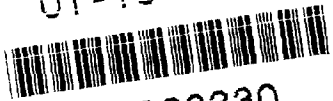


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U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office

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

<p>1. Name of conveying party(ies): Seok Cheol Yoon Jae Jin Lee Sang Hee Kang Chul Ho Kim</p> <p style="text-align: right; font-size: 2em;">1-13-03</p> <p>Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>2. Name and address of receiving party(ies) Name: <u>Hynix Semiconductor Inc.</u> Internal Address: _____ Street Address: _____ San 136-1, Ami-ri, Bubal-Eub, Ichon-shi</p> <p>City: <u>Kyoungki-do</u> Country <u>Republic of Korea</u> Zip: <u>467-860</u> Additional name(s) & address(es) attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>3. Nature of Conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other _____</p> <p>Execution Date: <u>April 9, 2002</u></p>	

4. Application number(s) or patent number(s):
If this document is being filed together with a new application, the execution date of the new application is: _____

<p>A. Patent Application No.(s): <u>10/313,445</u></p> <p>Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>B. Patent No.(s): _____</p>
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<p>5. Name and address of party to whom correspondence concerning document should be mailed: Name: <u>Michael R. Hull</u> <u>MARSHALL, GERSTEIN & BORUN</u> Internal Address: <u>Atty. Dkt.: 30205/38114</u> Street Address: <u>233 S. Wacker Drive, Suite 6300</u> <u>Sears Tower</u></p> <p>City: <u>Chicago</u> State: <u>IL</u> Zip: <u>60606-6357</u></p>	<p>6. Total number of applications and patents involved: _____</p> <p>7. Total fee (37 CFR 3.41) \$ <u>40.00</u> <input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> Authorized to be charged to deposit account</p> <p>8. Deposit account number: _____ <u>13-2855</u> (Attach duplicate copy of this page if paying by deposit account)</p>
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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.

Michael R. Hull January 9, 2003
Name of Person Signing Signature Date

Total number of pages including cover sheet, attachments, and documents: 3

01/14/2003 DBYRNE 00000226 10313445 40.00 DP 01 FC:8021

M₂**ASSIGNMENT**Serial No: 10/313,445Filed: 12/6/2002Title: **REFRESH APPARATUS FOR SEMICONDUCTOR MEMORY DEVICE, AND REFRESH METHOD THEREOF**

For good and valuable consideration, the receipt and sufficiency whereof are hereby acknowledged, the undersigned hereby assign(s) to Hynix Semiconductor Inc. (hereinafter "Assignee"), its successors and assigns, the entire right, title and interest in the invention or improvements of the undersigned disclosed in an application for Letters Patent of the United States, executed by the undersigned on April 9, 2002, and in said application and any and all other applications, which the undersigned may file, either solely or jointly with others, on said invention or improvements, and in any and all Letters Patent of the United States, which may be obtained on any of said applications, and in any reissue or extension thereof.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents and Trademarks to issue said Letters Patent to said assignee.

The undersigned hereby authorize(s) and request(s) the attorneys of record in said application to insert in this assignment the execution date and/or filing date and serial number of said application when officially known.

The undersigned warrant(s) themselves (himself/herself) to be the owners (owner) of the interest herein assigned and to have the right to make this assignment and further warrant(s) that there are no outstanding prior assignments, licenses, or other rights in the interest herein assigned.

For said consideration the undersigned hereby agree(s), upon the request and at the expense of said assignee, its successors and assigns, to execute any and all divisional, continuation, continuation-in-part and substitute applications for said invention or improvements, and any necessary oath or affidavit relating thereto, and any application for the reissue or extension of any Letters Patent that may be granted upon said application, that said assignee, its successors or assigns, may deem necessary or expedient, and for the aforesaid consideration the undersigned further agree(s) upon the request of said assignee, its successors or assigns, in the event of any application or Letters Patent assigned herein becoming involved in Interference, to cooperate to the best of the ability of the undersigned with said assignee, its successors or assigns, in the matters of preparing and executing the preliminary statement and giving and producing evidence in support thereof, the undersigned hereby agreeing to perform, upon request, any and all affirmative acts to obtain said Letters Patent, and vest all rights therein hereby conveyed in said assignee, its successors and assigns, whereby said Letters Patent will be held and enjoyed by said assignee, its 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 and enjoyed by the undersigned if this assignment and sale had not been made.

WITNESS my (our) hand(s) this 9th day of April, 2002.

Witness: Soyoung KIM



1) Seok cheol Yoon
Name: Seok Cheol YOON

Date: April 9, 2002

2) JAE JIN LEE
Name: Jae Jin LEE

Date: April 9, 2002

3) Sang Hee Kang
Name: Sang Hee KANG

Date: April 9, 2002

4) Kim chul ho
Name: Chul Ho KIM

Date: April 9, 2002

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