503160091 01/30/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT3206705

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PHILIP SHILANE	01/29/2015
GRANT WALLACE	01/29/2015
FREDERICK DOUGLIS	01/29/2015
CHENG LI	01/29/2015

RECEIVING PARTY DATA

Name:	EMC CORPORATION
Street Address:	176 SOUTH STREET
City:	HOPKINTON
State/Country:	MASSACHUSETTS
Postal Code:	01748

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14609839

CORRESPONDENCE DATA

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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.

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TAM Q. TRAN **Correspondent Name:**

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ATTORNEY DOCKET NUMBER:	6368P141
NAME OF SUBMITTER:	TAM Q. TRAN
SIGNATURE:	/ Tam Q. Tran /
DATE SIGNED:	01/30/2015

Total Attachments: 6

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PATENT REEL: 034869 FRAME: 0804 503160091

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> PATENT REEL: 034869 FRAME: 0805

ASSIGNMENT

WHEREAS, we, Philip Shilane, Grant Wallace, Frederick Douglis, and Cheng Li, 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 METHODS

TO FFFICIENTLY IMPLEMENT COARSE GRANULARITY CACHE EVICTION BASED ON SEGMENT DELETION HINTS (Application), the specification of which:

[X]	is being executed on even date herewith and is about to be filed in the United States Patent Office;	
	was filed on as U.S. Application No	
	was patented under U.S. Patent Noonon	

WHEREAS, EMC Corporation (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;

AND, we hereby authorize our attorneys, EMC Corporation, to insert here in parentheses (14/609,839 filed January 30, 2015 _____) 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:)(n 29,20/5	Inventor's Signature
Print full name of inventor:	Philip Shilane
Residence:	559 Aspen Woods Drive
	Yardley, Pennsylvania 19067
Citizenship:	United States of America
Mailing Address:	Same as above
STATE/COMMONWEALTH OF COUNTY OF COUN	
[] employee identification card; [] dri to be the person whose name is subscribed	iver's license; [_] (other) I to the foregoing Assignment and acknowledged that ct and deed for the purposes therein contained.
	Notary Public Print Name: Icsudas S. Ni+14
	My Commission expires 2/4/20/9
	NOTATY FULL COF NEW AUGUST 11.2018

Date: //27/20/5	
Print full name of inventor:	Grant Wallace
Residence:	405 Oak Street
	Pennington, New Jersey 08534
Citizenship:	United States of America
Mailing Address:	Same as above
above-named <u>Grant Wallace</u> known employee identification card; [to be the person whose name is subsc	A . 20 15, then personally appeared before me the 16 me through satisfactory evidence of identification 3 driver's license; [] (other) ribed to the foregoing Assignment and acknowledged that ree act and deed for the purposes therein contained. Notary Public
	NOTATY PUBLIC OF NEW JENSEY Ny Comminson Econos August 11, 2010

Date: 56- 27 2315	Inventor's Signature	
Print full name of inventor: Residence:	Frederick Douglis 152 Smoke Rise Road Basking Ridge, New Jersey 07920	
Citizenship:	United States of America	
Mailing Address:	Same as above	
STATE/COMMONWEALTH OF COUNTY OF COUN		
We see exercised the latter we remains was an	1. L.Z.E.	
	Notary Public	
	Print Name: ICSUAUS: S. Na+14	
	My Commission expires 2/11/2019	
	JEQUOAS S. NITLA NOTARIY PUBLIC OF NEW JENSEY Ny Commission Expires August 11, 2019	

Date: 29 - Jan-2015	Cheny Li
	Inventor's Signature
Print full name of inventor:	Cheng Li
Residence:	333 Crowells Road
	Highland Park, New Jersey 08904
Citizenship:	China
Mailing Address:	Same as above
STATE/COMMONWEALTH OF \(\sqrt{\cappa}\)	en Jersex
COUNTY OF W	uiddlesex
above-named <u>Cheng Li</u> known to me throug [] employee identification card; [] driver	r's license; [] (other) the foregoing Assignment and acknowledged that
	Karon Votti
	Notary Public
	Print Name: Karen Vetter
	My Commission expires $3/18/2019$
	KAREN ANN VETTER Commission # 2443818 Notary Public, State of New Jersey My Commission Expires Morch 18, 2019