504470166 07/24/2017

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RAMPRASAD CHINTHEKINDI	07/18/2017
NITIN MADAN	07/18/2017
ABHINAV DUGGAL	07/19/2017
LAN BAI	07/19/2017

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:	15656588

CORRESPONDENCE DATA

Fax Number:

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: 7136581818

Email: paula.hardilek@chamberlainlaw.com

Correspondent Name: PAULA HARDILEK

Address Line 1: 1200 SMITH ST., 14TH FLOOR

Address Line 4: HOUSTON, TEXAS 01748

ATTORNEY DOCKET NUMBER:	170360-015700US
NAME OF SUBMITTER:	ALY Z. DOSSA
SIGNATURE:	/Aly Z. Dossa/
DATE SIGNED:	07/22/2017

Total Attachments: 6

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ASSIGNMENT

WHEREAS, we, Ramprasad Chinthekindi, Nitin Madan, Abhinav Duggal and Lan Bai 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 A METHOD OR AN APPARATUS TO MOVE PERFECT DE-DUPLICATED UNIQUE DATA FROM A SOURCE TO DESTINATION STORAGE TIER, 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 July 21, 2017 as U.S. Application No. <u>15/656,588</u> ;
[]	was patented under U.S. Patent Noon

WHEREAS, EMC IP Holding Company (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 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 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 EMC Docket No.: EMC-17-0023; 170360-015700US

Date: 18th July 2017	Zampraead
	Inventor's Signature
Print full name of first inventor:	Ramprasad CHINTHEKINDI
Residence:	India
Citizenship:	India
Mailing Address:	c/o EMC IP Holding Company LLC
	176 South Street
	Hopkinton, MA 01748
#2-203 ATHARVA GANGA was personally present and did see RAMKA the assignment) who is personally known to	ignature of first witness) (location of witness signature)
I JAMES LOBO	(nama) nikawa rawidontial addrewa ke
BIS, SUKHWAND CLASSIO, MOL	HADI PIMPRI PUNE - 18
was personally present and did see RAMPR	ASAD LAINTHEKINDI (name of person signing
the assignment) who is personally known to	me, execute the above assignment.
	signature of second witness)
Signed at PUNE	(location of witness signature)
on this day 18th JULY of 3	

PATENT/Joint Assignment EMC Docket No.: EMC-17-0023; 170360-015700US

Date: 18th Jul . 2017	Null Med
	Inventor's Signature
Print full name of second inventor:	Nitin MADAN
Residence:	Gurugram, Haryana
Citizenship:	India
Mailing Address:	c/o EMC IP Holding Company LLC
	176 South Street
	Hopkinton, MA 01748
the assignment) who is personally l	(name) whose residential address is MOLWADI, PIMIKI, PONE - 18 NITH MADAM (name of person signing known to me, execute the above assignment. (signature of first witness)
	(location of witness signature)
on this day 18 th JULY	of 20 <u>17</u> . (date of signature)
I PALAK AGARWAL A2-203 ATHAR VA was personally present and did see	(name) whose residential address is GANGA, PASHAN, PUNE - 411021 NITIM MADAM (name of person signing
the assignment) who is personally	known to me, execute the above assignment.
PAgamel	(signature of second witness)
Signed at Pune	(location of witness signature)
on this day 18 th July	of 20 <u>17</u> . (date of signature)

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PATENT/Joint Assignment EMC Docket No.: EMC-17-0023; 170360-015700US

Date: 0 기	19/2017	OND
		Aventor's Signature
Print full name of th	ird inventor:	Abhinav DUGGAL
Residence:		Santa Clara, California
Citizenship:		India
Mailing Address:		c/o EMC IP Holding Company LLC
		176 South Street
		Hopkinton, MA 01748
<u>1</u> 1		
176manlh 30	<u>yanagayana</u>	, (name) whose residential address is , Apt 4301, Sanda Claga, CM -9505
was personally prese	at and did see - No	wikav Dugga I (name of person signing
the assignment) who	is personally know	wn to me, execute the above assignment.
Kenah		(signature of first witness)
Signed at <u>Sud</u>	e Clasa	(location of witness signature)
on this day <u>07</u>	14	_of 20 <u>14</u> (date of signature)
I SMXITI TO	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	(name) whose residential address is
20 DESCANS		1352, SAN JUGE, CA 95134
was personally present		KHINAY DUGGAL (name of person signing wn to me, execute the above assignment.
an assignment, who	io personany knor	an to the, execute the above assignment.
Smirilbally	М	(signature of second witness)
Signed at	CLARA	(location of witness signature)
on this day 07 11		of 20 17 . (date of signature)

Date: 0//17/2011	. Lan Bai
•	Inventor's Signature
Print full name of third inventor:	Lan BAI
Residence:	Cheisea, MI
Citizenship:	US
Mailing Address:	c/o EMC IP Holding Company LLC
	176 South Street
	Hopkinton, MA 01748
· · · · · · · · · · · · · · · · · · ·	(name) whose residential address is
725 S. Freer Pd. (Chelsea, M1 48118
was personally present and did see	Lan Bai (name of person signing
the assignment) who is personally know	wn to me, execute the above assignment. (signature of first witness)
Signed at 725 S. Free Rd	(location of witness signature)
on this day	_ of 20 <u>/7</u> . (date of signature)
Henze Paul Fring	(name) whose residential address is
122 3. Tree 1/41 C	1060-101-5/18
was personally present and did see	wn to me, execute the above assignment.
Seal Part Fininger	(signature of second witness)
Signed at 725 S Freer i	(location of witness signature)
on this day	of 20 <u>17</u> . (date of signature)

RECORDED: 07/24/2017

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