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PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Soo-doo Chae	01/06/2009
Chung-woo Kim	03/13/2009
Choong-man Lee	01/06/2009
Yung-hee Lee	01/20/2009
Chan-jin Park	01/06/2009
Sung-wook Hwang	03/10/2009
Jeong-hee Han	01/06/2009
Do-haing Lee	01/29/2009
Jin-seok Lee	01/12/2009

RECEIVING PARTY DATA

Name:	Samsung Electronics Co., Ltd.
Street Address:	416 Maetan-dong, Yeongtong-gu, Suwon-si
City:	Gyeonggi-do
State/Country:	REPUBLIC OF KOREA

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12346934

CORRESPONDENCE DATA

Fax Number: (919)854-1401

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

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Email: cgregory@myersbigel.com

Correspondent Name: MYERS BIGEL SIBLEY & SAJOVEC/cgregory

Address Line 1: PO BOX 37428

Address Line 4: RALEIGH, NORTH CAROLINA 27627

ATTORNEY DOCKET NUMBER: 5649-2473

PATENT

500817992 REEL: 022454 FRAME: 0362

NAME OF SUBMITTER:	Carey Gregory
Total Attachments: 10	
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ASSIGNMENT

THIS ASSIGNMENT, made by us, Soo-doo Chae, citizen of the Republic of Korea, residing at 521-603, Hyundai Hometown 4-cha 2-danji Apt., Jukjeon-dong, Suji-gu, Yonginsi, Gyeonggi-do, Republic of Korea; Chung-woo Kim, citizen of the Republic of Korea, residing at 115-206, Neulpureun Byoksan Apt., Mangpo-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea; Choong-man Lee, citizen of Republic of Korea, residing 3F., 77-3, Sancheon-dong, Yongsan-gu, Seoul, Republic of Korea; Yung-hee Lee, citizen of the United States of America, residing at Rm.501, Ujeong Esher, 1355-24, Seocho 2-dong, Seocho-gu, Seoul, Republic of Korea; Chan-jin Park, citizen of the Republic of Korea, residing at 102-1904, Sunny-valley Apt., Jigok-dong, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea; Sung-wook Hwang, citizen of the Republic of Korea, residing at 107-1003, Samsung Cheongdam Gongwon Apt., Cheongdam-dong, Gangnam-gu, Seoul, Republic of Korea; Jeong-hee Han, citizen of the United States of America, residing at 622-201, Naru Maeul Hanwa Ggumegreen Apt., Bansong-dong, Hwaseong-si, Gyeonggi-do, Republic of Korea; Do-haing Lee, citizen of the Republic of Korea, residing at 105-905 Hanil Town Apt., Byeongjeom-dong, Hwaseong-si, Gyeonggi-do, Republic of Korea and Jin-seok Lee, citizen of the Republic of Korea, residing at 201-801, Purigio Apt., Munjeong 1-dong, Songpa-gu, Seoul, Republic of Korea;

WITNESSETH: That, WHEREAS, we are the joint inventors of certain new and useful improvements in METHODS OF MANUFACTURING NON-VOLATILE MEMORY DEVICES HAVING INSULATING LAYERS TREATED USING NEUTRAL BEAM IRRADIATION 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. 12/346,934, filed December 31, 2008) 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;

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1647691231208142

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 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.

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assignee, its successors, assigns and other legal representatives.	
IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 6th day	
of January, 2009.	
Soo-doo Chae (SEAL)	
Witnessed by:	
Date:	
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Attorney Docket 5649-2473

AS	SIGNMENT - CONTINUED
IN WITNESS WHERECO	OF, I have hereunto set my hand and seal on this day
C	hugw Kim (SEAL) hung-woo Kim
Witnessed by:	
Date:	·

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ASSIGNMENT - CONTINUED
IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 644 day
of January, 2009. Choong-man Lee (SEAL)
Witnessed by:
Date:

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ASSIGNMENT - CONTINUED

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 20 th day	
of analy, 2009. (SEAL) Yang-hee Lee	
Witnessed by:	
Date:	

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IN WITNE	SSS WHEREOF, I have hereunto set my hand and seal on this day
	, 2009.
J	Charja Porte (SEAL) Chan-jin Park
Witnessed by:	
Date:	

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Attorney Docket 5649-2473

ASSIGNMENT - CONTINUED

IN WITNE	SS WHEREOF, I have hereunto set my hand and seal on this 10th day
of <u>March</u>	, 2009.
	Sung-wook Hwang (SEAL)
Witnessed by:	
Date:	The state of the s

th .
IN WITNESS WHEREOF, I have hereunto set my hand and seal on this 6th day
of January , 2009.
Jeong-hee Han (SEAL)
Witnessed by:
·
Date:
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IN WITNESS WHERE	OF, I have hereunto set my	nand and seal on this عرف	th day
of January 2009.			
	-		
	Do-haing Lee	_(SEAL)	
	Jo-namg Lee		
Witnessed by:			
Date:	market.		
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	9 of 10		

REEL: 022454 FRAME: 0372

IN WITNESS V	WHEREOF, I have hereunto	set my hand and seal o	n this 12 mg day
of January	Jin-seok Lee	(SEAL)	
Witnessed by:			
Date:			
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	10 of 10	0	1647691231206142

PATENT REEL: 022454 FRAME: 0373

RECORDED: 03/26/2009