Form PTO-1595 1-31-92

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Young-Chul CHO, Sung-Hoon KIM, Joung-Yeal KIM

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

Nature of conveyance:

 Assignment □ Merger

Security Agreement Change of Name

□ Other

Execution Date: October 17, 2005

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

Name: SAMSUNG ELECTRONICS CO., LTD.

Internal Address: 416, Maetan-dong

Yeongtong-gu, Suwon-si, Gyeonggi-do,

Republic of Korea

Additional name(s) & address(es)

attached: 🗆 Yes 🖼 No

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: October 17, 2005

A. Patent Application No.(s)

Patent No.(s)

Additional numbers attached?

Yes
No

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

Name: Frank Chau, Esq.

Street Address: F. CHAU & ASSOCIATES, LLC

130 Woodbury Road

City: Woodbury State: NY Zip: 11797

11/02/2005 LWONDIM1 00000055 11262530

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Total number of applications and patents involved:

7. Total fee (37 C.F.R. §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.

Richard D. Ratchford, Jr.

Registration No. 53,865

Name of Person Signing

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> **PATENT** REEL: 017148 FRAME: 0503

ASSIGNMENT DOCKET NO.: 8028-53 (SPX200408-0060US)

AS A BELOW NAMED INVENTOR, I, and each of us, individually hereby declare that: IN CONSIDERATION of the sum of TEN (\$10.00) dollars or the equivalent thereof, and other good and valuable consideration, the receipt of which from the hereinafter named Assignee is hereby acknowledged, I do hereby sell, assign and forever grant and convey unto:

ASSIGNEE: Samsung Electronics Co., Ltd.

OF

executed on

G

ADDRESS: 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, KOREA

Who is my Assignee, and to the successes and assigns of my Assignee, all my right, title and interest, in and for the United States of America and all other countries, including all rights of priority, in and to the invention entitled:

TITLE: SEMICONDUCTOR MEMORY DEVICE AND A METHOD FOR ARRANGING SIGNAL LINES THEREOF

invented by me (if only one inventor is named below) or us (if more than one inventor is named below) and described in an application for a United States patent the specification of which is either attached hereto or otherwise accompanies this Assignment or indicates an attorney docket no, or is more particularly identified as:												
G	execute	ed on	even date here	with, o	r							
G	Serial	No.		filed	in	the	U.S.	Patent	&	Trademark	Office	on

and in and to all United States patents which may be granted thereon and therefore, and in and to all certificates of corrections, divisions, continuations, continuations-in-part, reissued and reexamined patents, and to any extensions thereof, said interest being the entire ownership of the patent when granted, to be held and enjoyed by said **SAMSUNG ELECTRONICS CO., LTD.**, my Assignee, its successors, assigns or other legal representatives, to the full end of the term, terms, or any extension or renewal thereof, for which said patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by me or us if this assignment, sale and conveyance had not been made;

AND I hereby covenant and agree to sign and execute any further documents or instruments which may from time-to-time be either necessary, lawful, proper or requested by the Assignee, in the prosecution of the above-named application or in the preparation and prosecution of any certificate of correction, division, continuation, continuation-in-part, reissue, re-examination, in any amendment, extension, or interference proceeding, whether administrative or judicial, or otherwise, to secure the title hereto in said Assignee;

AND I do hereby authorize and request the Commissioner of Patents and Trademarks to issue said Patent or Patents to the Assignee, and I hereby appoint as my, or our attorney, and authorize and request <u>Frank Chau. Reg. No. 34,136</u>, to insert on this Assignment any further identification or to complete such identification which may be either necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

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PATENT REEL: 017148 FRAME: 0504 IN WITNESS WHEREOF, I and we have set our hands and seals on the dates written beside my and our respective names:

INVENTOR(5)

Date Signed

1) Young Chil Cho

17/007/2005

2) Sung-Hoon Kim

17, OCt. 2005

3) Joung-Yeal Kim

11/0CT./2005

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U.S. DEPARTMENT OF COMMERCE

1-31-92 Patent and Trademark Office RECORDATION FORM COVER SHEET PATENTS ONLY To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies): Young-Chul CHO, Sung-Hoon KIM, Joung-Yeal KIM Name: SAMSUNG ELECTRONICS CO., LTD. Additional name(s) of conveying party(ies) Internal Address: 416, Maetan-dong, attached? 🗆 Yes 🖫 No Yeongtong-gu, Suwon-si, Gyeonggi-do, 3. Nature of conveyance: Republic of Korea Assignment ☐ Security Agreement ☐ Change of Name Additional name(s) & address(es) □ Other attached: 🗆 Yes 🖼 No Execution Date: October 17, 2005 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: October 17, 2005 B. Patent No.(s) Patent Application No.(s) Additional numbers attached?

Yes

No 5. Name and address of party to whom 6. Total number of applications and patents involved: correspondence concerning document should be mailed: Total fee (37 C.F.R. §3.41): \$40.00 Name: Frank Chau, Esq. ⊠ Enclosed - Credit Card Payment Form PTO-2038 Street Address: F. CHAU & ASSOCIATES, LLC Authorized to be charged to deposit 130 Woodbury Road account City: Woodbury State: NY Zip: 11797 Deposit account number: (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 D. Ratchford, Jr. Registration No. 53,865 Name of Person Signing Total number of pages including cover sheet, attachments and documents: Do not detach this portion Mail documents to be recorded with required cover sheet information to: Mail Stop Assignment Recordation Services Director of the US Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 Public burden reporting for this sample cover sheet is estimated to average about 30 minutes per document to be recorded, including time for reviewing the document and gathering the data needed, and completing and reviewing the sample cover sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Office of Information Systems, PK2-1000C, Washington, D.C. 20231, and to the Office of Management and Budget, Paperwork Reduction Project (0651-0011), Washington, D.C. 20503.

> **PATENT** REEL: 017148 FRAME: 0506

RECORDED: 10/28/2005