505017543 07/24/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5064291

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| CONVEYING PARTY | DATA | | | | | | |
| | | Na | me | | | Execution Date | |
| SORIN FAIBISH | | | | | 1 |)7/24/2018 | |
| IVAN BASSOV | | | | | 1 | 07/16/2018 | |
| RUSTEM RAFIKOV | | | | | 1 | 07/20/2018 | |
| RECEIVING PARTY D | ΑΤΑ | | | | | | |
| Name: | EMC IF | , HOLDII | NG COMPANY LLC | | | | |
| Street Address: | 176 SC | OUTH ST | REET | | | | |
| City: | HOPKI | NTON | | | | | |
| State/Country: | MASSA | ACHUSE | TTS | | | | |
| Postal Code: | 01748 | | | | | | |
| Application Number: | | 1604364 | -0 | | | | |
| Application Number: | | 1604364 | 0 | | | | |
| CORRESPONDENCE | DATA | | | | | | |
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PATENT REEL: 046442 FRAME: 0949

ASSIGNMENT

1.51.5

And a second second second by the second second

WHEREAS, we, Sorin FAIBISH, Ivan BASSOV and Rustem RAFIKOV, 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 CONCURRENT DATA ENTROPY AND DIGEST COMPUTATION OPERATING ON SAME DATA FOR CPU CACHE EFFICIENCY, 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 _____on _____

WHEREAS, EMC IP HOLDING COMPANY LLC (hereinafter "ASSIGNEE"), which is a corporation organized and existing under the laws 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.

Attorney Docket No.: EMS-700US EMC Docket No.: 111440.01

- 27 - 24 | - - - COUNTRA

AND, we hereby authorize attorneys of Muirhead and Saturnelli, LLC to insert here in parenthesis (<u>16/043,640 filed July 24, 2018</u>) 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:

PATENT REEL: 046442 FRAME: 0951

EMC Docket No.: 111440.01 Atty Docket No.: EMS-700US

| Date: 07/24/2018 | <u>Fachi</u> Inventor's Signature |
|--|---|
| | C |
| Print full name of first inventor: | Sorin Faibish |
| Residence: | 11 Selwyn Road, Newton, MA 02461 |
| Citizenship: | USA |
| Mailing Address: | Same as Above |
| I, <u>Christine Carey</u> | (name of first witness), whose residential address is |
| Upton, MA | |
| was personally present and did see Son is personally known to me, execute the <u>Christianski Carry</u> Signed at <u>228 South St.</u> on this day, <u>07/24</u> | (signature of first witness) |
| | (name of second witness), whose residential address is |
| was personally present and did see So | rin Faibish (name of person signing the assignment), who |
| is personally known to me, execute the WKUUY Signed at _228 South St. | e above assignment. (signature of second witness) (location of witness signature) |
| on this day, <u>07/24</u> | |

-3-

Attorney Docket No.: EMS-700US EMC Docket No.: 111440.01

| Date: 7 | 116/2018 |
|---------|----------|
|---------|----------|

Signed at _ 228 South St.

Inventor's Signature

(location of witness signature)

| Print full name of second inventor: | Ivan BASSOV | |
|---|---------------------------------------|---|
| Residence: | 55 Harvard Ave, Apt. 3 | |
| | Brookline, MA 02446 | |
| Citizenship: | USA | |
| Mailing Address: | Same as above | |
| I Christine Carey Upton, MA | (name) whose residential address is | w |
| personally present and did see Ivan Ba | ssov (name of person signing the | |
| assignment) who is personally known to | o me, execute the above assignment. | |
| Christine Carey | (signature of first witness) | |
| Signed at 228 South St |) (location of witness signature) | |
| on this day07/16 | of 20 <u>18</u> . (date of signature) | |
| I Jill Kelly | (name) whose residential address is | |
| Shrewsbury, MA | | W |
| personally present and did see <u>Ivan Ba</u> | · · · · · · · · · · · · · · · · · · · | |
| assignment) who is personally known to | o me, execute the above assignment. | |
| MULKILL | (signature of second witness) | |

on this day <u>07/16</u> of 20<u>18</u>. (date of signature)

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Attorney Docket No.: EMS-700US EMC Docket No.: 111440.01

Date:

Inventor's Signature

Print full name of third inventor:

07120118

Residence:

Citizenship:

59 Grove Street Hopkinton, MA 01748 Russia Same as above

Rustem RAFIKOV

Mailing Address:

RALACHANDRAN (name) whose residential address is NATICE, MA DITLO was 23 WOOPRINE PD. #3 personally present and did see <u>RUSTEM RAFIKOV</u> (name of person signing the assignment) who is personally known to me, execute the above assignment. (signature of first witness) Signed at HOP KINTON (location of witness signature) on this day <u>20 th JULY</u> of 20<u>18</u>. (date of signature) (name) whose residential address is Simmerman mand, MA was personally present and did see Instem Rolitor (name of person signing the assignment) who is personally known to me, execute the above assignment. _____ (signature of second witness)

signed at Hopkinton, MA (location of witness signature) on this day 20 July of 20 18. (date of signature)