ļ	Form PTO-1595 RF 3 03 - 26 - 2	i atont and mademant embe	
1	TO THE HONORABLE COMMISSION		
Ì	1 Name of conveying party(ies):	2. Name and address of receiving party(ies):	
	Hyung-Rok OH Beak-Hyung CHO Du-Eung KIM Woo-Yeong CHO	Name: Samsung Electronics, Co., Ltd. Internal Address:	
	Additional name(s) of conveying party(ies) attached? [] yes [X] no	Street Address: 416, Maetan-dong, Yeongtong- gu, Kyungki-do City: Suwon-city	
Ì	3. Nature of Conveyance	Country/State/Zip: Korea 100	
	[X] Assignment [] Merger [] Security Agreement [] Change of Name [] Other	Country/State/Zip: Korea Additional names and addresses attached? [] yes [X]	
	Execution Date: 3/11/04		
	If this document is being filed together with a new applicatio	on, the execution date of the application is <u>3/11/04</u> ; B. Patent No.(s):	
	A. Patent Application No.(s)N/A	N/A	
		1	
	Additional numbers attached? [] Yes [X] No		
	 Name and address of party to whom correspondence concerning document should be mailed: 	Total number of applications and patents involved: [1]	
	Name: Frank Chau	7. Total fee (37 C.F.R. 3.41) \$ 40.00	
	Internal Address: F. Chau & Associates, LLP	[X] Authorized to be charged to credit card. Form	
.,	Street Address: 1900 Hempstead Turnpike, Suite 501	PTO-2038 is enclosed	
1	26/2006 EBBANVG accommons 160 (1865) NY ZIP: 11554	8. Deposit account number: 50-0679 Attach duplicate copy of this page if paying by deposit account)	
02	FC:8021 40.00 OP		
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	9. Statement and signature.		
	To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. My Carl F. March 23, 2004		
		ignature March 22, 2004 Date	
	Reg. No. 44,952 Total number of	f pages including cover sheet, attachments and document [4]	
	OMB No. 0651-0011 (exp. 4/84)		
	do not detach this portion Mail documents to be recorded with required cover sheet information to: Assistant Commissioner for Patents and Trademarks Box Assignments Washington, D.C. 20231		
	Public burden reporting for this sample cover sheet is estimated to average about 30 minutes per document to be recorded, including time for reviewing the document and gathering the data needed, and completing and reviewing the sample cover sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Office of Information Systems, PK2-1000C, Washington, D.C. 20231, and to the Office of Management and Budget, Paperwork Reduction Project (0651-0011), Washington, D.C. 20503.		

PATENT REEL: 015124 FRAME: 0332

ASSIGNMENT

DOCKET NO.: 8836-231 (ID13030-US)

AS A BELOW NAMED INVENTOR, I, and each of us, individually hereby declare that: IN CONSIDERATION of the sum of TEN (\$10.00) dollars or the equivalent thereof, and other good and valuable consideration, the receipt of which from the hereinafter named Assignee is hereby acknowledged, I do hereby sell, assign and forever grant and convey unto:

ASSIGNEE: Samsung Electronics Co., Ltd.

ADDRESS: 416, Maetan-dong, Yeongtong-gu, Suwon-city, Kyungki-do, KOREA

Who is my Assignee, and to the successes and assigns of my Assignee, all my right, title and interest, in and for the United States of America and all other countries, including all rights of priority, in and to the invention entitled:

PHASE RANDOM ACCESS MEMORY WITH HIGH DENSITY TITLE:

invented by me (if only one inventor is named below) or us (if more than one inventor is named below) and described in an application for a United States patent the specification of which is either attached hereto or otherwise accompanies this Assignment or indicates an attorney docket no. 8836-231 (ID13030-US) or is more particularly identified as:

G	executed on even date herewith, or	
G	Serial No	filed in the U.S. Patent & Trademark Office on,
	or	
G	executed on	
all cer examinates patent my As terms, fully a	tificates of corre- ned patents, and when granted, to ssignee, its succe or any extension nd entirely as the	States patents which may be granted thereon and therefore, and in and to ctions, divisions, continuations, continuations-in-part, reissued and report any extensions thereof, said interest being the entire ownership of the be held and enjoyed by said SAMSUNG ELECTRONICS CO., LTD., sors, assigns or other legal representatives, to the full end of the term, or renewal thereof, for which said patent or patents may be granted, as same would have been held and enjoyed by me or us if this assignment,
sale ar	id conveyance had	not been made;

AND I hereby covenant and agree to sign and execute any further documents or instruments which may from time-to-time be either necessary, lawful, proper or requested by the Assignee, in the prosecution of the above-named application or in the preparation and prosecution of any certificate of correction, division, continuation, continuation-in-part, reissue, re-examination, in any amendment, extension, or interference proceeding, whether administrative or judicial, or otherwise, to secure the title hereto in said Assignee;

AND I do hereby authorize and request the Commissioner of Patents and Trademarks to issue said Patent or Patents to the Assignee, and I hereby appoint as my, or our attorney, and authorize and request Frank Chau, Reg. No. 34,136, to insert on this Assignment any further identification or to complete such identification which may be either necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Page 1 of 2

PATENT REEL: 015124 FRAME: 0333 IN WITNESS WHEREOF, I and we have set our hands and seals on the dates written beside my and our respective names:

INVENTOR(S)

Date Signed

1) Hyung-Pok. OH.
HYUNG-ROK OH

Mar. 11. 2004

2) Beak-Hyung Cho BEAK-HYUNG CHO

Mer. 11. ono 4

3) <u>Dv- Evns kry</u> DU-EUNG KIM

Mar. 11, 2014

4) WOO YEONG CHO
WOO-YEONG CHO

RECORDED: 03/22/2004

Mar. 11, 2004