PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5402826

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DUCK-HO BAE	02/07/2019
DONG-UK KIM	02/07/2019
HYUNG-WOO RYU	02/07/2019
KWANG-HYUN LA	02/11/2019
JOO-YOUNG HWANG	02/07/2019
YOU-RA CHOI	02/07/2019

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:	16291402

CORRESPONDENCE DATA

Fax Number: (516)692-8889

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.

Phone: 516-692-8888

mail@chauiplaw.com Email:

F. CHAU & ASSOCIATES, LLC Correspondent Name:

Address Line 1: 130 WOODBURY ROAD

Address Line 4: WOODBURY, NEW YORK 11797

ATTORNEY DOCKET NUMBER:	8054S-1323/AYL
NAME OF SUBMITTER:	FRANK CHAU
SIGNATURE:	/Frank Chau/
DATE SIGNED:	03/04/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).

PATENT REEL: 048493 FRAME: 0194

505356038

Total Attachments: 5 source=8054S-1323-Combined_DecAssign#page1.tif source=8054S-1323-Combined_DecAssign#page2.tif source=8054S-1323-Combined_DecAssign#page3.tif

source=8054S-1323-Combined_DecAssign#page4.tif source=8054S-1323-Combined_DecAssign#page5.tif

PATENT REEL: 048493 FRAME: 0195

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

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

	ORAGE DEVICE PROVIDING A VI CLUDING THE SAME, AND METH		ar and
for which 8	ssignor is about to make or has r		areational analication to
patent.	ssignor is appar to mays or mas i	uena Aulea Steras Ot utt	emational application in
WHEREAS,	as a below named inventor(s); [/ Peclaration	(we) hereby declare that	
		_노 리)/개덕호/13068229	
	mon is directed to:		
	The attached U.S. non-provis	ilonal patent application,	or
	U.S. non-provisional patent a		filed c
	PCT international patent appl	lication number	, filed on
he above-i	dentified application was made (or authorized to be made	by me (us).
This form re	quires the use of an Application Data S	heet.	
EC Ref Nó.	ID-201805-019-1-US0	Attorney Ref No.	80548-1323 (CY6020US)

Page 1 of 5 5/W개발팀(메모리)/베딕호/13068229/2019-02-07 10:50

PATENT

REEL: 048493 FRAME: 0196

SAMSUNG ELECTRONICS CO., LTD.

I (we) believe that I am (we are) the original inventor (original joint inventors) of a claimed invention in the above-identified application.

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.

I acknowledge that I am 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, Gyeonggièdo 16677, Republic of Korea (hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined INSS USE \$1002 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 aforesald 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

SEC Ref No.	ID-201805-019-1-US0	Attorney Ref No.	80548-1323
			(CY6020US)

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 2 of 5

SAV계발팀(메모리)/베덕호/13068229/2019-02-07 10:50

SAMSUNG ELECTRONICS CO., LTD.

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;

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.

57.4기원 등(연료리 기계 기업 10.68.29

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-201805-019-1-US0 Attorney Ref No. 8054S-1323 (CY6020US)

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 3 of 5

5/W개발팀(에모리)/베딕호/13068229/2019-02-07 10:50

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

LEGAL NAME OF FIRST	Family Name	First Given Name	Second Given Name
NVENTOR/ASSIGNOR	BAE	DUCK-HO	
		*	
SIGNATURE	la	DATE	00 a A

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SECOND NVENTOR/ASSIGNOR	KIM	DONG-UK	
			8 %
		WATES	
a see see an ander	4	· 200	້າ ພຣ ^າ ເພ

Family Name	First Given Name	Second Given Name
RYU	HYUNG-WOO	
		d:
A		
7/1-11/11/11	DATE	2019.2.1.
	RYU	RYU HYUNG-WOO

The state of the s			
SEC Ref No.	ID-201805-019-1-US0	Attorney Ref No.	8054S-1323
			(CY6020US)

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 4 of 5

S/W개발팀(메모리)/배덕호/13068229/2019-02-07 10:50

PATENT REEL: 048493 FRAME: 0199

LEGAL NAME OF FOURTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	И	KWANG-HYUN	
SIGNATURE	<u> </u>	Z. DAT	^E 2019, 02, 11
LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FIFTH INVENTOR/ASSIGNOR	HWANG	JOO-YOUNG	
SIGNATURE	Tropo is miss Mu	DATI	2018/2/7
SIGNATURE	S/w/211 ⁹¹ \$1(011.5;4)	4 Vu'S\$15068729	23/8/21/2
SIGNATURE: LEGAL NAME OF SIXTH	S/W/개발 팀(에도리 Family Name	YU'' 54.55 / 1.5068.729 First Given Name	Second Given Name
LEGAL NAME OF	S/w/211 ⁹¹ \$1(011.5;4)	4 Vu'S\$15068729	23/8/21/2
LEGAL NAME OF SIXTH	S/W/개발 팀(에도리 Family Name	YU'' 54.55 / 1.5068.729 First Given Name	Second Given Name

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 5 of 5
5/W개발됨(메모리)/배덕호/13068229/2019-02-07 10:50

WW 71 WEIDO

PATENT

REEL: 048493 FRAME: 0200