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To the Honorable Commissioner of Patents

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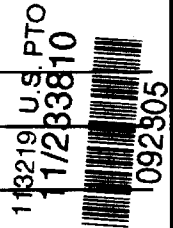
Original documents or copy thereof.

1. Name of conveying party(ies)
Hanna' Yehuda (executed: September 23, 2005)
Alan R. Schell (executed: September 22, 2005)
Michael A. Galvin (executed: September 22, 2005)
James Bernard McElroy, Jr. (executed: September 22, 2005)
Charles Dao (executed: September 23, 2005)

2. Name and address of receiving party(ies)

Name: EMC Corporation

Internal Address:



Additional name(s) of conveying party(ies) attached? [] Yes [X] No

3. Nature of conveyance:

- [X] Assignment [] Merger
[] Security Agreement [] Change of Name
[] Other

Execution Date: Please See Boz 1

Street Address: 176 South Street

City: Hopkinton State: MA ZIP: 01748

Additional name(s) & address(es) attached? [] Yes [X] No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: 09/23/05, 09/22/05, 09/22/05, 09/22/05, & 09/22/05

A. Patent Application No.(s)

09/27/2005 HVUONG1 00000070 11233810

05 C:8021

40.00 DP

B. Patent No.(s)

Additional numbers attached? [] Yes [x] No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Barry W. Chapin, Esq.

Internal Address:

CHAPIN & HUANG, L.L.C.

Street Address: Westborough Office Park

1700 West Park Drive

City: Westborough State: MA ZIP: 01581

6. Total number of applications and patents involved: [1]

7. Total Fee (37 C.F.R. 3.41)..... \$ 40.00

- [X] Enclosed with application filing fee
[X] Authorized to charge any deficiencies or credit any overpayment to deposit account
[] Authorized to be charged to deposit account

8. Deposit account number:

50-0901

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Barry W. Chapin, Esq.
Reg. No. 39,934

Name of Person Signing

[Signature]

Signature

September 23, 2005

Date

Total number of pages including cover sheet, attachments, and document: [19]

ASSIGNMENT

WHEREAS, we, Hanna Yehuda, Alan R. Schell, Michael A. Galvin, James Bernard McElroy, Jr. and Charles Dao 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 **METHODS AND APPARATUS PROVIDING FILTERING IN A MANAGEMENT APPLICATION**, the specification of which:

- 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 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.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals as set forth below:

Date: 9/23/05

Hanna Yehuda
Inventor's Signature

Print full name of first inventor:

Hanna Yehuda

Residence:

14 Selwyn Road, Newton, MA 02461

Citizenship:

Israel

Mailing Address:

Same as above

STATE/Commonwealth of
COUNTY OF

Massachusetts
Middlesex

On this 23 day of September, 2005, then personally appeared before me the above-named Hanna Yehuda known to me through satisfactory evidence of identification employee identification card; driver's license; (other)
HANNA YEHUDA 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.

Sally A. McCormack
Notary Public

Print Name: Sally A. McCormack

My Commission expires 10/3/08

Sally A. McCormack, Notary Public
My Commission Expires Oct. 3, 2008

-2-

Date: _____

Inventor's Signature

Print full name of second inventor:

Alan R. Schell

Residence:

28 Nicholas Road, Hopkinton MA 01748

Citizenship:

United States of America

Mailing Address:

Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2005, then personally appeared before me the above-named Alan R. Schell 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 ___ / ___ / ___

Date: _____

Inventor's Signature

Print full name of third inventor:

Michael A. Galvin

Residence:

18 Robbins Road, Foxboro, MA 02035

Citizenship:

United States of America

Mailing Address:

Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2005, then personally appeared before me the above-named Michael A. Galvin 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 ___ / ___ / ___

Date: _____

Inventor's Signature

Print full name of fourth inventor: James Bernard McElroy, Jr.
Residence: 8 Steam Mill Hill Road
Brookline NH 03033-2425
Citizenship: United States of America
Mailing Address: Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2005, then personally appeared before me the above-named James Bernard McElroy, Jr. 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 ___ / ___ / ___

Date: _____

Inventor's Signature

Print full name of fifth inventor: Charles Dao
Residence: 45 Bronson Way, Concord, MA 01742
Citizenship: United States of America
Mailing Address: Same as above

STATE/COMMONWEALTH OF _____
COUNTY OF _____

On this _____ day of _____, 2005, then personally appeared before me the above-named Charles Dao 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 ___ / ___ / ___

ASSIGNMENT

WHEREAS, we, Hanna Yehuda, Alan R. Schell, Michael A. Galvin, James Bernard McElroy, Jr. and Charles Dao 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 **METHODS AND APPARATUS PROVIDING FILTERING IN A MANAGEMENT APPLICATION**, the specification of which:

- 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 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.

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:

Hanna Yehuda

Residence:

14 Selwyn Road, Newton, MA 02461

Citizenship:

Israel

Mailing Address:

Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2005, then personally appeared before me the above-named Hanna Yehuda 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 ___ / ___ / ___

Sep 22 05 03:07p

EMC

508-544-2172

p. 3

PATENT/Joint Assignment
Attorney Docket No.: EMC05-43(05257)
EMC Docket No.: EMC-05-257

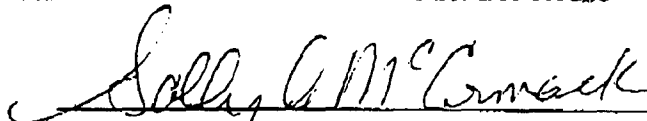
Date: 9/22/05


Inventor's Signature

Print full name of second inventor: Alan R. Schell
Residence: 28 Nicholas Road, Hopkinton MA 01748
Citizenship: United States of America
Mailing Address: Same as above

STATE/Commonwealth OF Massachusetts
COUNTY OF Middlesex

On this 22 day of September, 2005, then personally appeared before me the above-named Alan R. Schell known to me through satisfactory evidence of identification employee identification card; driver's license; (other) Alan R. Schell 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: SALLY A. MCCORMACK
My Commission expires 10/3/08

Sally A. McCormack, Notary Public
My Commission Expires Oct. 3, 2008

Sep 22 05.03:08p

EMC

508-544-2172

p. 4

PATENT/Joint Assignment
Attorney Docket No.: EMC05-43(05257)
EMC Docket No.: EMC-05-257

Date: 9-22-05

Michael A. Galvin
Inventor's Signature

Print full name of third inventor: Michael A. Galvin
Residence: 18 Robbins Road, Foxboro, MA 02035
Citizenship: United States of America
Mailing Address: Same as above

STATE/Commonwealth of Massachusetts
COUNTY OF Worcester

On this 22 day of September, 2005, then personally appeared before me the above-named Michael A. Galvin known to me through satisfactory evidence of identification employee identification card; driver's license; (other) Michael A Galvin 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.

Sally A McCormack
Notary Public

Print Name: Sally A McCormack
My Commission expires 10/31/08

Sally A. McCormack, Notary Public
My Commission Expires Oct. 3, 2008



Sep 22 05 03:08p

EMC

508-544-2172

p. 5

PATENT/Joint Assignment
Attorney Docket No.: EMC05-43(05257)
EMC Docket No.: EMC-05-257

Date: 9/22/05

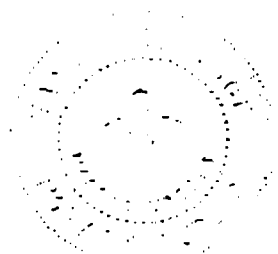
[Signature]
Inventor's Signature

Print full name of fourth inventor: James Bernard McElroy, Jr.
Residence: 8 Steam Mill Hill Road
Brookline NH 03033-2425
Citizenship: United States of America
Mailing Address: Same as above

STATE/Commonwealth of Massachusetts
COUNTY OF Middlesex

On this 22 day of September, 2005, then personally appeared before me the above-named James Bernard McElroy, Jr. 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 8/27/2010



Date: _____

Inventor's Signature

Print full name of fifth inventor: Charles Dao
Residence: 45 Bronson Way, Concord, MA 01742
Citizenship: United States of America
Mailing Address: Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2005, then personally appeared before me the above-named Charles Dao 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 ___ / ___ / ___

ASSIGNMENT

WHEREAS, we, Hanna Yehuda, Alan R. Schell, Michael A. Galvin, James Bernard McElroy, Jr. and Charles Dao 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 **METHODS AND APPARATUS PROVIDING FILTERING IN A MANAGEMENT APPLICATION**, the specification of which:

- 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 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;

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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.

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:

Hanna Yehuda

Residence:

14 Selwyn Road, Newton, MA 02461

Citizenship:

Israel

Mailing Address:

Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2005, then personally appeared before me the above-named Hanna Yehuda 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 ___ / ___ / ___

-2-

Date: _____

Inventor's Signature

Print full name of second inventor: Alan R. Schell
Residence: 28 Nicholas Road, Hopkinton MA 01748
Citizenship: United States of America
Mailing Address: Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2005, then personally appeared before me the above-named Alan R. Schell 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 ___ / ___ / ___

Date: _____

Inventor's Signature

Print full name of third inventor:

Michael A. Galvin

Residence:

18 Robbins Road, Foxboro, MA 02035

Citizenship:

United States of America

Mailing Address:

Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2005, then personally appeared before me the above-named Michael A. Galvin 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 ___ / ___ / ___

Date: _____

Inventor's Signature

Print full name of fourth inventor: James Bernard McElroy, Jr.
Residence: 8 Steam Mill Hill Road
Brookline NH 03033-2425
Citizenship: United States of America
Mailing Address: Same as above

STATE/Commonwealth of _____
COUNTY OF _____

On this _____ day of _____, 2005, then personally appeared before me the above-named James Bernard McElroy, Jr. 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 ___ / ___ / ___

Date: 9/23/05

Charles Dao
Inventor's Signature

Print full name of fifth inventor: Charles Dao
Residence: 45 Bronson Way, Concord, MA 01742
Citizenship: United States of America
Mailing Address: Same as above

STATE/Commonwealth of MA
COUNTY OF Middlesex

On this 23 day of September, 2005, then personally appeared before me the above-named Charles Dao known to me through satisfactory evidence of identification employee identification card; driver's license; (other) U.S. passport 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.

Joseph P. Williams
Notary Public
Print Name: Joseph P. Williams
My Commission expires 7/20/12

JOSEPH P. WILLIAMS
NOTARY PUBLIC
Commonwealth of Massachusetts
My Commission Expires July 20 2012

