Docket No.: SEC.2383

U.S. DEPARTMENT OF COMMERCE RECORDATION FORM COVER SHEET FORM PTO-1595 (Modified) (Boy. 03-01) Patent and Trademark Office OMB No. 0651-0027 (exp.5/31/2002) PATENTS ONLY POBA/REVO3 Tab settings 🔷 🔷 🔷 To the Director of the United States Patent and Trademark Office: Please record the attached original documents or copy thereof. Name and address of receiving party(ies): 1. Name of conveying party(ies): **Byung-Gil CHOI** Name: Samsung Electronics Co., Ltd. Address: 416, Mactan-dong, Yeongtong-gu, ☐ Yes ☒ No Additional names(s) of conveying party(ies) 3. Nature of conveyance: □ Merger City: Suwon-si, State/Prov.: Gyeonggi-do Change of Name ☐ Security Agreement 442-742 Republic of Korea Country: 🗀 Other _ Execution Date: June 3, 2009 □ Yes ⊠ No Additional name(s) & address(es) 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: B. Patent No.(s) Filing date Patent Application No. June 5, 2009 12/478,896 ☐ Yes 🏻 No Additional numbers Total number of applications and patents involved: 5. Name and address of party to whom correspondence concerning document should be mailed: Name: Van C. Ernest 7. Total fee (37 CFR 3.41):....\$ 40.00 Enclosed - Any excess or insufficiency should be Registration No. $\underline{44,099}$ credited or debited to deposit account Address: Volentine & Whitt, P.L.L.C. Authorized to be charged to deposit account One Freedom Square 8. Deposit account number: 11951 Freedom Drive, Suite 1260 50-0238 State/Prov.: VA_ City: Reston ZIP: 20190 (Attach duplicate copy of this page if paying by deposit account) Country: U.S.A. DO NOT USE THIS SPACE_ 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. June 5, 2009 Van C. Ernest Date Signature Name of Person Signing Total number of pages including cover sheet, attachments, and document:

ASSIGNMENT

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

	Cottos de la companya			
Insert Name(s) of Inventor(s)	1. Byung-Gil CHOI 7.			
	2 8			
	39			
	4			
	511			
	6 12.			
Insert	6. 12 the undersigned hereby sell(s) and assign(s) to			
Name(s) of	SAMSUNG ELECTRONICS CO., LTD.			
Assignee(s) &	416, Maetan-dong, Yeongtong-gu,			
	1 AAA MAA Damublic of Kores			
Address(es)	of Suwon-si, Gyeonggi-do 442-742, Republic of Molea			
Title of Invention	States as defined in 35 USC 100, in the invention known as NONVOLATILE MEMORY DEVICE USING VARIABLE RESISTIVE ELEMENT			
Date of Signing of Application	for which an application for patent in the United States of America has been executed by			
	the undersigned on			
	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 Assignce 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 Assignce.			

PATENT REEL: 022796 FRAME: 0347

RECORDED: 06/05/2009

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.

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.

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

Date	June 3, 200	Signature of Inventor	Byung-G11 CHOI
Date .		Signature of Inventor	
Date		Signature of Inventor	
Date	<u></u>	Signature of Inventor	
Date		Signature of Inventor	
	witnessed by at lea	ist two witnesses who sign her	ed that the execution by the Inventor(s) be to the current practice of the U.S. ignment even it has not been witnessed.)
	Witness		
	Witness		4
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Applicant Re	eference No	SIP080042US	
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Page 2 of 2

PATENT REEL: 022796 FRAME: 0348