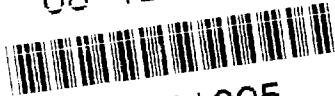


08-12-2003



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Form PTO-1595 (Rev. 10/02) OMB No. 0651-0027 (exp. 6/30/2005)

Attorney Docket No. 501.42869X00

U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

7-30-03

CHAKIHARA, HIRAKU
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NOGUCHI, MITSUHIRO
YOSHIDA, TADANORI
TAKAHASHI, YASUHIKO
NISHIDA, AKIO

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

3. Nature of conveyance:

Assignment Merger
 Security Agreement Change of Name
 Other _____

Execution Date: May 12, 21, 12, 12, 16, 27, June 6, May 19, and 12, 2003.

2. Name and address of receiving party(ies)

Name: 1) HITACHI, LTD.
2) HITACHI ULSI SYSTEMS CO., LTD.

Address: 1) 6, Kanda Surugadai 4-chome, Chiyoda-ku, Tokyo, Japan
2) 22-1, Josuihoncho 5-chome, Kodaira-shi, Tokyo, Japan

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

22212 U.S. PTO 10/629733



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: May 12, 21, 12, 12, 16, 27, June 6, May 19, and 12, 2003.

A. Patent Application No.(s)
10629733

Additional number(s) attached Yes No

B. Patent Registration No.(s)

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

Name: Antonelli, Terry, Stout & Kraus, LLP

Internal Address:

1300 North Seventeenth Street
Suite 1800
Arlington, VA 22209
USA

City: State: Zip:

6. Total number of applications and patents involved 1

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

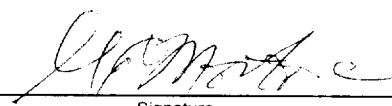
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To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

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ASSIGNMENT
(譲渡証)

As a below named inventor, I hereby declare that:

IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration paid to me citizen of Japan by Hitachi, Ltd., and Hitachi ULSI Systems Co., Ltd., corporations organized under the laws of Japan, located at 6, Kanda Surugadai 4-chome, Chiyoda-ku, Tokyo, Japan, and 22-1, Josuihoncho 5-chome, Kodaira-shi, Tokyo, Japan, receipt of which is hereby acknowledged I do hereby sell and assign to said Hitachi, Ltd., and Hitachi ULSI Systems Co., Ltd., their successors and assigns, all my right, title and interest, in and for the United States of America, in and to A SEMICONDUCTOR MEMORY DEVICE AND A METHOD OF MANUFACTURING THE SAME, A METHOD OF MANUFACTURING A VERTICAL MISFET AND A VERTICAL MISFET, AND A METHOD OF MANUFACTURING A SEMICONDUCTOR DEVICE AND A SEMICONDUCTOR DEVICE invented by me (if only one is named below) or us (if plural inventors are named below) and described in the application for United States Letters Patent therefor, executed on even date herewith, and all United States Letters Patent which may be granted therefor, and all divisions, continuations and extensions thereof, the said interest being the entire ownership of the said Letters Patent when granted, to be held and enjoyed by said Hitachi, Ltd., and Hitachi ULSI Systems Co., Ltd., their successors, assigns or other legal representatives, to the full end of term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by me or us if this assignment and sale had not been made;

And I hereby agree to sign and execute any further documents or instruments which may be necessary, lawful, and proper in the prosecution of the above-named application or in the preparation and prosecution of any continuing, continuation-in-part, substitute, divisional, renewal, reviewed or reissue applications or in any amendment, extension, or interference proceedings, or otherwise to secure the title thereto in said assignee;

And I do hereby authorize and request the Commissioner of Patents to issue said Letters Patent to said Hitachi, Ltd., and Hitachi ULSI Systems Co., Ltd.,

Signed on the date(s) indicated aside our signatures:

INVENTOR(S) (発明者フルネームサイン)	Date Signed (署名日)
1) <u>Hiraku Chakihara</u> Hiraku CHAKIHARA	<u>12 / May / 2003</u>
2) <u>Kousuke Okuyama</u> Kousuke OKUYAMA	<u>21 / May / 2003</u>
3) <u>Masahiro Moniwa</u> Masahiro MONIWA	<u>12 / May / 2003</u>
4) <u>Makoto Mizuno</u> Makoto MIZUNO	<u>12 / May / 2003</u>
5) <u>Keiji Okamoto</u> Keiji OKAMOTO	<u>16 / May / 2003</u>
6) <u>Mitsuhiro Noguchi</u> Mitsuhiro NOGUCHI	<u>27 / May / 2003</u>
7) <u>Tadanori Yoshida</u> Tadanori YOSHIDA	<u>6 / June / 2003</u>
8) <u>Yasuhiko Takahashi</u> Yasuhiko TAKAHASHI	<u>19 / May / 2003</u>
9) <u>Akio Nishida</u> Akio NISHIDA	<u>12 / May / 2003</u>
10) _____	_____