503493556 09/24/2015

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3540181

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
PHILIP DERBEKO	09/29/2013
ZVI GABRIEL BENHANOKH	09/29/2013
ARIEH DON	09/27/2013
ANAT EYAL	10/10/2013
ALEXANDR VEPRINSKY	09/27/2013
ASSAF NATANZON	09/24/2015

### **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:	14041290

## **CORRESPONDENCE DATA**

Fax Number: (508)293-7189

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: 508-435-1000

Email: docketing@emc.com **EMC CORPORATION Correspondent Name:** Address Line 1: 176 SOUTH STREET

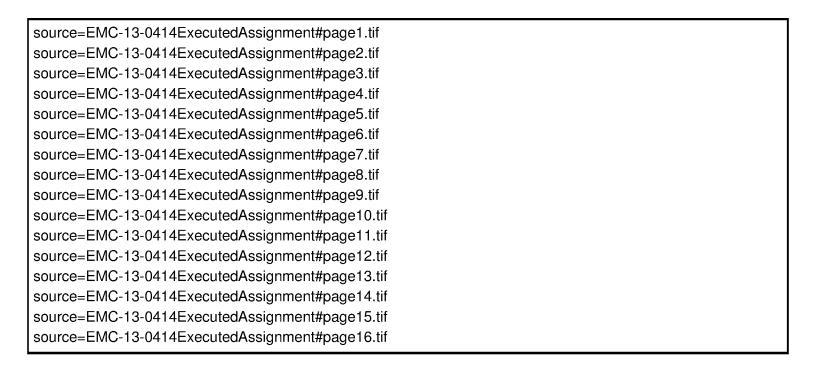
Address Line 4: HOPKINTON, MASSACHUSETTS 01748

ATTORNEY DOCKET NUMBER:	EMC-13-0414
NAME OF SUBMITTER:	GERALD P. KAZANJIAN
SIGNATURE:	/Gerald P. Kazanjian/
DATE SIGNED:	09/24/2015

**Total Attachments: 16** 

**PATENT** REEL: 036643 FRAME: 0296

503493556



PATENT REEL: 036643 FRAME: 0297

#### ASSIGNMENT

WHEREAS, we, Philip Derbeko, Zvi Gabriel Benhanokh, Assaf Natanzon, Arieh Don, Anat Eyal, and Alexandr Veprinsky, 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 METHOD AND APPARATUS FOR FLASH CACHE MANAGEMENT (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 Noon

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,

PATENT REEL: 036643 FRAME: 0298 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 parenthesis (<u>U.S. Patent Application Serial No. 14/041,290 filed September 30, 2013</u>) 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:

2.

	PATENT/Joint Assignment ENC Docket No.: EMC-13-0414
Date: 25/2/2015	Carlyman Samuel Carlotte Carlo
water	Inventor's Signature
Print full name of inventor	Philip Derbeko
Residence	10/4 Yaakov Dori Street
	Modiin, Israel 71700
Citizenship	Israel
Mailing Address	Same as above
1. Anat Dobrigan	(name of first witness), whose residential address is
was personally present and did see Ph	ilip Derbeko (name of person signing the assignment),
who is personally known to me, execu	
yeu.	
	(signature of first witness)
	(location of witness signature)
on this day,	, 20 (date of signature).
ann an an an an an an an an	
1, <u>EBEZ - 34-0K</u>	(name of second witness), whose residential address is
was personally present and did see Ph	ilip Derbeke (name of person signing the assignment),
who is personally known to me, execu	
G2 > 10-14	
Signad as	(signature of second witness)(location of witness signature)
CIENTO OF	(avadon of withese signature)

a Na

on this day, \_\_\_\_\_\_, 20\_\_\_\_\_\_ (date of signature).

Date: 3/29/2012	, // Comments
The state of the s	Inventor's Signature
Print full name of inventor	Zvi Gabriel Benhanokh
Residence	14 Gretz Street, Apt. #2
	Tel Aviv, Israel 63465
Citizenship	Israel
Mailing Address	Same as above
I Anat Dobrikan	(name of first witness), whose residential address is
	vn to me, execute the above assignment.
Signed at	(location of witness signature)
on this day,	, 20 (date of signature).
paris and a second a second as	
1 2/2 >11-7	(name of second witness), whose residential address is
was personally present and did see 2	Zvi Gabriel Benhanokh (name of person signing the
assignment), who is personally know	wn to me, execute the above assignment.
<u> </u>	(signature of second witness) (location of witness signature)
Signed at	(location of witness signature)
on this day,	, 20 (date of signature).

,....

Date:	
	Inventor's Signature
Print full name of inventor	Assaf Natanzon
Residence	Levanon 95
	Tel Aviv, Israel 69395
Citizenship	Israel
Mailing Address	Same as above
Į,	(name of first witness), whose residential address is
was personally present and did ser who is personally known to me, e.	e Assaf Natanzon (name of person signing the assignment), xecute the above assignment.
	(signature of first witness)
Signed at	(location of witness signature)
on this day,	, 20 (date of signature).
	(name of second witness), whose residential address is
was personally present and did see who is personally known to me, e.	e Assaf Natanzon (name of person signing the assignment),
	(signature of second witness)
	(location of witness signature)
on this day.	. 20 (date of signature).

Date: 9.27.13	\ 1 i \	
	Inventor's Signature	
Print full name of inventor:	Arieh Don	
Residence:	45 Dexter Road	
	Newton, Massachusetts 02460	
Citizenship:	USA	
Mailing Address:	Same as above	
On this		
RHONDA P. ZAFFINO Notary Public COMMONWEALTH OF MASSACHUSETTS May Contribusion Expires August 28, 2019	Notary Public  Print Name: Rhade P. Zafhia  My Commission expires 08/129/2019	

Date: 10/10/2013	Inventor/s Signature
Print full name of inventor	Anet Eyel
Residence	102 Levi Eshkol Street
	Tel Aviv, Israel 69361
Citizenship	Israel
Mailing Address	Same as above
i <u>Xichal Ba-dachum</u>	(name of first witness), whose residential address is
was personally present and did see As personally known to me, execute the	aat Eyal (name of person signing the assignment), who is above assignment.
Machal	(signature of first witness) (location of witness signature) 2013 (date of signature).
Signed at 1877C/134	(location of witness signature)
on this day, <u>QUANTY 10 PRA</u>	, 20 <u>13</u> (date of signature).
1. Maya Holica Lec	144 (name of second witness), whose residential address is
was personally present and did see A	nat Eyal (name of person signing the assignment), who is
personally known to me, execute the	above assignment.
Maya Mohrey Les	(signature of second witness) (location of witness signature)
Signed at Herrelia	(location of witness signature)
on this day. October 10th	, 2013 (date of signature).

Date: 9/27/2013	4)	
	Inventor's Signature	
Print full name of inventor:	Alexandr Veprinsky	
Residence:	145 Babcock Street	
	Brookline, Massachusetts 02446	
Citizenship:	USA	
Mailing Address:	Same as above	
On this		
RHONDA P. ZAFFINO Notery Public Commonwealth of Massachusettes My Commission Expires August 29, 2019	Notary Public  Print Name: Rhada P. Zaffia  My Commission expires 08 / 29 / 20 9	

### ASSIGNMENT

WHEREAS, we, Philip Derbeko, Zvi Gabriel Benbanokh, Assaf Natanzon, Arieh Don, Anat Eyal, and Alexandr Veprinsky, 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 METHOD AND APPARATUS FOR FLASH CACHE MANAGEMENT (Application), 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 <u>September 30, 2013</u> as U.S. Application No. <u>14/041,290</u>
[]	was patented under U.S. Patent Noon

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 bereby 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 assignce 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 REEL: 036643 FRAME: 0306 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 bands and affixed our seals as set forth below:

Date:	
	Inventor's Signature
Print full name of inventor	Philip Derbeko
Residence	10/4 Yaakov Dori Street
	Modiin, Israel 71700
Citizenship	Israel
Mailing Address	Same as above
l,	(name of first witness), whose residential address is
was personally present and did se who is personally known to me, e	e Philip Derbeko (name of person signing the assignment), xecute the above assignment.
	(signature of first witness)
	(location of witness signature)
	, 20 (date of signature).
I,	(name of second witness), whose residential address is
	e Philip Derbeko (name of person signing the assignment),
who is personally known to me, e	xecute the above assignment.
	(signature of second witness)
Signed at	(location of witness signature)
on this day	20 (date of signature)

Date:	
	Inventor's Signature
Print full name of inventor	Zvi Gabriel Benhanokh
Residence	14 Gretz Street, Apt. #2
	Tel Aviv, Israel 63465
Citizenship	Israel
Mailing Address	Same as above
I,	(name of first witness), whose residential address is
	Zvi Gabriel Benhanokh (name of person signing the own to me, execute the above assignment.
	(signature of first witness)
	(location of witness signature)
	, 20 (date of signature).
I,	(name of second witness), whose residential address is
	Zvi Gabriel Benhanokh (name of person signing the
assignment), who is personally kno	own to me, execute the above assignment.
	(signature of second witness)
Signed at	(location of witness signature)
on this day,	, 20 (date of signature).

Date: 24/9/2015			
	fnven⊠r's Signature		
Print full name of inventor	Assaf Natanzon		
Residence	Levanon 95		
	Tel Aviv, Israel 69395		
Citizenship	Israel		
Mailing Address	Same as above		
3 Rombah St. Harriya Israe			
was personally present and did see Assaf Na	tunzon (name of person signing the assignment).		
who is personally known to me, execute the	above assignment.		
	(signature of first witness)		
	(location of witness signature)		
on this day, <u>24/9</u>			
1. <u>Gill Ben ZVi</u> (name of second witness), whose residential address is <u>HCDXCFTXX</u> <u>SN 30 Tel AUD</u> TSXXQ was personally present and did see Assaf Natanzon (name of person signing the assignment).			
who is personally known to me, execute the			
GB Signed at <u>48721.49</u>	(signature of second witness) (location of witness signature)		
and the day and and the	miller Idago at characters		

Date:	
	Inventor's Signature
Print full name of inventor:	Arieh Don
Residence:	45 Dexter Road
	Newton, Massachusetts 02460
Citizenship:	USA
Mailing Address:	Same as above
above-named Arieh Don known to me temployee identification card; [] driver	
foregoing Assignment and acknowledge deed for the purposes therein contained.	to be the person whose name is subscribed to the d that he/she executed the same as his/her free act and
	Notary Public
	Print Name:
	My Commission expires / /

Date:	
	Inventor's Signature
Print full name of inventor	Anat Eyal
Residence	102 Levi Eshkol Street
	Tel Aviv, Israel 69361
Citizenship	Israel
Mailing Address	Same as above
I,	(name of first witness), whose residential address is
was personally present and did se personally known to me, execute	e <b>Anat Eyal</b> (name of person signing the assignment), who is the above assignment.
	(signature of first witness)
	(location of witness signature)
on this day,	, 20 (date of signature).
I,	(name of second witness), whose residential address is
was personally present and did se	e Anat Eyal (name of person signing the assignment), who is
personally known to me, execute	the above assignment.
	(signature of second witness)
	(location of witness signature)
on this day,	, 20 (date of signature).

Date:	
	Inventor's Signature
Print full name of inventor:	Alexandr Veprinsky
Residence:	145 Babcock Street
	Brookline, Massachusetts 02446
Citizenship:	USA
Mailing Address:	Same as above
STATE/COMMONWEALTH OF	
above-named Alexandr Veprinsky knov [] employee identification card; [] dr	, 20, then personally appeared before me the vn to me through satisfactory evidence of identification river's license; [] (other) to be the person whose name is subscribed to the
foregoing Assignment and acknowledged deed for the purposes therein contained.	I that he/she executed the same as his/her free act and
	Notary Public
	Print Name:
	My Commission expires / /