503881595 06/21/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3928245

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HYUNG-GYUN YANG	06/03/2016
YONG-JU KIM	06/03/2016
YONG-KEE KWON	06/03/2016
HONG-SIK KIM	06/03/2016

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:	15188347

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:	P16H0033/US	
NAME OF SUBMITTER:	JUN JEONG PARK	
SIGNATURE:	/Jun Jeong PARK/	
DATE SIGNED:	06/21/2016	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 4

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PATENT 503881595 REEL: 038974 FRAME: 0432

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NIUGNIIIC	J:14V00012/1	. / 21 F 10 F10 053	27 U S J

Attorney Docket No.: _

ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT			
WHEREAS YANG, Hyung-Gyun		, ł	nereinafter
referred to collectively as the assignor and inventor, has invented a certain improvement relating to			•
SYSTEM AND METHOD FOR OPERATING THE SAME			_
[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		amended
on(if applicable); [] the specification of which was filed under the Patent Cooperation Treaty on			
Serial No, the United States of America being designated.			
hereinafter 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 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 consideration paid by said assignee to said assignor, the receipt of which is hereby acknowled assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full an interest in and to said application, including any and all divisions and continuations thereof, and in any and all patents which may be granted therefor, including any and all renewals, reissues and passignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said appall divisions and continuations 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, pranywise arising from or appertaining thereto, for and during the term or terms of any and all sincluding any and all renewals, reissues and prolongations thereof, for the use and benefit of 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.	other g ged, said d exclusi and to s prolongal lication, may be ivileges a uch paten	ood and all properties and all properties and and advents whee ssignee	d valuable nor hereby it, title and ention and ereof; said ing any and d therefor, vantages in en granted, and said
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.	d assigner and all	ee's suc renewa	ccessors or ls, 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.			
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			
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.	ıble unde	er 18 U	.S.C. 1001

Page 1 of 1

YANG, Hyung - Gyun Date: 2016.6.3

ASSIGNOR (INVENTOR):

Printed or Typed Name: <u>YANG, Hyung-Gyun</u>

Attorney Docket No.:

ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT	
WHEREAS KIM, Yong-Ju , hereinafte	er
referred to collectively as the assignor and inventor, has invented a certain improvement relating to	
SYSTEM AND METHOD FOR OPERATING THE SAME	
[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 amend on, and was amend on, [] the specification of which was filed under the Patent Cooperation Treaty on, Serial No, the United States of America being designated. AND WHEREAS, SK hynix Inc	lec
NOW THIS WITNESSETH, that for and in consideration of One Dollar (\$1.00), and other good and valua consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor here assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title a interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; sassignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefincluding any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when grant including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and sassignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held a enjoyed the same, if this assignment had not been made.	eby and and and for for ed aid
AND said assignor hereby agrees to perform, upon the request of said assignce, or said assignee's successors assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reiss and prolongations thereof.	
AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors a assigns, in accordance herewith.	
As an above-named inventor, I hereby declare that the above-identified application was made or authorized to made by me, and that I am the original inventor or an original joint inventor of a claimed invention in the application.	Ъ
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 10 by fine or imprisonment of not more than five (5) years, or both.)0:
ASSIGNOR (INVENTOR):	
Signature: KZM Tomo Ju Date: 2016.6.3	

Page 1of 1

Printed or Typed Name: KIM, Yong-Ju

PATENT REEL: 038974 FRAME: 0435

Attorney Docket No.: _____

ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT	
WHEREAS KWON, Yong-Kee , hereinafte	
referred to collectively as the assignor and inventor, has invented a certain improvement relating to	
SYSTEM AND METHOD FOR OPERATING THE SAME	
[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 amende	
on(if applicable); [] the specification of which was filed under the Patent Cooperation Treaty on,	
[] the specification of which was filed under the Patent Cooperation Treaty on, Serial No, the United States of America being designated.	
AND WHEREAS SK hynix Inc.	
hereinafter referred to as the assignee or applicant, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents 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 other good and valuable consideration paid by said assignee to said assigner, the receipt of which is hereby acknowledged, said assigner hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title an interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages it anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held an enjoyed the same, if this assignment had not been made.	
AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors of assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissue and prolongations thereof.	
AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent o said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors an assigns, in accordance herewith.	
As an above-named inventor, I hereby declare that the above-identified application was made or authorized to be made by me, and that I am the original inventor or an original joint inventor of a claimed invention in the application.	
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 100 by fine or imprisonment of not more than five (5) years, or both.	
ASSIGNOR (INVENTOR):	
Signature: KWON, Yong-Kee Date: 2010.06.03	

Page 1of 1

Printed or Typed Name: KWON, Yong-Kee

PATENT REEL: 038974 FRAME: 0436

ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT

WHEREAS KIM, Hong-Sik , hereinafter
referred to collectively as the assignor and inventor, has invented a certain improvement relating to
SYSTEM AND METHOD FOR OPERATING THE SAME
[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 amended
on(if applicable); [] the specification of which was filed under the Patent Cooperation Treaty on,
Serial No, the United States of America being designated.
AND WHEREAS <u>SK hynix Inc.</u> hereinafter referred to as the assignee or applicant, is desirous of acquiring the entire right, title and interest in and to said
application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents 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 other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made. AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.
and prolongations thereof.
AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.
As an above-named inventor, I hereby declare that the above-identified application was made or authorized to be made by me, and that I am the original inventor or an original joint inventor of a claimed invention in the application.
I 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.
ASSIGNOR (INVENTOR):
Signature: K1M Hory-S7k Date: 2016/6/3
Printed or Typed Name: KIM, Hong-Sik
Page 1 of 1

PATENT REEL: 038974 FRAME: 0437

RECORDED: 06/21/2016