PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4708930

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JI-SANG LEE	09/18/2017
JI-HO CHO	09/18/2017
BYUNG-SOO KIM	09/18/2017
DONG-JIN SHIN	09/18/2017

RECEIVING PARTY DATA

Name:	SAMSUNG ELECTRONICS CO., LTD.
Street Address:	129, SAMSUNG-RO, YEONGTONG-GU,
City:	SUWON-SI, GYEONGGI-DO
State/Country:	KOREA, REPUBLIC OF
Postal Code:	16677

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15825786

CORRESPONDENCE DATA

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

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ATTORNEY DOCKET NUMBER:	8021S-970-NON/RDR
NAME OF SUBMITTER:	FRANK CHAU
SIGNATURE:	/Frank Chau/
DATE SIGNED: 11/29/2017	
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 5

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PATENT REEL: 044250 FRAME: 0042

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> PATENT REEL: 044250 FRAME: 0043

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

		ed acknowledges that this docur as the declaration (37 CFR 1.63)		
		undersigned, hereinafter referr		
Title:	OPER	ATION METHOD OF A NONVOLA ME OPERATION		
for whicl	h Assi	gnor is about to make or has ma	de United States or In	ternational application for
Section I	l. Dec			
		U.S. non-provisional patent app		
		PCT international patent applica	stion number	, filed on
The abo	ve-ide	ntified application was made or	authorized to be mad	le by me (us).
		that I am (we are) the original in ne above-identified application.	ventor (original joint i	inventors) of a claimed
¹ This for	m requ	ires the use of an Application Data She	et.	
SEC Ref N	No.	ID-201611-014-1-US0	Attorney Ref No.	8021S-970-NON
COMBI	NED D	ECLARATION (37 CFR 1.63) FOR UTI	LITY PATENT APPLICATI	ON AND ASSIGNMENT FORM

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PATENT REEL: 044250 FRAME: 0044 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.

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

Lacknowledge that Lam 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 16677, 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;

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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, 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 F. Chau & Associates, LLC 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

SEC Ref No. ID-201611-014-1-US0 Attorney Ref No. 8021S-970-NON

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

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FIRST INVENTOR/ASSIGNOR	ree	JI-SANG	
	:	<u> </u>	
4.4.7.7.7.4.7.	lee ji sang	DATE.	(7.09.18

LEGAL NAME OF	Family Name	· .	irst Given	Name	Second Given Name
SECOND INVENTOR/ASSIGNOR	СНО	:	JI-HO		
SIGNATURE	<i>run</i> 77	Mn		DATE	ענ פח חו

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
THIRD NVENTOR/ASSIGNOR	KIM	8YUNG-SOO	

SEC Ref No.	ID-201611-014-1-US0	Attorney Ref No.	8021S-970-NON

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LEGAL NAME OF	Fam	ily Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	-	SHIN	DONG-JIN	
	***************************************	•••••••••••••••••••••••••••••••••••••••	<u> </u>	
SIGNATURE	SHIN	70//631/	DATE	17.09.18

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 SEC Ref No.
 ID-201611-014-1-US0
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RECORDED: 11/29/2017