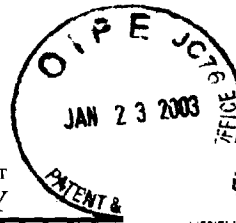


Atty Docket No.: 221890US2/tca

FORM PTO-1595
1-31-92

RECORDATION FORM COVER SHEET
PATENTS ONLY



01-28-2003



To the Honorable Commissioner of Patents and Trademarks. Please record the attached

1. Name of conveying party(ies): 1-23-03

Yoshinori TAKANO and Kentaro WATANABE

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

3. Nature of Conveyance:

- Assignment
- Security Agreement
- Other
- Merger
- Change of Name

Execution Date: April 1, 2002

2. Name and address

102349139

Name: KABUSHIKI KAISHA TOSHIBA

Address: 1-1, Shibaura 1-chome, Minato-ku,
Tokyo 105-8001, JAPAN

Additional name(s) and address(es) attached? Yes 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:

A. Patent Application No.(s)

10/119,840

B. Patent No.(s)

Additional numbers attached? Yes No

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



22850

Tel. (703) 413-3000
Fax. (703) 413-2220

6. Total applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$40.00

- Enclosed
- Authorized to be charged to deposit account

8. Deposit account number: 15-0030

(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.

Marvin J. Spivak

Name of Person Signing

Registration Number: 24,913

Joseph A. Scafetta, Jr.
Signature

Joseph A. Scafetta, Jr.
Registration No. 26,803

Total number of pages including this cover sheet: 3

Jan. 23, 2003
Date

Do not detach this portion

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks
Box Assignments
Washington, D.C. 20231

01/27/2003 TDIAZ1 00000193 10119840

01 FC:8021

40.00 OP

PATENT
REEL: 013687 FRAME: 0478

Assignment of Application

WHEREAS, I (WE)

INSERT NAMES AND RESIDENCE ADDRESS OF THE INVENTORS:

Yoshinori TAKANO 606, 5-15, Minami-yawata 4-chome, Ichikawa-shi, Chiba 272-0023,
JAPAN; Kentaro WATANABE 507, 19-18, Nakamachidai 4-chome, Tsuzuki-ku,
Yokohama-shi, Kanagawa 224-0041, JAPAN

INSERT TITLE OF INVENTION:

_____, respectively,
have invented certain new and useful improvements in: SEMICONDUCTOR MEMORY DEVICE

INSERT DATE INVENTORS SIGNED DECLARATION:

for which an application for Letters Patent was executed on April 1, 2002
(Application No. 10/119,840, filed April 11, 2002), and

INSERT NAME AND ADDRESS OF COMPANY OR OTHER ASSIGNEE:

WHEREAS, KABUSHIKI KAISHA TOSHIBA

(hereinafter referred to as "ASSIGNEE") having a place of business at: _____
1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, JAPAN

is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries;

NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I (WE), by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof.

I (WE) hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my (our) entire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) successors and assigns, 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 me (us) had this Assignment and sale not been made.

Further, I (WE) agree that I (WE) will communicate to said ASSIGNEE or its (his) representatives any facts known to me (us) respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letter Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.

The undersigned hereby grant(s) the firm of Oblon, Spivak, McClelland, Maier & Neustadt, P.C. of Fourth Floor, 1755 Jefferson Davis Highway, Arlington, Virginia 22202 the power to insert on this assignment any further identification, including the application number and filing date, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Date: April 1, 2002

Yoshinori Takano
(Signature of Inventor) Yoshinori TAKANO

Date: April 1, 2002

Kentaro Watanabe
(Signature of Inventor) Kentaro WATANABE

Date: _____

(Signature of Inventor)

Date: _____

(Signature of Inventor)

Date: _____

(Signature of Inventor)

Date: _____

(Signature of Inventor)

Date: _____

(Signature of Inventor)

Date: _____

(Signature of Inventor)

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.
ATTORNEYS AT LAW
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202