502344896 05/13/2013

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| Yasurou MATSUZAKI | 03/10/2003 |
| Takaaki SUZUKI | 03/10/2003 |
| Masafumi YAMAZAKI | 03/10/2003 |
| Kenichi KAWASAKI | 03/10/2003 |
| Shinnisuke KAMATA | 03/10/2003 |
| Ayako SATO | 03/10/2003 |
| Masato MATSUMIYA | 03/10/2003 |

RECEIVING PARTY DATA

| Name: | FUJITSU LIMITED |
|-----------------|--|
| Street Address: | 1-1, Kamikodanaka 4-chome, Nakahara-ku |
| City: | Kawasaki-shi, Kanagawa |
| State/Country: | JAPAN |
| Postal Code: | 211-8588 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13601475 |

CORRESPONDENCE DATA

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| ATTORNEY DOCKET NUMBER: | 100353.00354 |
|-------------------------|--------------|
| | PATENT |

REEL: 030402 FRAME: 0432

\$40.00 13601475

| NAME OF SUBMITTER: | Taledia A. Allen |
|--|--------------------|
| Signature: | /Taledia A. Allen/ |
| Date: | 05/13/2013 |
| Total Attachments: 2 source=100353-00354-Assignment#page1.tif source=100353-00354-Assignment#page2.tif | |

PATENT REEL: 030402 FRAME: 0433

| Docket No. | |
|------------|--|
| | |

U.S. ASSIGNMENT

IN CONSIDERATION of the sum of One Dollar (\$1.00), and of other good and valuable consideration paid to the undersigned inventor(s) (hereinafter ASSIGNOR) by

Unsert ASSIGNEE's Name(s) Address(es)]

FUJITSU LIMITED

1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8588 Japan

(hereinafter ASSIGNEE), the receipt of which is hereby acknowledged, the undersigned ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest to the invention entitled

Title of Invention]

MULTI-PORT MEMORY BASED ON DRAM CORE

[*If the assignment is being filed after the filing of the application, this section must be completed]

for which application for Letters Patent of the United States was executed on even date herewith unless otherwise indicated below:

*filed on

October 31, 2002 , Serial No.

10/284,092

(Arent Fox Kintner Plotkin & Kahn is hereby authorized to insert the series code, serial number and/or filing date hereon, when known)

and all Letters Patent of the United States to be obtained therefor on said application or any continuation, division, renewal, substitute, reissue or reexamination thereof for the full term or terms for which the same may be granted.

The ASSIGNOR agrees to execute all papers necessary in connection with application and any continuing, divisional, reissue or reexamination applications thereof and also to execute separate assignments in connection with such applications as the ASSIGNEE may deem necessary or expedient.

The ASSIGNOR agrees to execute all papers necessary in connection with any interference, litigation, or other legal proceeding which may be declared concerning this application or any continuation, division, reissue or reexamination thereof or Letters Patent or reissue patent issued thereon and to cooperate with the ASSIGNEE in every way possible in obtaining and producing evidence and proceeding with such interference, litigation, or other legal proceeding.

IN WITNESS WHEREOF, the undersigned inventor(s) has (have) affixed his/her/their signature(s)

[Signature(s) of Assignor(s)]

| , | indicated signature(s). |
|---|---|
| Yasurou Matsuzaki | March 10, 2003 |
| (TYPE NAME) | (DATE) |
| Takaaki Suzuki | March 10, 2003 |
| | (DATE) |
| Masafumi Yamazaki | March 10, 2003 |
| (TYPE NAME) | (DATE) |
| | March 10, 2003 |
| (TYPE NAME) | (DATE) |
| Shinnosuke Kamata | March 10, 2003 |
| | (DATE) |
| | March 10, 2003 |
| (TYPE NAME) | (DATE) |
| | Yasurou Matsuzaki (TYPE NAME) Takaaki Suzuki (TYPE NAME) Masafumi Yamazaki (TYPE NAME) Kenichi Kawasaki (TYPE NAME) |

PATENT REEL: 030402 FRAME: 0434

| [Signature(:;) |
|-----------------|
| of Assignor(s)] |

| Massumya (SIGNATURE) | Masato Matsumiya (TYPE NAME) | March 10, 2003 (DATE) |
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| (SIGNATURE) | (TYPE NAME) | (DATE) |

PATENT REEL: 030402 FRAME: 0435

RECORDED: 05/13/2013