

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5478511

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT												
NATURE OF CONVEYANCE:	Corrective Assignment to correct the DOCUMENT DATE OF ASSIGNOR MARTIN ROSA previously recorded on Reel 047704 Frame 0495. Assignor(s) hereby confirms the ASSIGNMENT.												
CONVEYING PARTY DATA													
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>ZHOU LI</td><td>09/28/2018</td></tr><tr><td>KEVIN BOWERS</td><td>09/28/2018</td></tr><tr><td>MARTIN ROSA</td><td>10/01/2018</td></tr><tr><td>RAYMOND CARNEY</td><td>09/28/2018</td></tr><tr><td>KE TIAN</td><td>09/28/2018</td></tr></tbody></table>	Name	Execution Date	ZHOU LI	09/28/2018	KEVIN BOWERS	09/28/2018	MARTIN ROSA	10/01/2018	RAYMOND CARNEY	09/28/2018	KE TIAN	09/28/2018	
Name	Execution Date												
ZHOU LI	09/28/2018												
KEVIN BOWERS	09/28/2018												
MARTIN ROSA	10/01/2018												
RAYMOND CARNEY	09/28/2018												
KE TIAN	09/28/2018												
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													
<table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>16146587</td></tr></tbody></table>	Property Type	Number	Application Number:	16146587									
Property Type	Number												
Application Number:	16146587												
CORRESPONDENCE DATA													
Fax Number:	(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>													
Phone:	(631) 393-6270												
Email:	nyoffice@rml-law.com												
Correspondent Name:	JOSEPH B. RYAN												
Address Line 1:	RYAN, MASON & LEWIS, LLP												
Address Line 2:	48 SOUTH SERVICE ROAD, SUITE 100												
Address Line 4:	MELVILLE, NEW YORK 11747												
ATTORNEY DOCKET NUMBER:	112324.01												
NAME OF SUBMITTER:	JOSEPH B. RYAN												
SIGNATURE:	/Joseph B. Ryan/												
DATE SIGNED:	04/17/2019												

Total Attachments: 8

source=4414-1084_ASM#page1.tif

source=4414-1084_ASM#page2.tif

source=4414-1084_ASM#page3.tif

source=4414-1084_ASM#page4.tif

source=4414-1084_ASM#page5.tif

source=4414-1084_ASM#page6.tif

source=4414-1084_ASM#page7.tif

source=4414-1084_ASM#page8.tif

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5271822

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
ZHOU LI	09/28/2018
KEVIN BOWERS	09/28/2018
MARTIN ROSA	11/30/2018
RAYMOND CARNEY	09/28/2018
KE TIAN	09/28/2018
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:	16146587
CORRESPONDENCE DATA	
Fax Number:	(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>	
Phone:	(631) 393-6270
Email:	nyoffice@rml-law.com
Correspondent Name:	JOSEPH B. RYAN
Address Line 1:	RYAN, MASON & LEWIS, LLP
Address Line 2:	48 SOUTH SERVICE ROAD, SUITE 100
Address Line 4:	MELVILLE, NEW YORK 11747
ATTORNEY DOCKET NUMBER:	112324.01
NAME OF SUBMITTER:	JOSEPH B. RYAN
SIGNATURE:	/Joseph B. Ryan/
DATE SIGNED:	12/07/2018
Total Attachments: 7	

ASSIGNMENT

WHEREAS, we, Zhou Li, Kevin Bowers, Martin Rosa, Raymond Carney and Ke Tian, 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 **DETECTING FRAME INJECTION THROUGH WEB PAGE ANALYSIS** 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: 09/28/2018

Li Zhou
Inventor's Signature

Print full name of first inventor: Zhou Li
Residence: Malden, Massachusetts
Citizenship: P.R. China
Mailing Address: 8 Island Hill Avenue, Apt. 210
Malden, Massachusetts 02148

I Thuy V. Pham (name) whose residential address is

8854 Grandville Circle, Westminster, CA 92683
was personally present and did see Zhou Li (name of person signing the assignment) who is personally known to me, execute the above assignment.

[Signature] (signature of first witness)

Signed at EH 2211 (location of witness signature)

on this day Sept 28 of 20 18 (date of signature)

I Julia S. Strope (name) whose residential address is

309 Via Promesa, San Clemente CA 92673
was personally present and did see Zhou Li (name of person signing the assignment) who is personally known to me, execute the above assignment.

[Signature] (signature of second witness)

Signed at Eng. Hall 2211, VC Irvine (location of witness signature)

on this day 28, Sept. of 20 18 (date of signature)

Date: 9/28/2018

Kevin O. Bowers
Inventor's Signature

Print full name of second inventor: Kevin Bowers
Residence: Melrose, Massachusetts
Citizenship: United States of America
Mailing Address: 245 Tremont Street
Melrose, Massachusetts 02176

I Riaz Zolfonoon (name) whose residential address is

152 Annunciate Hill Rd. Concord, MA 01742
was personally present and did see Kevin Bowers (name of person signing the assignment) who is personally known to me, execute the above assignment.

[Signature] (signature of first witness)

Signed at Bedford, MA (location of witness signature)

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

I Alex Zaslavsky (name) whose residential address is

23 Goring Road, Chestnut Hill, MA 02467
was personally present and did see Kevin Bowers (name of person signing the assignment) who is personally known to me, execute the above assignment.

[Signature] (signature of second witness)

Signed at Bedford, MA (location of witness signature)

on this day 28 / sep of 2018. (date of signature)

Date:

01/10/2018

Martin Rosa

Inventor's Signature

Print full name of third inventor:

Martin Rosa

Residence:

Quebec, Canada

Citizenship:

Canada

Mailing Address:

1180, av. Moncton, App 310

Quebec, Canada G1S4T8

I Mathieu Dumont-Deslandes (name) whose residential address is

275 12^e rue Québec, Qc, Canada G1L 2L3

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

Mathieu Dumont-Deslandes (signature of first witness)

Signed at Québec (location of witness signature)

on this day October 1st of 20 18 (date of signature)

I FIOR D ALIZA DIAZ DE LACOMBE (name) whose residential address is

605, 8^e Avenue Québec, Qc, Canada G1J 3M1

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

Fior Diaz (signature of second witness)

Signed at Québec (location of witness signature)

on this day October 1st of 20 18 (date of signature)

Date: 9/28/2018

Raymond P. Carney
Inventor's Signature

Print full name of fourth inventor:

Raymond Carney

Residence:

North Franklin, Connecticut

Citizenship:

United States of America

Mailing Address:

867 Route 32

North Franklin, Connecticut 06254

I Elizabeth Anne Carney (name) whose residential address is

867 Route 32 North Franklin, CT 06254

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

[Signature] (signature of first witness)

Signed at North Franklin, CT (location of witness signature)

on this day 28 September of 20 18 (date of signature)

I George King III (name) whose residential address is

859 Route 32 North Franklin, CT 06254

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

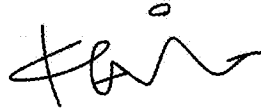
George King III (signature of second witness)

Signed at North Franklin, CT (location of witness signature)

on this day 28 September of 20 18 (date of signature)

Date:

09/28/2018



Inventor's Signature

Print full name of fifth inventor:

Ke Tian

Residence:

Redmond, Washington

Citizenship:

P.R. China

Mailing Address:

15606 NE 40th Street, Apt. U177

Redmond, Washington 98052

I Yin Liu (name) whose residential address is

Knowledge Works II, 2202 Kraft Dr., Blacksburg, VA, 24060
was personally present and did see Ke Tian (name of person signing the assignment) who is personally known to me, execute the above assignment.


 (signature of first witness)

Signed at Knowledge Works II (location of witness signature)

on this day 09/28 of 20 18. (date of signature)

I TONG ZHANG (name) whose residential address is

3100 RICHMOND LANE APT. L Blacksburg, VA, 24060
was personally present and did see Ke Tian (name of person signing the assignment) who is personally known to me, execute the above assignment.

 (signature of second witness)

Signed at Knowledge Works II (location of witness signature)

on this day 09/28 of 20 18. (date of signature)