher A. Seibel who is personally known to me, execute the above assignment.

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(signature of second witness)

of 20 (2. (date of signature)

228 South St; Hopkinton (location of witness signature)

PATENT ASSIGNMENT

on this day