

<b>PATENT ASSIGNMENT COVER SHEET</b>
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 Stylesheet Version v1.2

EPAS ID: PAT5135350

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
NIMROD SHANI	07/26/2018
ANTON KUCHEROV	09/10/2018
LIOR KAMRAN	07/26/2018
LERON FLIESS	07/26/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	EMC IP HOLDING COMPANY LLC
<b>Street Address:</b>	176 SOUTH STREET
<b>City:</b>	HOPKINTON
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	01748
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16050530
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(631)393-6271
<i>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.</i>	
<b>Phone:</b>	631-393-6270
<b>Email:</b>	nyoffice@rml-law.com
<b>Correspondent Name:</b>	WILLIAM E. LEWIS
<b>Address Line 1:</b>	48 SOUTH SERVICE ROAD, SUITE 100
<b>Address Line 2:</b>	RYAN, MASON & LEWIS, LLP
<b>Address Line 4:</b>	MELVILLE, NEW YORK 11747
<b>ATTORNEY DOCKET NUMBER:</b>	111880.01
<b>NAME OF SUBMITTER:</b>	WILLIAM E. LEWIS
<b>SIGNATURE:</b>	/william e. lewis/
<b>DATE SIGNED:</b>	09/11/2018
<b>Total Attachments: 12</b>	
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**ASSIGNMENT**

**WHEREAS**, we, Nimrod Shani, Anton Kucherov, Lior Kamran and Leron Fliess, 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 **MAINTAINING LOGICAL TO PHYSICAL ADDRESS MAPPING DURING IN PLACE SECTOR REBUILD**, the specification of which:

- 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 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;

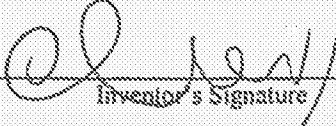
**AND**, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal 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 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: 26 July 2018

  
Inventor's Signature

Print full name of first inventor: Nimrod Shani  
Residence: Raanana, Israel  
Citizenship: Israel  
Mailing Address: Haiko Grossman St. 9, Apt. 14  
Raanana, Israel 4373312

I Vladimir Shveidel (name) whose residential address is  
Hinanit 7A, Pardes-Hana, Israel

was personally present and did see Nimrod Shani (name of person signing the assignment) who is personally known to me, execute the above assignment.

  
(signature of first witness)

Signed at Herzlia, Israel (location of witness signature)

on this day 28 July of 2018. (date of signature)

I Alex Soukman (name) whose residential address is  
HaYovel 28/20, Raanana, Israel

was personally present and did see Nimrod Shani (name of person signing the assignment) who is personally known to me, execute the above assignment.

  
(signature of second witness)

Signed at Herzlia, Israel (location of witness signature)

on this day 26 July of 2018. (date of signature)

Date: \_\_\_\_\_

\_\_\_\_\_  
Inventor's Signature

Print full name of second inventor: Anton Kucherov  
Residence: Dudley, Massachusetts  
Citizenship: United States of America  
Mailing Address: 72 Flaxfield Road  
Dudley, Massachusetts 01571

I \_\_\_\_\_ (name) whose residential address is

\_\_\_\_\_  
was personally present and did see Anton Kucherov (name of person signing the assignment)  
who is personally known to me, execute the above assignment.

\_\_\_\_\_ (signature of first witness)

Signed at \_\_\_\_\_ (location of witness signature)

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

I \_\_\_\_\_ (name) whose residential address is


\_\_\_\_\_  
was personally present and did see Anton Kucherov (name of person signing the assignment)  
who is personally known to me, execute the above assignment.

\_\_\_\_\_ (signature of second witness)

Signed at \_\_\_\_\_ (location of witness signature)

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

Date: 26 July 2012

  
Inventor's Signature

Print full name of third inventor: Lior Kamran  
Residence: Rishon LeZion, Israel  
Citizenship: Israel  
Mailing Address: 8 Barzilai Street  
Rishon LeZion, Israel

I Vladimir Shveidel (name) whose residential address is

Hinanit 7A, Pardes-Hana, Israel

was personally present and did see Lior Kamran (name of person signing the assignment) who is personally known to me, execute the above assignment.

  
(signature of first witness)

Signed at Herzeliya, Israel (location of witness signature)

on this day 26 Jul of 2012. (date of signature)

I Alex Soukhman (name) whose residential address is

HaYovel 28/20, Raanana, Israel


was personally present and did see Lior Kamran (name of person signing the assignment) who is personally known to me, execute the above assignment.

  
(signature of second witness)

Signed at Herzeliya, Israel (location of witness signature)

on this day 26 Jul of 2012. (date of signature)


Date: 26 July 2018

  
Inventor's Signature

Print full name of fourth inventor: Leron Fliess  
Residence: Kiryat Ono, Israel  
Citizenship: Israel  
Mailing Address: 6<sup>th</sup> Hameyasdim Street, Apt. 32  
Kiryat Ono, Israel 5552106

I Vladimir Shveidel (name) whose residential address is  
Hinanit 7A, Pardes-Hana, Israel

was personally present and did see Leron Fliess (name of person signing the assignment) who is personally known to me, execute the above assignment.

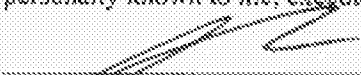
  
(signature of first witness)

Signed at Herzelia, Israel (location of witness signature)

on this day 26 July of 20 18. (date of signature)

I Alex Soukhman (name) whose residential address is

HaYovel 28/20, Raanana, Israel  
was personally present and did see Leron Fliess (name of person signing the assignment) who is personally known to me, execute the above assignment.

  
(signature of second witness)

Signed at Herzelia, Israel (location of witness signature)

on this day 26 July of 20 18. (date of signature)



**ASSIGNMENT**

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- is being executed on even date herewith and is about to be filed in the United States Patent Office;
- was filed on July 31, 2018 as U.S. Application No. 16/050,530;
- 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 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:

\_\_\_\_\_

\_\_\_\_\_

Inventor's Signature

Print full name of first inventor:

Nimrod Shani

Residence:

Raanana, Israel

Citizenship:

Israel

Mailing Address:

Haike Grossman St. 9, App 14

Raanana, Israel 4373312

I \_\_\_\_\_ (name) whose residential address is

\_\_\_\_\_ was personally present and did see Nimrod Shani (name of person signing the assignment) who is personally known to me, execute the above assignment.

\_\_\_\_\_ (signature of first witness)

Signed at \_\_\_\_\_ (location of witness signature)

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

I \_\_\_\_\_ (name) whose residential address is

\_\_\_\_\_ was personally present and did see Nimrod Shani (name of person signing the assignment) who is personally known to me, execute the above assignment.

\_\_\_\_\_ (signature of second witness)

Signed at \_\_\_\_\_ (location of witness signature)

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

Date: 9/10/2018

Kucherov  
Inventor's Signature

Print full name of second inventor: Anton Kucherov  
Residence: Dudley, Massachusetts  
Citizenship: United States of America  
Mailing Address: 72 Flaxfield Road  
Dudley, Massachusetts 01571

I William Strong (name) whose residential address is  
5 Woodland Drive Westford MA  
was personally present and did see Anton Kucherov (name of person signing the assignment)  
who is personally known to me, execute the above assignment.

William Strong (signature of first witness)

Signed at Hopkinton MA (location of witness signature)

on this day Sept 10 of 20 18 (date of signature)

I Svetlana Khovrod (name) whose residential address is  
10 Wright Farm Concord MA  
was personally present and did see Anton Kucherov (name of person signing the assignment)  
who is personally known to me, execute the above assignment.

Svetlana Khovrod (signature of second witness)

Signed at Hopkinton MA (location of witness signature)

on this day September 10<sup>th</sup> of 20 18 (date of signature)

Date:

\_\_\_\_\_

\_\_\_\_\_

Inventor's Signature

Print full name of third inventor:

Lior Kamran

Residence:

Rishon LeZion, Israel

Citizenship:

Israel

Mailing Address:

8 Barzilay Street

Rishon LeZion, Israel

I \_\_\_\_\_ (name) whose residential address is

\_\_\_\_\_ was personally present and did see Lior Kamran (name of person signing the assignment) who is personally known to me, execute the above assignment.

\_\_\_\_\_ (signature of first witness)

Signed at \_\_\_\_\_ (location of witness signature)

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\_\_\_\_\_ (signature of second witness)

Signed at \_\_\_\_\_ (location of witness signature)

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

Date: \_\_\_\_\_

\_\_\_\_\_  
Inventor's Signature

Print full name of fourth inventor: Leron Fliess  
Residence: Kiryat Ono, Israel  
Citizenship: Israel  
Mailing Address: 6<sup>th</sup> Hameyasdim Street, Apt. 32  
Kiryat Ono, Israel 5552106

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\_\_\_\_\_ (signature of first witness)

Signed at \_\_\_\_\_ (location of witness signature)

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\_\_\_\_\_ (signature of second witness)

Signed at \_\_\_\_\_ (location of witness signature)

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