**PATENT ASSIGNMENT**

Electronic Version v1.1  
Stylesheet Version v1.1  

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<th>SUBMISSION TYPE:</th>
<th>NEW ASSIGNMENT</th>
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**CONVEYING PARTY DATA**

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<th>Name</th>
<th>Execution Date</th>
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<td>Chi-Sung OH</td>
<td>02/26/2007</td>
</tr>
<tr>
<td>Ho-Cheol LEE</td>
<td>02/26/2007</td>
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**RECEIVING PARTY DATA**

<table>
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<tr>
<th>Name</th>
<th>Samsung Electronics Co., Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Address:</td>
<td>416 Maetan-Dong, Yeongtong-Gu, Suwon-Si</td>
</tr>
<tr>
<td>City:</td>
<td>Gyeonggi-do</td>
</tr>
<tr>
<td>State/Country:</td>
<td>KOREA, REPUBLIC OF</td>
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**PROPERTY NUMBERS Total: 1**

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<tr>
<td>Application Number</td>
<td>11616846</td>
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**CORRESPONDENCE DATA**

Fax Number: (503)274-4622  
Correspondence will be sent via US Mail when the fax attempt is unsuccessful.  
Phone: 503-222-3613  
Email: docketing@techlaw.com  
Correspondent Name: Marger Johnson & McCollom, P.C.  
Address Line 1: 210 SW Morrison Street, Suite 400  
Address Line 4: Portland, OREGON 97204

**ATTORNEY DOCKET NUMBER:** 5484-175

**NAME OF SUBMITTER:** Hosoon Lee

Total Attachments: 2  
source=Assignment#page1.tif  
source=Assignment#page2.tif
ASSIGNMENT

U.S.A. Patent Application
Sole or Joint
For Inventions Made Outside U.S.A.
Executed With Application

In consideration of the sum of Ten Dollars (10.00) and other good and valuable considerations paid to each of the undersigned, to wit:

(1) Chi-Sung OH
(2) Ho-Cheul LEE
(3) Nam-Jong KIM

☐ X if continued on separate page

the receipt and sufficiency of which are hereby acknowledged by the undersigned who hereby sell(s), assign(s) and transfer(s) unto:

SAMSUNG ELECTRONICS CO., LTD.
416 MAETAN-DONG, YEONGTONG-GU
SUWON-SI, GYEONGGI-DO
REPUBLIC OF KOREA

(hereinafter designated “ASSIGNEE”) the entire right, title and interest in and to the invention as defined in 35 USC §100, for the United States of America, the invention entitled:

MULTI-PORT SEMICONDUCTOR MEMORY DEVICE AND METHOD FOR ACCESSING AND REFRESHING THE SAME

for which an application for Letters Patent of the United States of America was filed on December 27, 2006 as Application No. 11/616,846 has been executed even date herewith by the undersigned, and in and to any and all divisionals, continuations, substitutes, and reissues thereof; and all resulting patents and the undersigned hereby authorizes and requests the United States Assistant Commissioner of Patents to issue said Letters Patent to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE:

And the undersigned hereby agrees to testify and execute any papers for ASSIGNEE, its successors, assigns and legal representatives, deemed essential by ASSIGNEE to ASSIGNEE’S full protection and title in and to the invention hereby transferred.
Please sign
concurrently
with Oath or Declaration
and Power of Attorney

SIGNED ON THE DATES INDICATED BESIDE OUR SIGNATURES:

<table>
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<tr>
<th>INVENTOR(S)</th>
<th>DATE SIGNED</th>
<th>WITNESSED</th>
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<tr>
<td>(1) Chi-Sung OH</td>
<td>2007.2.26</td>
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</tr>
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<td>(2) Ho-Cheol Lee</td>
<td>2007.2.26</td>
<td>—</td>
</tr>
<tr>
<td>(3) Nam-Jong Kim</td>
<td>2007.2.26</td>
<td>—</td>
</tr>
</tbody>
</table>

PLEASE RETURN RECORDED ASSIGNMENT TO:

Alan T. McCollom
Marger Johnson & McCollom
210 S.W. Morrison Street, Suite 400
Portland, OR 97204