

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5198203

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
XIANGPING CHEN	10/17/2018
JUNPING ZHAO	10/18/2018
<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>	16164005
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(781)401-9966
<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>	781-401-9988
<b>Email:</b>	pam@dc-m.com
<b>Correspondent Name:</b>	DALY, CROWLEY, MOFFORD & DURKEE, LLP
<b>Address Line 1:</b>	ONE UNIVERSITY AVENUE
<b>Address Line 2:</b>	SUITE 201B
<b>Address Line 4:</b>	WESTWOOD, MASSACHUSETTS 02090
<b>ATTORNEY DOCKET NUMBER:</b>	DELL-027PUS
<b>NAME OF SUBMITTER:</b>	KIRIL O. DIMOV
<b>SIGNATURE:</b>	/KIRIL O. DIMOV/
<b>DATE SIGNED:</b>	10/18/2018
<b>Total Attachments: 4</b>	
source=TO_PTO_ASSIGNMENT#page1.tif	
source=TO_PTO_ASSIGNMENT#page2.tif	
source=TO_PTO_ASSIGNMENT#page3.tif	
source=TO_PTO_ASSIGNMENT#page4.tif	

## ASSIGNMENT

WHEREAS, we, Xiangping Chen and Junping Zhao, 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 LEVERAGING SNAPSHOT FOR TIME SERIES PATTERN ANALYSIS PREDICTION and identified as Attorney Docket No. DELL-027PUS, 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 IP Holding Company LLC (hereinafter "ASSIGNEE"), a Delaware limited liability company 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 me;

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;

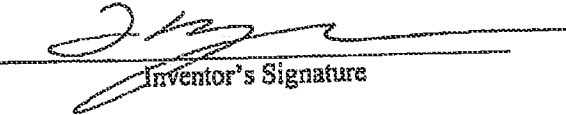
PATENT  
Atty. Dckt. No.: DELL-027PUS  
Client Case No.: 112544.01

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 attorneys that we have appointed and EMC IP Holding Company LLC to insert here in parenthesis ( 16/164,005 10-18-18 ) 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: 10/17/18

  
Inventor's Signature

Print full name of first inventor:

Xiangping Chen

Residence:

22 Harrington Ridge Road  
Sherborn, MA 01770

Citizenship:

United States

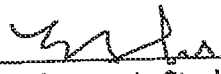
Mailing Address:

Same as above

I, Christopher Sayles (name of first witness), whose residential address is  
32 Griffin Rd Framingham, MA 01701,  
was personally presented and did see Xiangping Chen who is personally known to me, execute the  
above assignment.

Christopher Sayles (signature of first witness)  
Signed at 228 South St, Hopkinton, MA (location of witness signature)  
on this day Oct 17, 20 18 (date of witness signature)

I, Ying Hu (name of second witness), whose residential address is  
52 Little pond rd Northborough, MA 01532,  
was personally presented and did see Xiangping Chen who is personally known to me, execute the  
above assignment.

I,  (signature of second witness)  
Signed at 228 South St Hopkinton, MA (location of witness signature)  
on this day Oct 17, 20 18 (date of witness signature)

Date: Oct 18, 2018

Junping Zhao  
Inventor's Signature

Print full name of first inventor:

Junping Zhao

Residence:

Floor 8, Block D, Tsinghua Science Park  
Haidian  
Beijing 100084  
CHINA

Citizenship:

People's Republic of China

Mailing Address:

Same as above

I, SANPLAK LI (name of first witness), whose residential address is  
Beijing 100101, China  
was personally presented and did see Junping Zhao who is personally known to me, execute the  
above assignment.

[Signature] (signature of first witness)  
Signed at Tsinghua Sci & Tech Building D, Beijing (location of witness signature)  
on this day Oct 18th, 2018 (date of witness signature)

I, FUCAL LIU (name of second witness), whose residential address is  
Beijing 100101, China  
was personally presented and did see Junping Zhao who is personally known to me, execute the  
above assignment.

Fucal Liu (signature of second witness)  
Signed at 8/F, Building D, Tsinghua Science Park, Beijing, China (location of witness signature)  
on this day Oct 18th, 2018 (date of witness signature)

693946