

08-15-2002

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(Rev. 6-93)

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102191434
PATENTS ONLY

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Patent and Trademark Office

1017 U.S. PTO
10/213241

08/06/02

To the Honorable Commissioner for Patents: Please record the attached original document or copy thereof.

1. Name of conveying party(ies):

Philippe Armangau; Himabindu Tummala

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: August 2, 2002

2. Name and address of receiving party(ies):

Name: EMC Corporation

Internal Address:

Street Address: 35 Parkwood Ave.

City: Hopkinton State: MA Zip: 01748-9103

Additional name(s) & address(es) attached? ☐ Yes ☒ No

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

If this document is being filed together with a new application, the execution date of the application is: August 2, 2002

A. Patent Application No.(s):

B. Patent No.(s):

Additional numbers attached? ☐ Yes ☒ No

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

Name: Richard Auchterlonie
Howrey Simon Arnold & White, LLP
750 Bering Drive

City: Houston State: Texas Zip: 77057-2198

6. Total number of applications and patents involved: 1

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

☐ Enclosed☒ Authorized to be charged to deposit account
if check insufficient or inadvertently omitted8. Deposit account number: 05-0889/EMC-02-038
(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.

Richard Auchterlonie

Richard C. Auchterlonie

August 6, 2002

Name of Person Signing, Reg. No. 30,607

Signature

Date

Total number of pages including cover sheet, attachments and documents: 4

CERTIFICATE OF EXPRESS MAIL

NUMBER EV 040498093 US

DATE OF DEPOSIT August 6, 2002

I hereby certify that this paper or fee is being deposited with the United States Postal Service "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Washington, D.C. 20231.

Richard C. Auchterlonie
Signature Reg. 30,607

08/14/2002 DBYRNE 00000115 050889 10213241

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40.00 CH

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned, do hereby:

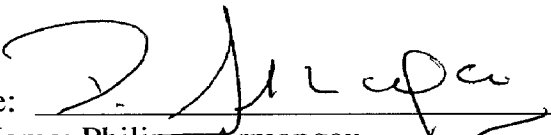
SELL, ASSIGN AND TRANSFER to EMC CORPORATION (the "Assignee"), having a place of business at 35 Parkwood Ave., Hopkinton, MA 01748-9103, their entire right, title and interest for the United States and all foreign countries in and to any and all improvements which are disclosed in the application for United States Letters Patent, which has been executed by the undersigned concurrently herewith and is entitled "DATA STORAGE SYSTEM HAVING META BIT MAPS FOR INDICATING WHETHER DATA BLOCKS ARE INVALID IN SNAPSHOT COPIES," such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such improvements in the Assignee, and for securing, maintaining and enforcing proper patent protection for such improvements;

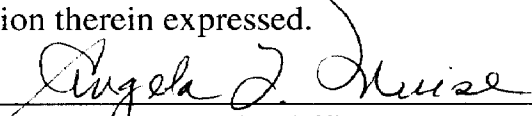
TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

Signature: 
Name: Philippe Armangau

Date: 08/02/02

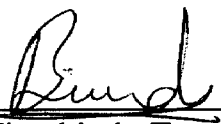
STATE OF MASSACHUSETTS)
) ss.
COUNTY OF WORCESTER)

BEFORE ME, the undersigned authority, on this 2nd day of August, 2002,
personally appeared Philippe Armangau, known to me to be the person whose name is
subscribed to the foregoing instrument and acknowledged to me that he executed the same of his
own free will for the purposes and consideration therein expressed.


Notary or Consular Officer

[SEAL]

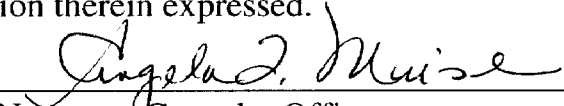
ANGELA F. MUISE
Notary Public
My Commission Expires February 12, 2004

Signature: 
Name: Himabindu Tummala

Date: 08/02/02

STATE OF MASSACHUSETTS)
) ss.
COUNTY OF WORCESTER)

BEFORE ME, the undersigned authority, on this 2nd day of August, 2002,
personally appeared Himabindu Tummala, known to me to be the person whose name is
subscribed to the foregoing instrument and acknowledged to me that he executed the same of his
own free will for the purposes and consideration therein expressed.


Notary or Consular Officer

[SEAL]

ANGELA F. MUISE
Notary Public
My Commission Expires February 12, 2004

HOWREY SIMON ARNOLD & WHITE, LLP
750 Bering Drive
Houston, Texas 77057-2198

1299 Pennsylvania Avenue, N.W.
Washington, DC 20004