PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4051815

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
FAN ZHANG	09/07/2016
JUNE LEE	09/07/2016
YU CAI	09/07/2016

RECEIVING PARTY DATA

Name:	SK HYNIX MEMORY SOLUTIONS INC.	
Street Address:	3103 NORTH FIRST STREET	
City:	SAN JOSE	
State/Country:	CALIFORNIA	
Postal Code:	95134	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15184845

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

Address Line 2: SUITE 650

Address Line 4: VIENNA, VIRGINIA 22182

ATTORNEY DOCKET NUMBER:	SKHYP100	
NAME OF SUBMITTER:	MYUNG SOO KIM	
SIGNATURE:	/Myung Soo KIM/	
DATE SIGNED:	09/14/2016	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 3

source=Assignment 100#page1.tif source=Assignment 100#page2.tif

PATENT 504005158 REEL: 039740 FRAME: 0229

source=Assignment 100#page3.tif

PATENT REEL: 039740 FRAME: 0230

Attorney Docket No.: SKHYP100

ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT

WHEREAS	Fan ZHANG	, hereinafter referred to collectivel	y as the assignor and
inventor, has invented a certain improvement relating to			
ENH	ENHANCED CHIP-KILL SCHEMES BY USING SUB-TRUNK CRC ,		
Jun 16, 2016, as App	ng been filed in the Un blication Serial No. <u>15</u> hich was filed under t	nited States Patent and Trademark Office 5/184,845, and was amended onhe Patent Cooperation Treaty ontes of America being designated.	(if applicable);
hereinafter referred to as said application, includin	the assignee or applicate any and all divisions	Memory Solutions Inc. ant, is desirous of acquiring the entire rigs and continuations thereof, and in and to uding any and all renewals, reissues and	said invention and any and
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			
	nor authorizes and recon, and on any and a	quests the Commissioner of Patents and all divisions and continuations thereof	
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.			
		al false statement made in this declarate than five (5) years, or both.	tion is punishable under 18
ASSIGNOR (INVENTOR	<i>t):</i>		
Signature:	72	Date:	7/2011
Printed or Typed Name: _	Fan ZHANC	<u> </u>	

Attorney Docket No.: SKHYP100

ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT

	WHEREAS June LEE , hereinafter referred to collectively as the assignor and inventor,			
	as invented a certain improvement relating to			
	ENHANCED CHIP-KILL SCHEMES BY USING SUB-TRUNK CRC			
	ENHANCED CHIF-RILL SCHEMES BY USING SUB-TRUNK CRC			
] said application being attached hereto;			
	X] said application having been filed in the United States Patent and Trademark Office on			
	Jun 16, 2016, as Application Serial No. 15/184,845, 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 SK Hynix Memory Solutions Inc.			
3	pereinafter referred to as the assignee or applicant, is desirous of acquiring the entire right, title and interest in and to			
3	aid 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.			
•	repaired which that so granted district, historing any and an innewals, insomes and protongations mercur,			
	NOW THIS WITNESSETH, that for and in consideration of One Dollar (\$1.00), and other good and			
,	aluable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said			
	ssignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and			
5	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 any diving the term or terms of any and all much patents when all may be granted diving the term or terms of any and all much patents when all may be granted therefor.			
18				
8				
	nd during the term or terms of any and all such patents when granted, including any and all renewals, reissues and rolongations 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 assigner unglit or could have held and enjoyed the same, if this			
8	ssignment had not been made.			
	AND and a maintain that the same of the sa			
s	AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's			
a	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.			
100	AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters			
- ₹ - 2	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.			
a	osguer a soccessors and assigns, in accordance nerewith.			
	As an above-named inventor, I hereby declare that the above-identified application was made or authorized			
	be made by me, and that I am the original inventor or an original joint inventor of a claimed invention in the			
a	pplication.			
	I hereby acknowledge that any willful false statement made in this declaration is punishable under 18			
U	U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.			
.4	SSIGNOR (INVENTOR):			
ς,	gnature:			
د کریا	Company of the Compan			
P	inted or Typed Name:hune LEE			



Attorney Docket No.: SKHYP100

ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT

WHEREAS	Yu CAI	, hereinafter referred to collecti	vely as the assignor and inventor, has
invented a certain impro-			
•		CAMENTE DATTETATO CETT O	DIBUT CDC
15131	MICED CHIF-KILL	SCHEMES BY USING SUB-1	RUNK CRC
Jun 16, 2016, as App	ng been filed in the Un plication Serial No. <u>15</u> , hich was filed under th	ited States Patent and Trademar (184,845 , and was amended of e Patent Cooperation Treaty on es of America being designated	on(if applicable);
A NITA MITTERDE A: C	YOU YY *** X	A COLOR	
hereinafter referred to as said application, includin	g any and all divisions	nt, is desirous of acquiring the e	entire right, title and interest in and to in and to said invention and any and ues and prolongations thereof;
valuable consideration passignor hereby assigns, exclusive right, title and it and in and to said invention reissues and prolongation and enjoy the said application and all patents which thereof, with all the right and during the term or temprolongations thereof, for ample and beneficial and assignment had not been in	aid by said assignee to sells and transfers to so nterest in and to said a on and any and all pat is thereof; said assignedation, including any and may be granted the standard process of any and all such the use and benefit of manner as the said as nade.	o said assignor, the receipt of aid assignee, and said assignee's pplication, including any and all ents which may be granted there, and said assignee's successor d all divisions and continuation arefor, including any and all rand advantages in anywise arisis patents when granted, including as said assignor might or could have be	Dollar (\$1.00), and other good and which is hereby acknowledged, said a successors and assigns, the full and il divisions and continuations thereof, refor, including any and all renewals, as and assigns, to have, hold, exercise as thereof, and the said invention and enewals, reissues and prolongations ing from or appertaining thereto, for any and all renewals, reissues and gnee's successors and assigns, in as held and enjoyed the same, if this
AND said assig successors or assigns, any all renewals, reissues and	and all acts relating to	perform, upon the request of the obtaining or to the assertion	of said assignee, or said assignee's ag of said patents, including any and
AND said assign Patent on said applicatio assignee's successors and	n, and on any and al	1 divisions and continuations	nts and Trademarks to issue Letters thereof, to said assignee, and said
As an above-nam to be made by me, and the application.	ed inventor, I hereby duat I am the original is	eclare that the above-identified aventor or an original joint inv	application was made or authorized ventor of a claimed invention in the
I hereby acknow U.S.C. 1001 by fine or imp	ledge that any willful risonment of not more	false statement made in this than five (5) years, or both.	declaration is punishable under 18
ASSIGNOR (INVENTOR) <i>:</i>		
Signature:	12		7/20/6
Printed or Typed Name:	Yu CAI		

