PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Heung Jin Joo	02/01/2011
JaeHee Oh	02/01/2011
Byoungjae Bae	02/01/2011
Myung Jin Kang	02/01/2011

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:	13090553

CORRESPONDENCE DATA

Fax Number: (919)854-1401

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

919-854-1400 Phone:

Email: instructions@myersbigel.com Correspondent Name: Myers Bigel Sibley & Sajovec, P.A.

Address Line 1: 4140 Parklake Ave. Address Line 2: P.O. Box 37428

Address Line 4: Raleigh, NORTH CAROLINA 27612

ATTORNEY DOCKET NUMBER: 5649-3116

NAME OF SUBMITTER: Gayle E. Endres

Total Attachments: 5

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> **PATENT** REEL: 026156 FRAME: 0657

ASSIGNMENT

THIS ASSIGNMENT, made by us, Heung Jin Joo, citizen of the Republic of Korea, residing at 421-404, Cheongmyeong Maeul 4 danji Apt., Yeongtong-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea; JaeHee Oh, citizen of the Republic of Korea, residing at 803-1404, Baekhyeonmaeul, 558 Baekhyeon-dong, Bundang-gu, Seongnam-si, Republic of Korea; Byoungjae Bae, citizen of the Republic of Korea, residing at 208-804, Sinyeongtong Hyundai 2-cha Apt., Banwol-dong, Hwaseong-si, Gyeonggi-do, Republic of Korea; and Myung Jin Kang, citizen of the Republic of Korea, residing at 941-1301, Byeokjeokgol 9 danji Lotte Apt., Yeongtong-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea;

WITNESSETH: That,

WHEREAS, we are the joint inventors of certain new and useful improvements in METHODS OF FORMING VARIABLE-RESISTANCE MEMORY DEVICES AND DEVICES FORMED THEREBY 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. 13/090.553, filed 4/20/11) 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 of 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 success	ors, assigns and other legal representativ	es.	
IN WITNES	S WHEREOF, I have hereunto set my h	and and seal on this	day
of February	_, 20 /		
	Heung Jin Joo	(STATE)	
Witnessed by:			
Date:	·		

ASSIGNMENT – CONTINUED

	IN WITNE	SS WHERI	EOF, I have hereu	nto set n	ry hand and seal on	this Lot day	7
of	February	, 20 <u>_t</u> f			. /		
	,		Jac Mee JacHee Oh	Oh	(SEAL)		
Witn	essed by:						
—— Date	:						

REEL: 026156 FRAME: 0660

ASSIGNMENT - CONTINUED

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this /st day of <u>Feburary</u>, 2011.

Byoung Jae, Bae Byoungjae Bae

Witne	ssed by:		
Date:_	_		

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ASSIGNMENT - CONTINUED

IN WITNES	SS WHEREOF, I have hereunto set my hand and seal on this	day
of February		J
	Myung Jin Cang (SEATE) Myung Jin Kang	
Witnessed by:		
Date:		

RECORDED: 04/20/2011

REEL: 026156 FRAME: 0662