503212874 03/10/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

c Version v1.1 EPAS ID: PAT3259490

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| JEAN-PIERRE BONO | 01/19/2015 |
| MICHAL MARKO | 02/27/2015 |
| ROHIT CHAWLA | 02/25/2015 |
| YE ZHANG | 01/15/2015 |
| WILLIAM DAVENPORT | 01/19/2015 |

RECEIVING PARTY DATA

| Name: | EMC CORPORATION | |
|-----------------|------------------|--|
| Street Address: | 176 SOUTH STREET | |
| City: | HOPKINTON | |
| State/Country: | MASSACHUSETTS | |
| Postal Code: | 01748 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14588065 |

CORRESPONDENCE DATA

Fax Number: (414)277-8521

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: (414) 277-8500

Email: mari_stewart@gshllp.com

Correspondent Name: GONZALEZ SAGGIO & HARLAN LLP (PATENT GRO

Address Line 1: 111 E. WISCONSIN AVENUE

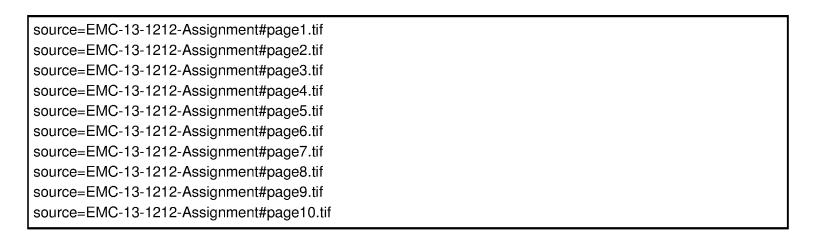
Address Line 2: SUITE 1000

Address Line 4: MILWAUKEE, WISCONSIN 53202

| Total Attackments 40 | |
|-------------------------|----------------------|
| DATE SIGNED: | 03/10/2015 |
| SIGNATURE: | /Holli L. Templeton/ |
| NAME OF SUBMITTER: | HOLLI L. TEMPLETON |
| ATTORNEY DOCKET NUMBER: | EMC-13-1212 |

Total Attachments: 10

503212874



ASSIGNMENT

WHEREAS, we, Jean-Pierre Bono, Michal Marko, Rohit Chawla, Ye Zhang, and William Davenport 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 UNIFIED SLICE MAP VOLUME (Application), the specification of which:

| | is being executed on even date herewith and is about to be filed in the United States Patent Office; |
|-----|--|
| [X] | was filed on December 31, 2014 as U.S. Application No. 14/588,065; |
| | was patented under U.S. Patent Noon |

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 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, EMC Corporation, 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: 11915 | H |
|---|--|
| | Inventor's Signature |
| Print full name of first inventor: | Jean-Pierre Bono |
| Residence: | Westboro, MA |
| Citizenship: | United States |
| Mailing Address: | c/o EMC Corporation |
| | 176 South Street |
| | Hopkinton, MA 01748 |
| | |
| STATE/COMMONWEALTH OF | assachusetts ddlesex |
| employee identification card; [X] driver's lice | 20/5 then personally appeared before me the through satisfactory evidence of identification [] ense; [] (other) be the person whose name is subscribed to the he/she executed the same as his/her free act and |
| | Litt-S. Keller |
| • | Notary Public |
| | Print Name: Linette S. Kelley |
| | My Commission expires <u>07</u> / <u>30</u> / <u>20</u> 18 |
| | |
| , | LINETTE S. KELLEY Notary Public COMMONWEALTH OF MASSACHUSETTS My Commission Expires July 13, 2018 |

| Date: | 01 | 113/15 | | | | | |
|----------------|---------------------------------------|---|---|------------------------------|----------------|------------------|----------------|
| | | e de la companya de | | | Į, | venid's Sign | ature |
| Print full | name of | inventor: | Jean-Pierre | Bono | | 1.8 | |
| Residenc | e: West | boro, MA | | | | | |
| | hip: Unit | | | | | | |
| | | | Corporation | | | | |
| Ç | | 176 South | 7 | | | | |
| | | | n, MA 0174 | 10 | | | |
| | | impanno | u, wia 0174 | ro. | | | |
| Pil | iz An Imuiale | nangar M | Jon o1A | (name) | whose reside | ential address i | is |
| | | | | | | | person signing |
| the assign | 1 1 1 | | - | | | ve assignment | v ., |
| ` | $\angle y_{\lambda}$ | <u>~</u> | ,Y | (signature | of first witr | ness) | |
| Signed a | 2. 3 | - 18 | | | of witness | | |
| on this d | ay Q 1 | /19 | | of 20 <u>15</u> . (c | late of signa | ture) | |
| | · · · · · · · · · · · · · · · · · · · | · · · · • | | | | | |
| | | | | | | | |
| [<u> </u> | Lristophi | ~ Sehel | | (name) | whose reside | ential address i | is |
| | ZJena D | d bulged | e MA 020 | <u>'%l</u> | | | person signing |
| was perso | onally pre | sent and d | id see <u>Jo</u> | ean Pier | re Bouo | (name of | person signing |
| me assigi | nniciti) w | | 1 | | | ve assignment | • |
| | | r N | <u>m/ </u> | (signature | of second v | vitness) | |
| , the state of | | | | | | | |
| signed at | t | top linton | | | (location | n of witness si | gnature) |
| on this da | ay <u>""</u> <u>Ø</u> j | /19 | | of 20 <u>1</u> <u>人</u> . (d | late of signat | ture) | |

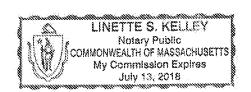
| Date: $2/27/15$ | M. M |
|--|--|
| | Inventor's Signature |
| Print full name of second inventor: | Michal Marko |
| Residence: | Fanwood, NJ |
| Citizenship: | United States |
| Mailing Address: | c/o EMC Corporation |
| | 176 South Street |
| | Hopkinton, MA 01748 |
| above-named Michal Marko known to me the employee identification card; [A driver's limited to the control of t | 2015, then personally appeared before me the rough satisfactory evidence of identification [×] cense; [_] (other) be the person whose name is subscribed to the at he/she executed the same as his/her free act and |
| | Notary Public |
| | Print Name: Caller M Huch |
| | My Commission expires 4/24/2016 |
| | COLLEGEN OF PERSON IN NOTABLY AUGUST OF COMPANIES OF STATE OF COMPANIES OF COMPANIE |

| Date: 2/27/11 |
|--|
| Inventor's Signature |
| Print full name of inventor: Michal Marko |
| Residence: Fanwood, NJ |
| Citizenship: United States |
| Mailing Address: c/o EMC Corporation |
| 176 South Street |
| Hopkinton, MA 01748 |
| I WHEN FONCES LY (name) whose residential address is 21 MAGNUM CT, BERNELLY HIS.N.J. 07902 was personally present and did see Michael Marko (name of person signing the assignment) who is personally known to me, execute the above assignment. (signature of first witness) Signed at EMC OFFICE SOUTH PL. N (location of witness signature) on this day FED 27 of 20/5. (date of signature) |
| I Alexander Mathews (name) whose residential address is 4 Prince Edward Rol, Morganici (e., N) 07751 was personally present and did see Michal Marko (name of person signing the assignment) who is personally known to me, execute the above assignment. (signature of second witness) Signed at EMC OFFICE SOUTH PIANFIELD, NJ (location of witness signature) |
| on this day Feb 27 of 20 15. (date of signature) |

| Date: 25 Feb 2015 | - Marie |
|---|--|
| | Inventor's Signature |
| Print full name of third inventor: | Rohit Chawla |
| Residence: | Scotch Plains, NJ |
| Citizenship: | United States |
| Mailing Address: | c/o EMC Corporation |
| | 176 South Street |
| | Hopkinton, MA 01748 |
| STATE/COMMONWEALTH OF COUNTY OF On this 25 day of February above-named Rohit Chawla know employee identification card; | , 2015, then personally appeared before me the |
| foregoing Assignment and acknow deed for the purposes therein conta | to be the person whose name is subscribed to the reledged that he/she executed the same as his/her free act and nined. Notary Public Print Name: 000 7 000 2019 My Commission expires 00 / 10 / 2019 |
| | Management of the National Control of the National Con |

| Date: | 1/15/2015 | Ye Zhang |
|------------|--|---|
| | | Inventor's Signature |
| Print full | name of inventor: Ye Zhang | |
| Residenc | e: Shanghai, China | |
| Citizensh | ip: China | |
| Mailing 2 | Address: Baiyu Rd. No. 669, Bui | lding 6 |
| | Room 1301 | |
| | Shanghai, China 20006 | 3 |
| Iwas perso | Ronnie Vu Lon Building Lone 24 mally present and did see nment) who is personally known | (name) whose residential address is 0., 2herytang Rood Yangfu District Shows hai y |
| | Romie Wu | |
| on this da | ay Jan Coo | f 20 <u>15</u> . (date of signature) |
| the assign | iment) who is personally known: | (name) whose residential address is \(\text{Lege of Shighang Yangon District, Shong har \(\text{Lege of Shighang Yangon District} \) |
| Signed at | Albert Gw 11 Floor, KICIII NO.333 | (signature of second witness) Songhu Priod Yang pu District, Shanghai Songhu Priod Yang pu District, Shanghai |
| | ny <u>Jan 15</u> 0 | |

Inventor's Signature William Davenport Print full name of third inventor: Residence: Burlington, MA Citizenship: United States Mailing Address: c/o EMC Corporation 176 South Street Hopkinton, MA 01748 Massachusetts STATE/COMMONWEALTH OF Middleser COUNTY OF On this $\sqrt{\frac{9}{2}}$ day of $\sqrt{\frac{1}{284889}}$, $\frac{20}{\sqrt{5}}$, then personally appeared before me the above-named William Davenport known to me through satisfactory evidence of identification [X] 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. Print Name: Linette S. Kelley My Commission expires 07 / 18 / 20 / 8



| Date: 1/19/2015 William Inventor's Signature |
|---|
| Print full name of inventor: William Davenport |
| Residence: Burlington, MA |
| Citizenship: United States |
| Mailing Address: c/o EMC Corporation |
| 176 South Street |
| Hopkinton, MA 01748 |
| I Among (name) whose residential address is was personally present and did see William Deven part (name of person signing the assignment) who is personally known to me, execute the above assignment. (signature of first witness) Signed at Hopking of MA (location of witness signature) on this day 01/19/ of 2015. (date of signature) |
| I <u>Ch. Aph So ke/</u> (name) whose residential address is |
| was personally present and did see William Daven port (name of person signing |
| the assignment) who is personally known to me, execute the above assignment. |
| (signature of second witness) |
| Signed at Heplina MA (location of witness signature) |
| on this dayO\/\frac{19}{20} of 20/5 (date of signature) |

RECORDED: 03/10/2015