

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Name</th> <th style="width: 30%;">Execution Date</th> </tr> </thead> <tbody> <tr> <td>Hak-soo Yu</td> <td>05/04/2011</td> </tr> <tr> <td>Sang-bo Lee</td> <td>05/04/2011</td> </tr> <tr> <td>Hong-sun Hwang</td> <td>05/04/2011</td> </tr> <tr> <td>Dong-hyun Sohn</td> <td>05/04/2011</td> </tr> </tbody> </table>		Name	Execution Date	Hak-soo Yu	05/04/2011	Sang-bo Lee	05/04/2011	Hong-sun Hwang	05/04/2011	Dong-hyun Sohn	05/04/2011		
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CORRESPONDENCE DATA													
<p>Fax Number: (919)854-1401 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 9198541400 Email: mmc Mahan@myersbigel.com Correspondent Name: Michele P. McMahan Address Line 1: 4140 Parklake Avenue Address Line 4: Raleigh, NORTH CAROLINA 27612</p>													
ATTORNEY DOCKET NUMBER:	5649-3179												
NAME OF SUBMITTER:	Michele P. McMahan												
Total Attachments: 5													

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ASSIGNMENT

THIS ASSIGNMENT, made by us, **HAK-SOO YU**, citizen of the Republic of Korea, with a residential address of 703-405, Imaechon Sungji Apt., Imae-dong, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea; **Sang-bo LEE**, citizen of the Republic of Korea, with a residential address of 403-1604, Geumhwa Maeul Jugong Apt., Sanggal-dong, Giheung-gu, Yongsin-si, Gyeonggi-do, Republic of Korea; **Hong-sun HWANG**, citizen of the Republic of Korea, with a residential address of 106-303, Ssangyong Apt., Mangpo-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea; and **Dong-hyun SOHN**, citizen of the Republic of Korea, with a residential address of 101-1801, Samsung Apt., Daejo-dong, Eunpyeong-gu, Seoul, Republic of Korea.

WITNESSETH: That,

WHEREAS, we are the joint inventors of certain new and useful improvements in **SEMICONDUCTOR DEVICES HAVING A THREE DIMENSIONAL STACKED STRUCTURE AND METHODS OF DE-SKEWING DATA THEREIN** 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. 13/108,130, filed 5/16/11) 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

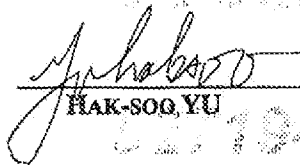
priority of said application in all foreign countries in accordance with the International Convention, the same to be held and enjoyed by said assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

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.

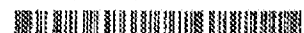
We further covenant and agree to bind our heirs, legal representatives and assigns, promptly to communicate to said assignee or its representatives any facts known to us relating to said invention, to testify in any interference or legal proceedings involving said invention, to execute any additional 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 4 day of May, 20 11.


 HAK-SOO YU (SEAL)

Witnessed by:

Date: _____



ASSIGNMENT - CONTINUED

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 4th day
of May, 2011.

Sangbo Lee (SEAL)
SANG-BO LEE

Witnessed by:

Date: _____



ASSIGNMENT - CONTINUED

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 4 day
of May, 2011.

Hwang Hong Sun (SEAL)
HONG-SUN HWANG

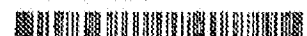
Witnessed by:

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ASSIGNMENT - CONTINUED

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 4th day
of May, 2011.



DONG-HYUN SOHN (SEAL)

Witnessed by:

Date: _____

