503587666 11/30/2015

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DOO-GON KIM	11/24/2015
KI-TAE PARK	11/24/2015
YEONG-TAEK LEE	11/24/2015

RECEIVING PARTY DATA

Name:	SAMSUNG ELECTRONICS CO., LTD.
Street Address:	416 MAETAN-DONG, YEONGTONG-GU
City:	SUWON-SI, GYEONGGI-DO
State/Country:	KOREA, REPUBLIC OF

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14940288

CORRESPONDENCE DATA

Fax Number: (919)854-1401

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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Email: criggs@myersbigel.com **Correspondent Name:** MBSS/CANDI L. RIGGS Address Line 1: 4140 PARKLAKE AVENUE

Address Line 2: SUITE 600

Address Line 4: RALEIGH, NORTH CAROLINA 27612

ATTORNEY DOCKET NUMBER:	5649-2432RE
NAME OF SUBMITTER:	CANDI L. RIGGS
SIGNATURE:	/clr/
DATE SIGNED:	11/30/2015

Total Attachments: 4

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> **PATENT REEL: 037162 FRAME: 0615** 503587666

ASSIGNMENT

THIS ASSIGNMENT, made by us, **Doo-gon Kim**, citizen of the Republic of Korea, with a residential address of 235-2302, Sibeom Hanbit Maeul Hanwa Ggumegreen Apt., Bansong-dong, Hwaseong-si, Gyeonggi-do, Republic of Korea; **Ki-tae Park**, citizen of the Republic of Korea, with a residential address at 410-304, Saetbyeol Maeul Sambu Apt., Bundang-dong, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea; and **Yeong-taek Lee**, citizen of the Republic of Korea, with a residential address 5-510, Daelim Apt., Garakbon-dong, Songpa-gu, Seoul, Republic of Korea;

WITNESSETH: That,

WHEREAS, we are the joint inventors of certain new and useful improvements in FLASH MEMORY DEVICES HAVING THREE DIMENSIONAL STACK STRUCTURES AND METHODS OF DRIVING SAME for which U.S. Application No. 14/940,288 was filed on November 13, 2015 in the United States Patent and Trademark Office; 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 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.

ASSIGNMENT - CONTINUED

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.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on this	24	day
of November , 2015.		.
Doo-gon Fim (SEAL)		
Doo-gon Kim (SEAL)		
Witnessed by:		
Date:		

ASSIGNMENT - CONTINUED

IN WITNESS WHER	EOF, I have hereunto se	et my hand and seal on this _	74 day
of November, 2015.			institut one file
	milan	(SEAL)	
	Ki tae Park		
Witnessed by:		도 한다. 당시 : 이 그 : 하기 되었다. [기계:] : 조리 : 하기 : 1 : 1 : 1 : 1 : 1 : 1 : 1 : 1 : 1 :	
	(1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
Date			

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ASSIGNMENT – CONTINUED

IN WITNESS WI of <u>No year ber</u> , 20	HEREOF, I have hereunto set 15.	my hand and seal on this _	<u>24</u> day
	Yeong tack Lee Yeong-tack Lee	(SEAL)	
(2) 10	Yeong-tack Lee		
Witnessed by:			

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