

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT | | | | | | | | | | |
|---|-------------------------|---------------|-----------------|---------------------|------------------|----------------|------------|---------------------|---------------|--------------------|------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT | | | | | | | | | | |
| CONVEYING PARTY DATA | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Name</th> <th style="width: 30%;">Execution Date</th> </tr> </thead> <tbody> <tr> <td>Ralph C. Frangioso</td> <td>06/07/2011</td> </tr> <tr> <td>Jason J. Leone</td> <td>06/07/2011</td> </tr> <tr> <td>Robert W. Beauchamp</td> <td>06/03/2011</td> </tr> <tr> <td>Steven D. Sardella</td> <td>06/07/2011</td> </tr> </tbody> </table> | | Name | Execution Date | Ralph C. Frangioso | 06/07/2011 | Jason J. Leone | 06/07/2011 | Robert W. Beauchamp | 06/03/2011 | Steven D. Sardella | 06/07/2011 |
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| Ralph C. Frangioso | 06/07/2011 | | | | | | | | | | |
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| RECEIVING PARTY DATA | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Name:</td> <td>EMC Corporation</td> </tr> <tr> <td>Street Address:</td> <td>176 South Street</td> </tr> <tr> <td>City:</td> <td>Hopkinton</td> </tr> <tr> <td>State/Country:</td> <td>MASSACHUSETTS</td> </tr> <tr> <td>Postal Code:</td> <td>01748</td> </tr> </table> | | Name: | EMC Corporation | Street Address: | 176 South Street | City: | Hopkinton | State/Country: | MASSACHUSETTS | Postal Code: | 01748 |
| Name: | EMC Corporation | | | | | | | | | | |
| Street Address: | 176 South Street | | | | | | | | | | |
| City: | Hopkinton | | | | | | | | | | |
| State/Country: | MASSACHUSETTS | | | | | | | | | | |
| Postal Code: | 01748 | | | | | | | | | | |
| PROPERTY NUMBERS Total: 1 | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Property Type</th> <th style="width: 70%;">Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13077844</td> </tr> </tbody> </table> | | Property Type | Number | Application Number: | 13077844 | | | | | | |
| Property Type | Number | | | | | | | | | | |
| Application Number: | 13077844 | | | | | | | | | | |
| CORRESPONDENCE DATA | | | | | | | | | | | |
| <p>Fax Number: (617)523-6850</p> <p><i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 617-523-2700</p> <p>Email: Anthony.Sutton@hklaw.com</p> <p>Correspondent Name: HOLLAND & KNIGHT LLP</p> <p>Address Line 1: 10 ST. JAMES AVENUE</p> <p>Address Line 4: BOSTON, MASSACHUSETTS 02116</p> | | | | | | | | | | | |
| ATTORNEY DOCKET NUMBER: | 113454.00048/EMC-11-177 | | | | | | | | | | |
| NAME OF SUBMITTER: | Anthony W. Sutton | | | | | | | | | | |

Total Attachments: 7
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ASSIGNMENT

WHEREAS, we, Ralph C. Frangioso, Jason J. Leone, Robert W. Beauchamp and Steven D. Sardella 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 BMC-Based Communication System, the specification of which:

[X] was filed on 31 March 2011 as U.S. Application No. 13/077,844;

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;

PATENT/Joint Assignment
Attorney Docket No.: 113454.00048
EMC Docket No.: EMC-11-177

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: 6/7/2011

Ralph C Frangioso
Inventor's Signature

Print full name of first inventor: **Ralph C. Frangioso**
Residence: Franklin, MA
Citizenship: US
Mailing Address: 23 Midland Avenue
Franklin, MA 02038

STATE/Commonwealth of Massachusetts
COUNTY OF Middlesex

On this 7 day of June, 2011, then personally appeared before me the above-named Ralph C. Frangioso known to me through satisfactory evidence 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/she executed the same as his/her free act and deed for the purposes therein contained.

Nancy E. Buck
Notary Public
Print Name: Nancy E. Buck
My Commission expires 6-7-11 DEB
8-11-17

Date: 6 / 7 / 2011

Jason Leone
Inventor's Signature

Print full name of second inventor:

Jason J. Leone

Residence:

North Providence, RI

Citizenship:

US

Mailing Address:

2 View Street

North Providence, RI 02904

STATE/Commonwealth of
COUNTY OF

Massachusetts
Middlesex

On this 7 day of June, 2011, then personally appeared before me the above-named Jason Leone known to me through satisfactory evidence 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/she executed the same as his/her free act and deed for the purposes therein contained.

Nancy E. Buck
Notary Public
Print Name: Nancy E. Buck
My Commission expires 8 / 1 / 17

Date: Jun 3, 2011

Robert W. Beauchamp
Inventor's Signature

Print full name of third inventor:

Robert W. Beauchamp

Residence:

Littleton, MA

Citizenship:

US

Mailing Address:

6 Uplands Road

Littleton, MA 01460

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 20____, then personally appeared before me the
above-named _____ known to me through satisfactory evidence 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/she executed the same as his/her free act and
deed for the purposes therein contained.

Notary Public

Print Name: _____

My Commission expires ____ / ____ / ____

*r. June 3, 2011 please see attached
acknowledgment pertaining to this
document. cflores*

California Acknowledgment Form

State of California
County of Santa Clara } ss.

On June 3, 2011 before me, C. Flores, notary public
personally appeared Robert W. Beauchamp

who proved to me on the basis of satisfactory evidence to be the person~~(s)~~ whose name~~(s)~~ is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/their authorized capacity~~(ies)~~; and that by his/~~her~~/their signature~~(s)~~ on the instrument the person~~(s)~~, or the entity upon behalf of which the person~~(s)~~ acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Seal



C. Flores
Signature of Notary

Notes

Please provide information about the document that this form is attached to.
This is not required under California State notary public law.

Date: June 7, 2011

Steven D. Sardella
Inventor's Signature

Print full name of forth inventor: **Steven D. Sardella**
Residence: North Grafton, MA
Citizenship: US
Mailing Address: 19 Valley View Drive
North Grafton, MA 01536

STATE/Commonwealth of
COUNTY OF

Massachusetts
Middlesex

On this 7 day of June, 2011, then personally appeared before me the
above-named Steven D. Sardella known to me through satisfactory evidence 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/she executed the same as his/her free act and
deed for the purposes therein contained.

Nancy E. Buck
Notary Public
Print Name: Nancy E. Buck
My Commission expires 8/11/2017

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