PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
KeunJae Lee	03/27/2012
Sung Hoon Baek	03/27/2012
Wonmoon Cheon	04/03/2012
Jeong-Beom Seo	03/26/2012

RECEIVING PARTY DATA

Name:	SAMSUNG ELECTRONICS CO., LTD.
Street Address:	416, Maetan-dong, Yeongtong-gu,
City:	Suwon-si, Gyeonggi-do,
State/Country:	REPUBLIC OF KOREA
Postal Code:	442-742

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13440114

CORRESPONDENCE DATA

Fax Number: (571)283-0740 Phone: 5712830720

Email: aloomis@volentine.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

Correspondent Name: VOLENTINE & WHITT, PLLC

Address Line 1: 11951 FREEDOM DRIVE, SUITE 1300

Address Line 4: RESTON, VIRGINIA 20190

ATTORNEY DOCKET NUMBER: SEC.3078

NAME OF SUBMITTER: ADAM C. VOLENTINE

Total Attachments: 8

PATENT REEL: 028000 FRAME: 0785 :H \$40.00 13440

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PATENT REEL: 028000 FRAME: 0786 VOLENTINE & WHITT, P.L.L.C. (01/2007)

ATTORNEY DOCKET NO. SEC.3078

ASSIGNMENT

	In consideration of the sum of C consideration paid to each of the ur	me Dollar (\$1.00) and other good and valuable		
Insert Name(s) of	-	7.		
Inventor(s)	2. Sung Hoon BAEK			
	3. Wonmoon CHEON	9		
	4. <u>Jeong-Beom SEO</u>	10		
	5	11.		
Insert	6.	12		
Numc(s) of Assignee(s) &		ELECTRONICS CO., LTD.		
Address(es)	416, Maetan-dong,	Yeongtong-gu, gi-do 442-742, Republic of Korea		
Title of Invention Date of Signing of Application	States as defined in 35 USC 100, in	ELATED METHOD OF OPERATION in the United States of America has been executed by		
	application and any continuing, divi	e all papers necessary in connection with this isional or reissue applications thereof and also to meetion with such applications as the Assignee may		
	The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuing, division or reissue thereof and to cooperate with the Assignce in every way possible in obtaining evidence and going forward with such interference.			
	The undersigned agree(s) to execute may be necessary in connection wit for Protection of Industrial Property	e all papers and documents and perform any act which h claims or provisions of the International Convention or similar agreements.		
	The undersigned agree(s) to perform a grant of a valid United States pate	n all affirmative acts which may be necessary to obtain ent to the Assignee.		

Page 1 of 2

VOLENTINE & WHITT, P.L.L.C. (01/2007)

ATTORNEY DOCKET NO. SEC.3078

allow

The undersigned hereby grant(s) the practitioners associated with the <u>CUSTOMER NUMBER 20987</u> the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

184te _ [74, 25]. 20.	Signature of Inventor	KayinJae LEE
Date	Signature of Inventor	Sung Hoen BAEK
Date	Signature of Inventor	Wantsoon Chaon
Date	Signature of Inventor	Jeong-Beom SEC
Date	Signature of Inventor	
Date	Signature of Inventor	
witnessed by	at least two witnesses who sign here.	that the execution by the Inventor(s) be However, the current practice of the U.S. nment even it has not been witnessed.)
Witne	ess	
Witne	383	
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Page 2 of 2

ASSIGNMENT

	In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned
Insert Name(s) of	l. Keunjae LEE 7.
Inventor(s)	2. Sung Hoon BAEK 8.
	3. Wonmoon CHRON 9.
	4. <u>Jeong-Beom SEO</u> 10.
	J
	6. 11. 12.
Insert Name(s) of Assignec(s) &	6. 12. the undersigned hereby sell(s) and assign(s) to SAMSUNG ELECTRONICS CO., LTD.
	416, Maetan-dong, Yeongtong-gu,
Address(es)	of Suwon-si, Gyeonggi-do 442-742, Republic of Korea
Date of Signing of Application	for which an application for patent in the United States of America has been executed by the undersigned onMARCH 27, 2012
	The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient. The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuing, division or reissue thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference. The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.
	The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

Page 1 of 2

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In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date		Signature of Inventor		
			Wonwoon CHECH	
Date		Signuture of Inventor		
			Jeang-Beam SES	
Date		Signature of Inventor		
Date		Signature of Inventor		
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Page 2 of 2

PATENT

REEL: 028000 FRAME: 0790

## **ASSIGNMENT**

In consideration of the sum of One Dollar (\$1.00) and other good and valua	ble
consideration paid to each of the undersigned	

Insert
Name(s) of
Inventor(s)

1.	KeunJae LEE	7	
2.	Sung Hoon BAEK	8.	
3.	Wonmoon CHEON	9.	
4.	Jeong-Beom SEO	10	
5.		11.	
6.		12	

### Insert Name(s) of Assignee(s) &

the undersigned hereby sell(s) and assign(s) to

SAMSUNG ELECTRONICS CO., LTD.
416, Maetan-dong, Yeongtong-gu,

## Address(es)

of Suwon-si, Gyeonggi-do 442-742, Republic of Korea

(hereinafter designated as the Assignee) the entire right, title and interest for the United States as defined in 35 USC 100, in the invention known as

### Title of Invention

DATA STORAGE DEVICE AND RELATED METHOD OF OPERATION

### Date of Signing of Application

for which an application for patent in the United States of America has been executed by

the undersigned on APRIL 3, 2012

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuing. division or reissue thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

Page 1 of 2

REEL: 028000 FRAME: 0791

Date

The undersigned hereby grant(s) the practitioners associated with the **CUSTOMER NUMBER 20987** the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Zutt		Signature of Inventor	KeunJae LEE
Date	<u> </u>	Signature of Inventor	Sung Hoon BAEK
Date _	2012. 4.	3 Signature of Inventor	Monmoon CHEON
Date _		Signature of Inventor	Jeong-Beom SEO
Date _		Signature of Inventor	
Date _		Signature of Inventor	
	witnessed by at le Patent and Trade	east two witnesses who sign here mark Office is to record an Assig	that the execution by the Inventor(s) be However, the current practice of the U.S. symment even it has not been witnessed.)
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Page 2 of 2

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# ASSIGNMENT

	Econs	n consideration of the sum of O lideration paid to each of the un-	ne Dollar (\$1.00) and other good and valuable			
Insert Name(s) of			7.			
Inventor(s)			8.			
			9.			
			10.			
			1f			
	6.		3.9			
Insert Name(s) of	6. 12. the undersigned hereby sell(s) and assign(s) to					
Assignee(s) &	SAMSUNG ELECTRONICS CO., LTD.					
	416, Mastan-dong, Yeongtong-gu,					
Address(es)	of	Suwon-si, Gyeongg	i-do 442-742, Republic of Kores			
Title of Invention	(bereinafter designated as the Assignce) the entire right, title and interest for the United States as defined in 35 USC 100, in the invention known as  DATA STORAGE DEVICE AND BELATED METHOD OF OPERATION					
Date of Signing of Application	for which an application for patent in the United States of America has been executed by the undersigned on MARCH 26, 2012					
	The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.					
	The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuing, division or reissue thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.					
	The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in expection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.					
	The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.					

Page Lof 2

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In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date		Signature of Inventor					
Date			Resulee Lee				
*****		Signature of Inventor	SUBG BOON SAEX				
Date		Signature of Inventor					
Date	ab. Mar. 2012	Signature of Inventor	Nonneon Chiggs Jeong-Seon SEO				
Date		Signature of Inventor					
Date		Signature of Inventor					
(Note regarding Witnessing: It is recommended that the execution by the Inventor(s) be witnessed by at least two witnesses who sign here. However, the current practice of the U.S. Patent and Trademark Office is to record an Assignment even it has not been witnessed.)							
	Witness						
Witness							
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Applicant Reference NoTD-210042-US							

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