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Patent No.: SEC.1548

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**CHO, Beak-hyung**  
**SEO, Jong-soo**  
**KIM, Du-cung**  
**CHO, Woo-yeong**

Additional names(s) of conveying party(ies) ☐ Yes ☒ No

2. Name and address of receiving party(ies):  
Name: **SAMSUNG ELECTRONICS CO., LTD.**  
Address: **416, Maetan-dong, Yeongtong-gu, Suwon-si,**

3. Nature of conveyance:  
☒ Assignment ☐ Merger  
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Execution Date: **December 5, 2005**

City: **Gyeonggi-do** State/Prov.: \_\_\_\_\_  
Country: **Republic of Korea** ZIP: \_\_\_\_\_

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4. Application number(s) or patent numbers(s):  
If this document is being filed together with a new application, the execution date of the application is: **December 5, 2005**

Patent Application No.	Filing date
<b>NEW</b>	<b>DECEMBER 19, 2005</b>

B. Patent No.(s)

Additional numbers ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:  
Name: **ADAM C. VOLENTINE**  
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Country: **USA** ZIP: **20190**

6. Total number of applications and patents involved: **1**

7. Total fee (37 CFR 3.41):.....\$ **40.00**

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VOLENTINE FRANCO &amp; WHITT, P.L.L.C. (9/2004)

ATTORNEY DOCKET NO. SEC.154R**ASSIGNMENT**

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned

**Insert  
Name(s) of  
Inventor(s)**

1. Beak-hyung CHO 5. \_\_\_\_\_  
 2. Jong-soo Seo 6. \_\_\_\_\_  
 3. Du-eung KIM 7. \_\_\_\_\_  
 4. Woo-yeong CHO 8. \_\_\_\_\_

**Insert  
Name(s) of  
Assignee(s) &**

the undersigned hereby sell(s) and assign(s) to

**Address(es)**

SAMSUNG ELECTRONICS CO., LTD.  
416, Maetan-dong, Yeongtong-gu,  
Suwon-si, Gyeonggi-do, Republic of Korea

(hereinafter designated as the Assignee) the entire right, title and interest for the United States as defined in 35 USC 100, in the invention known as

**Title of  
Invention**

PHASE CHANGE MEMORY DEVICE AND METHOD OF DRIVING OF

WORD LINE THEREOF

**Date of  
Signing of  
Application**

for which an application for patent in the United States of America has been executed by  
 the undersigned on December 5, 2005

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuing, division or reissue thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

VOLENTINE FRANCOS &amp; WHITT, P.L.L.C. (9/2004)

ATTORNEY DOCKET NO. SEC.1548

The undersigned hereby grant(s) the practitioners associated with the CUSTOMER NUMBER 20987 the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date	<u>DEC. 5, 2005</u>	Signature of Inventor	<u>BEAK HYUNG CHO</u> Beak-hyung CHO
Date	<u>Dec. 5, 2005</u>	Signature of Inventor	<u>CTONG SOO SEO</u> Jong-soo SEO
Date	<u>Dec. 1, 2005</u>	Signature of Inventor	<u>Du - eung KIM</u> Du-eung KIM
Date	<u>Dec. 5, 2005</u>	Signature of Inventor	<u>WOO YEONG CHO</u> Woo-yeong CHO
Date	_____	Signature of Inventor	_____
Date	_____	Signature of Inventor	_____
Date	_____	Signature of Inventor	_____
Date	_____	Signature of Inventor	_____

(Note regarding Witnessing: It is recommended that the execution by the Inventor(s) be witnessed by at least two witnesses who sign here. However, the current practice of the U.S. Patent and Trademark Office is to record an Assignment even it has not been witnessed.)

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Applicant Reference No. SS-24883-US