505620545 08/14/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
LIAM LI	09/26/2017
XINLEI XU	09/26/2017
JIAN GAO	09/27/2017
LIFENG YANG	09/26/2017
CHANGYU FENG	09/26/2017

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:	16514291

CORRESPONDENCE DATA

Fax Number: (508)366-4688

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Correspondent Name: BAINWOOD, HUANG & ASSOCIATES, LLC

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ATTORNEY DOCKET NUMBER:	1003-833.001	
NAME OF SUBMITTER:	DAVID E. HUANG, ESQ.	
SIGNATURE:	/David E. Huang, Reg. No. 39,229/	
DATE SIGNED:	08/14/2019	

Total Attachments: 7

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PATENT 505620545 REEL: 050045 FRAME: 0925

PATENT REEL: 050045 FRAME: 0926

ASSIGNMENT

WHEREAS, we, Liam Li, Xinlei Xu, Jian Gao, Lifeng Yang and Changyu Feng, 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 *FLUSHING PAGES FROM SOLID-STATE STORAGE DEVICE* (Application), the specification of which:

[]	is being executed on even date herewith and is abo States Patent Office;	ut to be filed in the United
[X]	was filed on September 22, 2017 as U.S. Application	on No. <u>15/712,483;</u>
Г	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, reissue, divisional or continuation applications and preliminary or other statements and the

PATENT REEL: 050045 FRAME: 0927 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;

AND, we hereby authorize our attorneys, EMC IP Holding Company LLC, to insert here in parenthesis (15/712,483 filed September 22, 2017 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, we have hereunto set our hands and affixed our seals as set forth below:

Date: 9/26/2017	Loan Li
	Inventor's Signature
Full Name:	Liam Li
Residence:	Longhuiyuan 1-3-401, Huilongguan
	Beijing, CN
Citizenship:	CN
Mailing Address:	Same as above
	•
I, Liu Loushan (nam	e of first witness), whose residential address is
7/F RLock D. Tsinghua Science Park	e of first witness), whose residential address is Haidian Dist. Beijing PRL.
was personally present and did see Liam Li (n	ame of person signing the assignment), who is
personally known to me, execute the above as	signment.
Lin Yous ham.	(signature of first witness)
Signed at Tsing hun Science Park	. (location of witness signature)
on this day, $\frac{9/26}{111}$,	(signature of first witness) (location of witness signature) 20 (date of signature).
,	
I, Ruiting Jia (nam	ne of second witness), whose residential address is
7 F. Block D. Isinghua Science Desp. Haillan Di	in beijns PRC
was personally present and did see Liam Li (r	name of person signing the assignment), who is
personally known to me, execute the above as	
, , , , , , , , , , , , , , , , , , , 	
Ruijong Ila	(signature of second witness)
Signed at the same or above	(location of witness signature)
	20 (date of signature).
, , ,	

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Date: 2017. 9. 26	Lindei Lu
•	Inventor's Signature
Full Name:	Xinlei Xu
Residence:	6-6-602,tiantongyuan Zhong Yuan
	Beijing, CN 100010
Citizenship:	CN
Mailing Address:	Same as above
was personally present and did see Xinlei Xu personally known to me, execute the above as	ne of first witness), whose residential address is Haidian Diff. Beijing. PR C (name of person signing the assignment), who is signment. (signature of first witness) (location of witness signature) 20 17 (date of signature).
I, Milyong Ja (nan H. Nocky, Ushghu o Scleres Park, Ho was personally present and did see Xinlei Xu personally known to me, execute the above as	ne of second witness), whose residential address is which leifing the assignment), who is ssignment.
Rwybrg Ila Signed at the Same as above on this day, 9/25	(signature of second witness) (location of witness signature) (20) (date of signature).

	· · · · · · · · · · · · · · · · · · ·
Date: 20 (7, 4, 27	多人
	Inventor's Signature
Full Name:	Jian Gao
Residence:	8/F, Block D, Tsinghua Science Park
	NO.1 Zhongguancun East Road
	Beijing, CN 100084
Citizenship:	CN
Mailing Address:	Same as above
I, Lin Loushey (nam	e of first witness), whose residential address is
7/1 Block D. Trayhaa So; exce Park Hagel	in Dist. Reijim. PRC.
	name of person signing the assignment), who is
personally known to me, execute the above as	
Lin Yousher	(signature of first witness)
Signed at Toulous Science Park.	(location of witness signature) 20 (date of signature).
on this day	20 17 (date of signature).
on his day,,	(and or organization).
· Paidas To	ofd witness) whose residential address is
	ne of second witness), whose residential address is
, 1	iDlan Dist, beiling PRe.
•	name of person signing the assignment), who is
personally known to me, execute the above as	signment.
h 11 1:	
Kutjong /(~	(signature of second witness)
Signed at the Same as about	(location of witness signature)
on this day, 9/16	20_/ (date of signature).
	(signature of second witness) (location of witness signature) 20_// (date of signature).

-5-

Date: 70/7 9.26	Inventor's Signature
	Inventor's Signature
Full Name:	Lifeng Yang
Residence:	10-3-50A, Xingfu-jiayuan, Dongcheng Dist
	Beijing, CN 100062
Citizenship:	CN
Mailing Address:	Same as above
I, Lin Jouehan (narr	e of first witness), whose residential address is
7/ I Block D. Tsinghaa Science Port Hard	an Vist. Berjing PAC:
	ng (name of person signing the assignment), who is
personally known to me, execute the above as	signment.
Lim Youshon Signed at Tsing haa Scia a Pork on this day, 9/11.	(signature of first witness)
Signed at Tsim haa Sciare Pank	(location of witness signature)
on this day,,	20 (date of signature).
I, Puisors Ila (nan	ne of second witness), whose residential address is
17, Block Tsinghun Science Bark, Haible	ne of second witness), whose residential address is an Diat, Bejjig par
was personally present and did see Lifeng Ya	ng (name of person signing the assignment), who is
personally known to me, execute the above as	ssignment.
Kingay Jin	(signature of second witness)
Signed at the some of able	(location of witness signature)
on this day, 926	20 (date of signature).

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PATENT REEL: 050045 FRAME: 0932

Date: 2017. 9.26	Fing Managy
	Inventor (Signature
Full Name:	Changyu Feng
Residence:	RM 702, Unit 1, 4th Building,
	ShiZhong Road, HouShaYu Town
	Beijing, CN 100084
Citizenship:	CN
Mailing Address:	Same as above
1 J .	
I, Lin Toushon (nam	te of first witness), whose residential address is tank of the Drst. Beijim. P. (
7/7. Block D. Tsing haa Science Park. F	tandian Dyst. Benjim. PRC
was personally present and did see Changyu F	eng (name of person signing the assignment), who
is personally known to me, execute the above	
1: V cha.	
LW 1000st and	(signature of first witness)
Signed at Tsinghun Schone Park	(location of witness signature)
Lin Youshay Signed at Tsinghua Science Payk on this day, 4/21	20 17 (date of signature).
	1
I. Reilling Da (nan	ne of second witness), whose residential address is
17. Blocks Tilnghus Science bark Hail	ne of second witness), whose residential address is han Dia. Beiling Pke
	Feng (name of person signing the assignment), who
is personally known to me, execute the above	
is possenany known to me, excourt me above	annihimanii
Rivyon Ira	(signature of second witness)
Signed at the sime of asilve	(location of witness signature)
Signed at the same of above on this day, 9/26	, 20 (date of signature).
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	, -7-

PATENT REEL: 050045 FRAME: 0933

RECORDED: 08/14/2019