

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Yedidya DOTAN</td> <td>09/21/2012</td> </tr> <tr> <td>Lawrence N. FRIEDMAN</td> <td>09/21/2012</td> </tr> <tr> <td>Ayelet ELIEZER</td> <td>10/03/2012</td> </tr> </tbody> </table>		Name	Execution Date	Yedidya DOTAN	09/21/2012	Lawrence N. FRIEDMAN	09/21/2012	Ayelet ELIEZER	10/03/2012		
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<table border="1"> <tr> <td>Name:</td> <td>EMC Corporation</td> </tr> <tr> <td>Street Address:</td> <td>176 South Street</td> </tr> <tr> <td>City:</td> <td>Hopkinton</td> </tr> <tr> <td>State/Country:</td> <td>MASSACHUSETTS</td> </tr> <tr> <td>Postal Code:</td> <td>01748</td> </tr> </table>		Name:	EMC Corporation	Street Address:	176 South Street	City:	Hopkinton	State/Country:	MASSACHUSETTS	Postal Code:	01748
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PROPERTY NUMBERS Total: 1											
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CORRESPONDENCE DATA											
Fax Number: 5083664688 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> Phone: 5086162900 Email: docket@bainwoodhuang.com Correspondent Name: Ronald L. Gordon, Ph.D. Address Line 1: Bainwood, Huang & Associates, LLC Address Line 2: 2 Connector Road Address Line 4: Westborough, MASSACHUSETTS 01568											
ATTORNEY DOCKET NUMBER:	1048-147										
NAME OF SUBMITTER:	Ronald L. Gordon, Ph.D.										
Total Attachments: 10 source=1048-147-Assignment#page1.tif											

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ASSIGNMENT

WHEREAS, we, Yedidya Dotan, Ayelet Eliezer, and Lawrence N. Friedman 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 **USING LINK ANALYSIS IN ADVERSARIAL KNOWLEDGE-BASED AUTHENTICATION MODEL** 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 No. _____ on _____.

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, USA 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 Bainwood Huang & Associates LLC to insert here in parentheses (13/628,642 September 27, 2012) 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: 21/9/2012

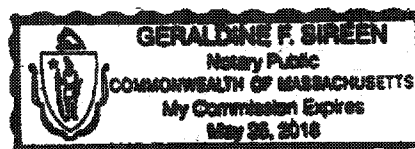
Yedidya Dotan
Inventor's Signature

Print full name of first inventor: Yedidya Dotan
Residence: 53 Cloverdale Road, Newton, MA, 02461
Citizenship: IL
Mailing Address: Same as above

STATE/COMMONWEALTH OF Massachusetts
COUNTY OF Middlesex

On this 21st day of September, 2012, then personally appeared before me the above-named Yedidya Dotan known to me through satisfactory evidence of identification ☒ employee identification card; ☐ driver's license; ☐ (other) _____ to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained.

Geraldine F. Sireen
GERALDINE F. SIREEN



Date: _____

Inventor's Signature

Print full name of second inventor: Ayelet Eliezer
Residence: 3 Hashomer Street, Givatayim, 53221, IL
Citizenship: IL
Mailing Address: Same as above

I _____ (name) whose residential address is

_____ was personally present and did see _____ (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 2012. (date of signature)

I _____ (name) whose residential address is

_____ was personally present and did see _____ (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 2012. (date of signature)

Date: Sept 21, 2012

Lawrence N. Friedman
Inventor's Signature

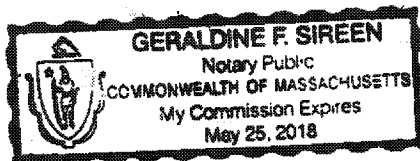
Print full name of second inventor: Lawrence N. Friedman
Residence: 148 Scituate Street, Arlington, MA, 02476
Citizenship: US
Mailing Address: Same as above

STATE/COMMONWEALTH OF Massachusetts
COUNTY OF Middlesex

On this 21st day of September, 2012, then personally appeared before me the above-named **Lawrence N. Friedman** known to me through satisfactory evidence of identification ☒ employee identification card; ☐ driver's license; ☐ (other) _____ to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained.

Geraldine F. Sireen
Notary Public

Print Name: GERALDINE F. SIREEN
My Commission expires 5/25/2018



ASSIGNMENT

WHEREAS, we, Yedidya Dotan, Ayelet Eliezer, and Lawrence N. Friedman 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 **USING LINK ANALYSIS IN ADVERSARIAL KNOWLEDGE-BASED AUTHENTICATION MODEL** 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 September 27, 2012 as U.S. Application No. 13/628,642;
- ☐ was patented under U.S. Patent No. _____ on _____.

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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 Bainwood Huang & Associates LLC to insert here in parentheses (_____) 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: _____

Inventor's Signature

Print full name of first inventor:

Yedidya Dotan

Residence:

53 Cloverdale Road, Newton, MA, 02461

Citizenship:

IL

Mailing Address:

Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2012, then personally appeared before me the above-named **Yedidya Dotan** known to me through satisfactory evidence of identification ☐ employee identification card; ☐ driver's license; ☐ (other) _____ to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained.

PATENT/Joint Assignment
Attorney Docket No.: 1048-147
EMC Docket No.: EMC-12-482

Date: 10/3/2012

[Signature]
Inventor's Signature

Print full name of second inventor: Ayelet Eliezer
Residence: 3 Hashomer Street, Givatayim, 53221, IL
Citizenship: IL
Mailing Address: Same as above

I Alex Taslavsky (name) whose residential address is

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

[Signature] (signature of first witness)

Signed at Herzeliya (location of witness signature)

on this day 10/3/2012 of 2012. (date of signature)

I Moldavsky Vadim (name) whose residential address is

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

[Signature] (signature of second witness)

Signed at Herzeliya (location of witness signature)

on this day 10/3/2012 of 2012. (date of signature)

Date: _____

Inventor's Signature

Print full name of second inventor:

Lawrence N. Friedman

Residence:

148 Scituate Street, Arlington, MA, 02476

Citizenship:

US

Mailing Address:

Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2012, then personally appeared before me the above-named **Lawrence N. Friedman** known to me through satisfactory evidence of identification ☐ employee identification card; ☐ driver's license; ☐ (other) _____ to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained.

Notary Public

Print Name:

My Commission expires ____ / ____ / ____