

**PATENT ASSIGNMENT**

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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
<b>CONVEYING PARTY DATA</b>													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Sunil Shim</td> <td>10/19/2010</td> </tr> <tr> <td>Sunghoi Hur</td> <td>10/14/2010</td> </tr> <tr> <td>Hansoo Kim</td> <td>10/14/2010</td> </tr> <tr> <td>Jaehoon Jang</td> <td>10/19/2010</td> </tr> <tr> <td>Hoosung Cho</td> <td>10/19/2010</td> </tr> </tbody> </table>		Name	Execution Date	Sunil Shim	10/19/2010	Sunghoi Hur	10/14/2010	Hansoo Kim	10/14/2010	Jaehoon Jang	10/19/2010	Hoosung Cho	10/19/2010
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<b>RECEIVING PARTY DATA</b>													
Name:	Samsung Electronics Co., Ltd.												
Street Address:	416 Maetan-dong, Yeongtong-gu, Suwon-si												
City:	Gyeonggi-do												
State/Country:	REPUBLIC OF KOREA												
<b>PROPERTY NUMBERS Total: 1</b>													
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12943126</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12943126								
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<b>CORRESPONDENCE DATA</b>													
Fax Number:	(919)854-1401												
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>													
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ATTORNEY DOCKET NUMBER:	5649-2971												
NAME OF SUBMITTER:	Audra Wooten												
Total Attachments: 6													

CH \$40.00 12943126

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**PATENT**  
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**ASSIGNMENT**

THIS ASSIGNMENT, made by us, **Sunil Shim**, citizen of the Republic of Korea, residing at 104-704, Kolon Apt., Bangi 1-dong, Songpa-gu, Seoul, Republic of Korea; **Sunghoi Hur**, citizen of the Republic of Korea, residing at 5-803, Gyeongnam Apt., Gaepo 1-dong, Gangnam-gu, Seoul, Republic of Korea; **Hansoo Kim**, citizen of the Republic of Korea, residing at 431-601, Samsung Raemian Apt., 100, Chengmyungro, Yeongtong-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea; **Jaehoon Jang**, citizen of the Republic of Korea, residing at 210-103, Yangji Maeul Chunggu Apt., Sunae-dong, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea; and **Hoosung Cho**, citizen of the Republic of Korea, residing at 101-303, Gangnam Maeul Kolon Haneulchaesu Apt., Gugal-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea;

WITNESSETH: That,

WHEREAS, we are the joint inventors of certain new and useful improvements in **THREE-DIMENSIONAL SEMICONDUCTOR MEMORY DEVICE** for which an application for United States Letters Patent has been filed, or is being filed concurrently, in the United States Patent and Trademark Office. We hereby authorize and request Myers Bigel Sibley & Sajovec, P.A., to insert here in parentheses (Application No. 12/943,126, filed 11/10/10) the filing date and application number of said application when known or to file this Assignment concurrently with the application, and

WHEREAS, **Samsung Electronics Co., Ltd.**, a Korean corporation having a principal place of business at 416 Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, hereinafter referred to as assignee, is desirous of acquiring the entire right, title and interest in and to said invention as described in said application, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

NOW, THEREFORE, To Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have sold and by these presents do hereby sell, assign, transfer and convey unto the said assignee, its successors and assigns, the entire right, title and interest in and to the said invention and application, and in and to any and all continuations, continuations-in-part, or divisions thereof, and in and to any and all Letters Patent of the United States of America and all foreign countries or reissues thereof which may be granted therefor or thereon, for the full end of the term for which said Letters Patent may be granted, together with the right to claim the

**ASSIGNMENT – CONTINUED**

priority of said application in all foreign countries in accordance with the International Convention, the same to be held and enjoyed by said assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

We hereby request that said Letters Patent be issued in accordance with this assignment.

We further covenant and agree that, at the time of the execution and delivery of these presents, we possess full title to the invention and application above-mentioned, and that we have the unencumbered right and authority to make this assignment.

We further covenant and agree to bind our heirs, legal representatives and assigns, promptly to communicate to said assignee or its representatives any facts known to us relating to said invention, to testify in any interference or legal proceedings involving said invention, to execute any additional papers which may be requested to confirm the right of the assignee, its representatives, successors or assigns to secure patent or similar protection for the said invention in all countries and to vest in the assignee complete title to the said invention and Letters Patent, without further compensation, but at the expense of said assignee, its successors, assigns and other legal representatives.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 19 day of October, 2010.

Sun Il Shim (SEAL)  
**Sunil Shim**

Witnessed by:

\_\_\_\_\_

Date: \_\_\_\_\_

ASSIGNMENT – CONTINUED

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 17 day  
of Oct, 2010.

*Sunghoi Hur* (SEAL)  
Sunghoi Hur

Witnessed by:

\_\_\_\_\_

Date: \_\_\_\_\_

ASSIGNMENT - CONTINUED

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 1P day  
of oct., 2010.

H.S. Kim (SEAL)  
**Hansoo Kim**

Witnessed by:

\_\_\_\_\_

Date: \_\_\_\_\_

**ASSIGNMENT - CONTINUED**

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 19<sup>th</sup> day  
of Oct, 2010.

Jaehoon Jang (SEAL)  
**Jaehoon Jang**

Witnessed by:

\_\_\_\_\_

Date: \_\_\_\_\_

**ASSIGNMENT - CONTINUED**

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 19 day  
of oct, 2010.

Cho Hoo Sang (SEAL)  
**Hoosung Cho**

Witnessed by:

\_\_\_\_\_

Date: \_\_\_\_\_