PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
STEPHEN TODD	06/15/2018
JEFFREY NORTON	11/15/2017

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:	15797663

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: WILLIAM E. LEWIS

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:	109644.01
NAME OF SUBMITTER:	WILLIAM E. LEWIS
SIGNATURE:	/william e. lewis/
DATE SIGNED:	06/18/2018

Total Attachments: 4

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> PATENT REEL: 046117 FRAME: 0284

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ASSIGNMENT

WHEREAS, we, Stephen Todd and Jeffrey Norton, 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 CONTENT STORAGE MANAGEMENT BASED ON MULTI-DIMENSIONAL VALUATION MODELS, 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 October 30, 2017 as U.S. Application No. 15/797,663;
[]	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,

PATENT/Joint Assignment Attorney Docket No.: 109644.01

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:

Date: JUNE 15 2018	Soon 7050
	Inventor's Signature
Print full name of first inventor:	Stephen Todd
Residence:	Shrewsbury, Massachusetts
Citizenship:	United States of America
Mailing Address:	36 Thomas Farm Circle
1 JOAN SHEAD	Shrewsbury, Massachusetts 01545
176 Swim St. F.	POPKZNON, NA
was personally present and did see Stepl	ten Todd (name of person signing the assignment) who
is personally known to me, execute the a	ibove assignment.
Loan Okon	(signature of first witness)
Signed at HOPKINGO, MA	
on this day 15YL 10AY 07 JOHN	of 20 <u>17</u> . (date of signature)
- 1.7.	Discourage State
1 SANDRA AKULBGA	(name) whose tesidential address is
17/2 S4 UTH STRE	ET HOPKINTON MA
was personally present and did see Steph is personally known to me, execute the a	en Todd (name of person signing the assignment) who bove assignment.
Janara Q Zuley	(signature of second witness)
Signed at <u>VoPK14 TOX</u>	A (location of witness signature)
on this day 15th JUNE"	of 201/8 . (date of signature)

Date: 1/15/2017	Inventor's Signature	
	// // // (Inventor's Signature	
Print full name of second inventor:	Jeffrey Norton	
Residence:	Laguna Niguel, California	
Citizenship:	United States of America	
Mailing Address:	24691 Monita Circle	
	Laguna Niguel, California 92677	
1 Erik S Hansen	(name) whose residential address is	
25857 CANGAS MV, CA, 92692 was personally present and did see Jeffrey Norton (name of person signing the assignment) who is personally known to me, execute the above assignment.		
CAB Donas	(signature of first witness)	
Signed at <u>Trvine</u> , <u>CA</u>	(location of witness signature)	
on this day <u>November 15</u>	of 20 (date of signature)	
	(name) whose residential address is	
26501 NORMANGIE DR BIB, CAVE FUREIT, CA 92630 was personally present and did see Jeffrey Norton (name of person signing the assignment) who is personally known to me, execute the above assignment.		
alla fill	(signature of second witness)	
Signed at IRVINE / CA	(location of witness signature)	
on this day NOVENDER 15	of 20 1 date of signature)	