504545760 09/13/2017

# PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
MARK A. O'CONNELL	08/22/2017
STEPHEN TODD	08/18/2017

# **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:	15669499

## **CORRESPONDENCE DATA**

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using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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Correspondent Name: WILLIAM E. LEWIS

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ATTORNEY DOCKET NUMBER:	109145.01
NAME OF SUBMITTER:	WILLIAM E. LEWIS
SIGNATURE:	/william e. lewis/
DATE SIGNED:	09/13/2017

### **Total Attachments: 4**

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> PATENT REEL: 043576 FRAME: 0319

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#### ASSIGNMENT

WHEREAS, we, Mark A. O'Connell and Stephen Todd, 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 DECENTRALIZED COMPUTING RESOURCE MANAGEMENT USING DISTRIBUTED LEDGER, the specification of which:

	is being executed on even date herewith a States Patent Office;	nd is about to be filed in the United	
[X]	was filed on <u>August 4, 2017</u> as U.S. Appl	ication No. <u>15/669,499;</u>	
[]	was patented under U.S. Patent No.	OR	

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,

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PATENT/Joint Assignment Attorney Docket No.: 109145.01

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, 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:

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PATENT REEL: 043576 FRAME: 0321

Date: Aug 22 2017	MaloCa
<del>- 0</del>	Inventor's Signature
Print full name of first inventor:	Mark A. O'Connell
Residence:	Westborough, Massachusetts
Citizenship:	United States of America
Mailing Address:	68 South Street
	Westborough, Massachusetts 01581
1 My Zair	(name) whose residential address is
19092 Grill RA Daylesham, was personally present and did see Mark who is personally known to me, execute  HILL MAY A 244	A. O'Connell (name of person signing the assignment)
Signed at Westbook, M	(location of witness signature)
on this day Angust 22	of 20 [7- (date of signature)
1 haren Yeawell 68 South St Westbo	(name) whose residential address is
was personally present and did see Mark who is personally known to me, execute	A. O'Gonnell (name of person signing the assignment)
Janyenal	(signature of second witness)
Signed at WEST borrown,	(location of witness signature)
on this day 22 dug	of 20\\\ (date of signature)

PATENT/Joint Assignment Attorney Docket No.: 189145.01

Date: <u>Av6401 18 2017</u>	Startu Pas
	Inventor's Signature
Print full name of second inventor:	Stephen Todd
Residence:	Shrewsbury, Massachusetts
Citizenship:	United States of America
Mailing Address:	36 Thomas Farm Circle
	Shrewsbury, Massachusetts 01545
1 Jeanne He Thomas	(name) whose residential address is
14 Tadarola Ave Milford was personally present and did see Steph is personally known to me, execute the all and the second was personally known to me, execute the all and the second at Delleman, Hopkinton, on this day 18 th of August	eh Todd (name of person signing the assignment) who bove assignment(signature of first witness)(location of witness signature)
3 HANTHOUSE LN 550%	en Todd (name of person signing the assignment) who bove assignment.
Signed at 10-41 EMC Haplana	MA (location of witness signature)
on this day <u>R3 Ag</u>	of 20 <u>f</u> . (date of signature)

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PATENT REEL: 043576 FRAME: 0323