504417103 06/16/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4463803

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YOUNG-SUK SEO	06/07/2017
DA-IN IM	06/07/2017

RECEIVING PARTY DATA

Name:	SK HYNIX INC.
Street Address:	2091, GYEONGCHUNG-DAERO, BUBAL-EUB, ICHEON-SI
City:	GYEONGGI-DO
State/Country:	KOREA, REPUBLIC OF

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15624977

CORRESPONDENCE DATA

Fax Number: (571)327-5452

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: 571-327-5450

Email: ipntlaw@ipntlaw.com
Correspondent Name: IP & T GROUP LLP

Address Line 1: 8230 LEESBURG PIKE SUITE 650

Address Line 4: VIENNA, VIRGINIA 22182

ATTORNEY DOCKET NUMBER:	P16H0364/US
NAME OF SUBMITTER:	JUN JEONG PARK
SIGNATURE:	/Jun Jeong PARK/
DATE SIGNED:	06/16/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 2

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PATENT 504417103 REEL: 042731 FRAME: 0352

SHIMSUNG:IVX000138329(P16H0364/).s	3)
Attorney Docker No.:	

ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT			
WHEREAS SEO Young-Suk			hereinafter
referred to collectively as the assignor and inventor, has invented a vertain improvement relating to		**********	and a second
SEMICONDUCTOR DEVICE INCLUDING DLL AND SEMICONDUCTOR SYSTEM			
[X] said application being attached hereto; [] said application having been filed in the United States Patent and Trademark Office on as Application Serial No	and	Was	
on		,,,,,,,	ossicionado.
[] the specification of which was filed under the Patent Cooperation Treaty on			
Serial No, the United States of America being designated.			
AND WHEREAS' SK bynix Inc.			
bereinatter referred to as the assignee or applicant, is desirous of acquiring the entire right, title and application, including any and all divisions and continuations thereof, and in and to said invention at which may be granted therefor, including any and all renewals, reissues and prolongations thereof. NOW THIS WITNESSETH, that for and in consideration of One Dollar (\$1.00), and of consideration paid by said assignee to said assigner, the receipt of which is hereby acknowledge assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and interest in and to said application, including any and all divisions and continuations thereof, and in a any and all patents which may be granted therefor, including any and all renewals, reissues and protongations and any and all patents which may be granted thereof, and the said invention and any and all patents which including any and all renewals, reissues and protongations thereof, with all the rights, powers, priving anywise arising from or appertaining thereto, for and during the term or terms of any and all suclincluding any and all renewals, reissues and protongations thereof, for the use and benefit of assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might enjoyed the same, if this assignment had not been made.	od any other go ed, said exclusi oid to s olongar iplicati nay be lleges a h paten said as or cou	and all and and and and assign verigh aid invites the minel grame advite whe signee, ld have	patents d valuable sor hereby i, title and ereof; said uding any d therefor, antages in n granted, and said t held and
AND said assignor hereby agrees to perform, upon the request of said assignee, or said assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any are and prolongations thereof.	assigne nd all re	e's suc- enewal	cessors or s, reissues
AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to said application, and on any and all divisions and consinuations thereof, to said assignee, and said as assigns, in accordance herewith.	i issue : isignee	Leners 's succ	Patent on second
As an above-named inventor, I hereby declare that the above-identified application was made by me, and that I am the original inventor or an original joint inventor of a claimed invention in	ade or	authori plicatio	zed to be m.
I hereby acknowledge that any willful false statement made in this declaration is punishable to fine or intersection of not more than five (5) was a probability for the property of not more than five (5) was an both	e under	18 U.	S.C. 1001

ASSIGNOR (INVENTOR):

Printed or Typed Name: <u>SEQ, Young-Suk</u>

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Attorney Do	tket No.:		************
ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT	¥.		
WHEREAS IM, Da-In			hereinatio
referred to collectively as the assignor and inventor, has invented a certain improvement relating			
SEMICONDUCTOR DEVICE INCLUDING DLL AND SEMICONDUCTOR SYSTEM			
[A] said application being attached heretry [] said application having been filed in the United States Patent and Trademark Office on as Annilostion Serial No.	See		
on(if applicable); [] the specification of which was filed under the Patent Cooperation Treaty on			www.cr.c.c.
The specification of which was filed under the Patent Cooperation Treaty on Serial No, the United States of America being designated.			
•			
AND WHEREAS SK hymix fac.			2.
hereinafter referred to as the assigner or applicant, is desirous of acquiring the entire right, title ar application, including any and all divisions and continuations thereof, and in and to said invention which may be granted therefor, including any and all renewals, reissues and prolongations thereof	and any	t in and and all	to said patents
assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full at interest in and to said application, including any and all divisions and continuations thereof, and it any and all patents which may be granted therefor, including any and all renewals, reissues and assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said and all divisions and communitions thereof, and the said invention and any and all patents which including any and all renewals, reissues and prolongations thereof, with all the rights, powers, premywise arising from or appertaining thereto, for and during the term or terms of any and all a including any and all renewals, reissues and prolongations thereof, for the use and benefit it assignee's successors and assigns, in as ample and beneficial a manner as the said assignor migenjoyed the same, if this assignment had not been made.	n and to a prolongation of the polication of the pater of said a chi or cou	said invitions the on, included grantes and advins whe ssignee, the have	ention and creaf; said uding any I therefor, antages in a granted, and said cheld and
AND said assignor hereby agrees to perform, upon the request of said assignee, or sai assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and prolongations thereof.	id assigna and all r	enewal:	cessors or s, reissues
AND said assignor authorizes and requests the Commissioner of Patents and Trademarks said application, and on any and all divisions and continuations thereof, to said assignee, and said assigns, in accordance herewith.	s to issue l'assignee	Letters 's succe	Patent on
As an above-named inventor, I hereby declare that the above-identified application was made by me, and that I am the original inventor or an original joint inventor of a claimed invention	made or in the ag	authori plicatic	ized to be in.
I hereby acknowledge that any willful false statement made in this declaration is punishably fine or imprisonment of not more than five (5) years, or both.	ible unde	r 18 U.S	8,C: 1001
ASSIGNOR (INVENTOR):			
Signature: IM, Da-In Date: 2017, 06, 07	****		

SMCinyolix **維脚脚脚脚脚脚** 127.0.0.1/PC_DEPT_IP_AUTO 127.0.0.1/10.145.48.118/2017-C8-07 10:58

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