504605762 10/23/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4652474

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SERGEY RYTENKOV	10/19/2017
HAGAY DAGAN	10/19/2017

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:	14193541

CORRESPONDENCE DATA

Fax Number:

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: 978 264 4001

Email: handerson@smmalaw.com
Correspondent Name: ANDERSON GORECKI LLP

Address Line 1: 2 DUNDEE PARK

Address Line 4: ANDOVER, MASSACHUSETTS 01810

ATTORNEY DOCKET NUMBER:	130-122 EMC-13-631
NAME OF SUBMITTER:	HOLMES W. ANDERSON
SIGNATURE:	/Holmes W. Anderson/
DATE SIGNED:	10/23/2017

Total Attachments: 7

source=EMC130631_Assignment_130122_SR_HD#page1.tif source=EMC130631_Assignment_130122_SR_HD#page2.tif source=EMC130631_Assignment_130122_SR_HD#page3.tif source=EMC130631_Assignment_130122_SR_HD#page4.tif source=EMC130631_Assignment_130122_SR_HD#page5.tif

PATENT 504605762 REEL: 043921 FRAME: 0542

source=EMC130631_Assignment_130122_SR_HD#page6.tif source=EMC130631_Assignment_130122_SR_HD#page7.tif

PATENT REEL: 043921 FRAME: 0543

ASSIGNMENT

WHEREAS, we, Ophir Aharoni, Gil Ratsaby, Sergey Rytenkov, Dan Aharoni and Hagay Dagan 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 Pre-Calculated Performance Simulation (Application), the specification of which:

[]	is being executed on even date herewith and is about to be filed in the Un States Patent Office;	ited
[X]	was filed on 28 February 2014 as U.S. Application No. 14/193,541;	
ſ]	was patented under U.S. Patent No.	

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 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

PATENT REEL: 043921 FRAME: 0544

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 do hereby authorize Anderson Gorecki LLP, whose full office address is 2 Dundee Park, Suite 301A, Andover, MA 01810, to correct errors in this Assignment and to insert any further identification and other information necessary or desirable to make this Assignment suitable for recording in a domestic or foreign Patent Office.

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:	
Ophir Aharoni	
Residence: 47 Winchester St, Un Brookline MA 02446	it #1,
Citizenship: Israel	
Mailing Address: 176 South Street Hopkinton, Massachusetts 01748	et,
STATE/COMMONWEALTH OF	
COUNTY OF	
On this day of	, then personally appeared before me the above-named
known to me through satisfactory eviden	nce 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/sl	he executed the same as his/her free act and deed for the purposes therein
contained.	
	Notary Public
	Print Name:
	My Commission expires / /

Date:	
	Inventor's Signature
Print full name of second inventor:	
Gil Ratasby	
Residence:170 Brookline Ave.	
Boston, MA 02215	
Citizenship: Israel	
Mailing Address: 176 South Street,	
Hopkinton, Massachusetts 01748	
STATE/COMMONWEALTH OF	
COUNTY OF	
On this, then person	onally appeared before me the above-named
known to me through satisfactory evidence of identific	ation [] employee identification card; [] driver's license;
[] (other) to b	be the person whose name is subscribed to the foregoing
Assignment and acknowledged that he/she executed th	e same as his/her free act and deed for the purposes therein
contained.	
	Notary Public
	Print Name:
	My Commission expires / /

paie: Uctober 17, W17	
	Inventor's Signature
Print full name of third inventor:	
Sergey Rytenkov	
Residence:Shatelena St. 12, Apt. 55	
St. Petersburg	
Russsian Federation	
Citizenship:Russian Federation	
Mailing Address:	Same as residence above
Wilhard Baby essex, St. Fetersfourg, B. Rush	ame) whose residential address is was personally was
known to me, execute the above assignment.	3 <u>7844</u>),
The contract of	nature of first witness)
Signed at St. Letersburg, Kull	サイベ
on this day October 19, 2018 of 20	/ <u>/</u> 2. (date of signature)
Natalia Balich (n Russia H. peters burg present and did see Sergey Rytend known to me, execute the above assignment.	ame) whose residential address is U(Shatelena d12/155 was personally (name of person signing the assignment) who is personally
\mathcal{L}	nature of second witness)
on this day October 19 of 20	<u>४९५/ स</u> (location of witness signature)
on this day Uttoker 9 of 20	(date of signature)

Date:	
	Inventor's Signature
Print full name of fourth inventor:	
Dan Aharoni	
Residence: 47 Winchester St, Unit #1	1,
Brookline MA 02446	
Citizenship: USA	
Mailing Address: 176 South Street,	
Hopkinton, Massachusetts 01748	
STATE/COMMONWEALTH OF	
COUNTY OF	
On this day of,	then personally appeared before me the above-named
known to me through satisfactory evidence of	f 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 ex	xecuted the same as his/her free act and deed for the purposes therein
contained.	
	Notary Public
	Print Name:
	My Commission expires / /

Date: 10/19/2017	
	Inventor's Signiture
Print full name of fifth inventor: Hagay Dagan	
Residence: 140 Hameyasdim,	
Pardes Hanna-Karkur,	
srael 3713472	
Citizenship: Israel	
Mailing Address:	Same as residence above
1100k AGAI 140 HAWEY OIM PARTS H present and did see HAGIV DAGAI snown to me, execute the above assignment. (signati	r) whose residential address is ANNA KIRLUK was personally (name of person signing the assignment) who is personally ure of first witness)
5igned at <u>190 HA M(YAKD)</u> W ₁₉ (10cati	on of witness signature)
on this day <u>OCTOBER 19¹⁶ of 2017</u> .	(date of signature)
	r) whose residential address is NA KHROK was personally (name of person signing the assignment) who is personally
O: By & (signan	ure of second witness)
signed at <u>140 Hamey 45DIM</u> , PARDES on this day <u>OCTOBER</u> 47 th of 2012.	HANN (ocation of witness signature)
on this day <u>OCTOBER 49th of 2013</u> .	(date of signature)

PATENT REEL: 043921 FRAME: 0550

RECORDED: 10/23/2017