

RECORDATION FORM COVER SHEET PATENTS ONLY				U.S. Department of Commerce Patent and Trademark Office Attorney Docket No. SAM-50175			
To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.				Mail Stop Assignment Recordation Services			
1. Name of conveying party(ies): 1. Je-Min Ryu 2. Gil-Su Kim 3. Jong-Min Oh 4. Sung-Min Seo 5. Ho-Young Song 6. Yong-Ho Cho				2. Name and address of receiving party: Name: Samsung Electronics Co., Ltd.			
Additional name(s) of conveying parties attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Internal Address:			
3. Nature of conveyance:				Street Address:		129, Samsung-ro, Yeongtong-gu	
<input checked="" type="checkbox"/>	Assignment	<input type="checkbox"/>	Merger	City:		Suwon-si	
<input type="checkbox"/>	Security Agreement	<input type="checkbox"/>	Change of Name	State: Gyeonggi-do		Country: Republic of Korea	
<input type="checkbox"/>	Joint Research Agreement	<input type="checkbox"/>	Government Interest Assignment	Additional name(s) & Address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<input type="checkbox"/>	Executive Order 9494, Confirmatory License	<input type="checkbox"/>	Other:				
Execution Date(s):		01/28/2013					
4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application:							
A. Patent Application Number:				B. Patent Number(s):			
13/771,633							
Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
5. Name and address of party to whom correspondence concerning document should be mailed:				6. Total number of applications and patents involved: 1			
Name:		Patrick D. Muir		7. Total fee (37 CFR 1.21(h) and 3.41): \$ 40			
		(tel): 703-757-7880 (fax): 703-757-7447 (e-mail): mailroom@muirpatentconsulting.com		<input type="checkbox"/> Enclosed (Please charge deficiency or credit overpayment to deposit account 50-4574)			
Internal Address:		Muir Patent Consulting, PLLC		<input checked="" type="checkbox"/> Authorized to be charged to deposit account			
Street Address:		9913 Georgetown Pike, Suite 200, P.O. Box 1213		<input type="checkbox"/> None required (government interest not affecting title)			
City:		Great Falls		8. Deposit Account No.: 50-4574			
State:		VA		Zip:		22066	
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.							
Signed:		/Sang Ki Hwang/				February 20, 2013	
		Sang Ki Hwang, Reg. No. 68,641				Date	
Total number of pages including cover sheet, attachments and documents:						7	

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SAMSUNG ELECTRONICS CO., LTD.

COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM¹

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

Title: MEMORY DEVICE, METHOD OF OPERATING THE SAME, AND ELECTRONIC DEVICE HAVING THE MEMORY DEVICE

for which Assignor is about to make or has made United States or International application for patent.

WHEREAS, as a below named inventor(s), I/(we) hereby declare that:

Section I. Declaration

This declaration is directed to:

- The attached U.S. non-provisional patent application, or
- U.S. non-provisional patent application number _____, filed on _____, or
- PCT international patent application number _____, filed on _____.

The above-identified application was made or authorized to be made by me (us).

I (we) believe that I am (we are) the original inventor (original joint inventors) of a claimed invention in the above-identified application.

I (we) hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

¹ This form requires the use of an Application Data Sheet.

SIC Ref No. _____	ID-201203-505-1-US0	Attorney Ref No. _____	SAM-50175
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I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

I acknowledge that I am aware of the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

Section II. Assignment

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

Samsung Electronics Co., Ltd.

having an address at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742, Republic of Korea (hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application, to the aforesaid application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part,

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divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

The undersigned hereby grant(s) the law firm of Muir Patent Consulting, PLLC the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF FIRST INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	Ryu	Je-Min	
SIGNATURE 		DATE 2013/01/28	

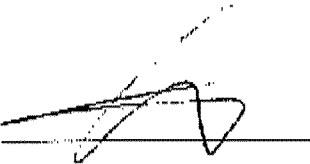
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Attorney Ref SAM-50175 No. _____

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LEGAL NAME OF SECOND INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	Kim	Gil-Su	
SIGNATURE 		DATE 2013/01/28	

LEGAL NAME OF THIRD INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	Oh	Jong-Min	
SIGNATURE 		DATE 2013/01/28	

LEGAL NAME OF FOURTH	Family Name	First Given Name	Second Given Name

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No. _____

ID-201203-505-1-US0

Attorney Ref
No. _____

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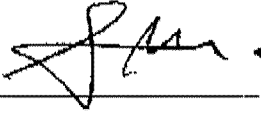
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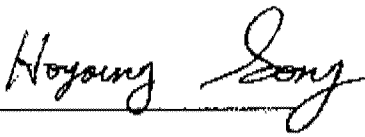
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INVENTOR/ASSIGNOR	Seo	Sung-Min	
SIGNATURE <u></u> DATE <u>2013/01/28</u>			

LEGAL NAME OF FIFTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	Song	Ho-Young	
SIGNATURE <u></u> DATE <u>2013/01/28</u>			

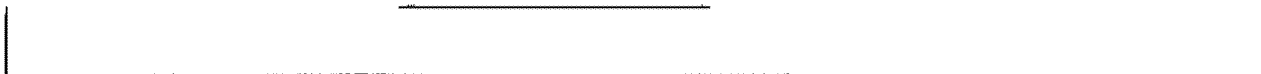
LEGAL NAME OF SIXTH INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
	Cho	Yong-Ho	
SIGNATURE <u></u> DATE <u>2013/01/28</u>			

SEC Ref No. ID-201203-505-1-USO Attorney Ref No. SAM-50175

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