

04-19-2001



FORM PTO-1619A  
Expires 06/30/99  
OMB 0651-0027

101676452

U.S. Department of Commerce  
Patent and Trademark Office  
**PATENT**

**RECORDATION FORM COVER SHEET  
PATENTS ONLY**

JC918 U.S. PTO  
09822709  
03/30/01

TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies)

**Submission Type**

New *3/30/01*

Resubmission (Non-Recordation)  
Document ID#

Correction of PTO Error  
Reel #  Frame #

Corrective Document  
Reel #  Frame #

**Conveyance Type**

Assignment  Security Agreement

License  Change of Name

Merger  Other

**U.S. Government**  
(For Use ONLY by U.S. Government Agencies)

Departmental File  Secret File

**Conveying Party(ies)**

Mark if additional names of conveying parties attached

Name (line 1)  Execution Date Month Day Year

Name (line 2)

**Second Party**

Name (line 1)  Execution Date Month Day Year

Name (line 2)

*09822709*

**Receiving Party**

Mark if additional names of receiving parties attached

If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Name (line 1)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)     
City State/Country Zip Code

**Domestic Representative Name and Address**

Enter for the first Receiving Party only.

Name

Address (line 1)

Address (line 2)

Address (line 3)

Address (line 4)

**FOR OFFICE USE ONLY**

04/04/2001 MGE BREM1 00000045 09822709  
03 FC:581 40.00 DP

Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB Information Collection Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

Mail documents to be recorded with required cover sheet(s) information to:  
Commissioner of Patents and Trademarks, Box Assignments, Washington, D.C. 20231

**PATENT**  
**REEL: 011683 FRAME: 0576**

FORM PTO-1619C  
Expires 06/30/99  
OMB 0651-0027

RECORDATION FORM COVER SHEET  
CONTINUATION  
PATENTS ONLY

U.S. Department of Commerce  
Patent and Trademark Office  
PATENT

JCS. PTO  
02/28/01  
02/28/01  
03/30/01

Conveying Party(ies)

Mark if additional names of conveying parties attached

Enter additional Conveying Parties

Name (line 1) Cara Garber

Execution Date  
Month Day  
03 28

Name (line 2)

Name (line 1) Ajay Shekhar

Execution Date  
Month Day Year  
03 28 01

Name (line 2)

Name (line 1)

Execution Date  
Month Day Year

Name (line 2)

Receiving Party(ies)

Mark if additional names of receiving parties attached

Enter additional Receiving Party(ies)

Name (line 1)

If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)  
City State/Country Zip Code

Name (line 1)

If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)  
City State/Country Zip Code

Application Number(s) or Patent Number(s)

Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

Grid of 15 boxes for Patent Application Number(s)

Grid of 15 boxes for Patent Number(s)

**Correspondent Name and Address**

Area Code and Telephone Number

Name

Address (line 1)

Address (line 2)

Address (line 3)

Address (line 4)

**Pages** Enter the total number of pages of the attached conveyance document including any attachments. #

**Application Number(s) or Patent Number(s)**

Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

**Patent Application Number(s)**

**Patent Number(s)**

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If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. 

Month	Day	Year
<input type="text"/>	<input type="text"/>	<input type="text"/>

**Patent Cooperation Treaty (PCT)**

Enter PCT application number only if a U.S. Application Number has not been assigned.

PCT <input type="text"/>	PCT <input type="text"/>	PCT <input type="text"/>
PCT <input type="text"/>	PCT <input type="text"/>	PCT <input type="text"/>

**Number of Properties**

Enter the total number of properties involved. #

**Fee Amount**

Fee Amount for Properties Listed (37 CFR 3.41): \$

Method of Payment: Enclosed  Deposit Account

(Enter for payment by deposit account or if additional fees can be charged to the account.)

Deposit Account Number: #

Authorization to charge additional fees: Yes  No

**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. Charges to deposit account are authorized, as indicated herein.

Christopher S. Daly

30 MAR 01

Name of Person Signing

Signature

Date

## ASSIGNMENT

Whereas I, the undersigned, Ananthan K. Pillai, Madhav Mutalik, Cara Garber and Ajay Shekhar, hereby have made certain inventions or discoveries (or both) set forth in an application for Letters Patent of the United States of America entitled, METHOD AND APPARATUS FOR COMPUTING FILE STORAGE ELEMENTS FOR BACKUP AND RESTORE identified as Attorney Docket No. EMC-005PUS and Client Case No. EMC-00-018, which application was executed by us on 3/28/01 filed on 3/30/01 assigned Application No. \_\_\_\_\_.

In the event that the execution date, filing date and/or Application No. are not entered above at the time I execute this document, and if such information is deemed necessary, I hereby authorize and request my attorneys at Daly, Crowley & Mofford, LLP, 275 Turnpike Street, Suite 101, Canton, MA 02021-2310, to insert above the execution date, filing date and/or Application No. of said application.

Whereas, EMC CORPORATION, a Massachusetts corporation having a place of business at 35 Parkwood Drive, Hopkinton, MA 01748, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation:

1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, reissue, re-examination and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent;

2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in our names or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;

3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;

PATENT  
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Client Case No. EMC-00-018

4. Warrant that we have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that we have good right to assign the same to Assignee without encumbrance;

5. Bind our heirs, legal representatives and assigns, as well as ourselves, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to us or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by us, our heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to us relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in our control or in the control of our heirs, legal representatives or assigns which may be useful for establishing the facts of our conceptions, disclosures, and reduction to practice of said inventions and discoveries.

In testimony of which we have executed this Assignment as an instrument under seal on the dates indicated next to our names.

State or Commonwealth of Massachusetts  
County Middlesex

Dated 3/29/01  
A.K. Pillai  
Ananthan K. Pillai

On this 29<sup>th</sup> day of March, 2001, before me appeared Ananthan K. Pillai, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she acknowledged the same to be his/her free act and deed.

Mary E. Harrington  
Notary Public  
Comm expires 9.20.2002

[seal]

PATENT  
Attorney Docket No. EMC-005PUS  
Client Case No. EMC-00-018

In testimony of which we have executed this Assignment as an instrument under seal on the dates indicated next to our names.

State or Commonwealth of Massachusetts

County Middlesex

Dated 3-29-01

M Madhav Mutalik  
Madhav Mutalik

On this 29<sup>th</sup> day of March, 2001, before me appeared Madhav Mutalik, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she acknowledged the same to be his/her free act and deed.

Mary E. Harrington  
Notary Public  
Comm expires 9.20.2002

[seal]

PATENT  
Attorney Docket No. EMC-005PUS  
Client Case No. EMC-00-018

In testimony of which we have executed this Assignment as an instrument under seal on the dates indicated next to our names.

State or Commonwealth of Massachusetts

County Middlesex

Dated 3-29-01

Cara Garber  
Cara Garber

On this 29<sup>th</sup> day of March, 2001, before me appeared Cara Garber, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she acknowledged the same to be his/her free act and deed.

Mary E. Harrington  
Notary Public  
Comm. expires 9-20-2002

[seal]

PATENT  
Attorney Docket No. EMC-005PUS  
Client Case No. EMC-00-018

In testimony of which we have executed this Assignment as an instrument under seal on the dates indicated next to our names.

State or Commonwealth of Massachusetts

County Middlesex

Dated 3.29.01

Ajay Shekhar  
Ajay Shekhar

On this 29<sup>th</sup> day of March, 2001, before me appeared Ajay Shekhar, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she acknowledged the same to be his/her free act and deed.

Mary E. Huntington  
Notary Public  
Comm. expires 9.20.2002

[seal]