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1. Name of conveying party(ies):  
Jong-Yeol PARK  
Additional name(s) of conveying party(ies)  
attached?  Yes  No

2. Name and address of receiving  
party(ies):  
Name: SAMSUNG ELECTRONICS CO., LTD.  
Internal Address: 416, Maetan-dong,  
Paldal-gu, Suwon-city, Kyungki-do,  
Korea  
Additional name(s) & address(es) attached:  
 Yes  No

3. Nature of conveyance:  
 Assignment  Merger  
 Security Agreement  Change of Name  
 Other \_\_\_\_\_  
Execution Date: January 15, 2003

4. Application number(s) or patent number(s): 10,351,008  
If this document is being filed together with a new application, the execution date  
of the application is: January 15, 2003  
A. Patent Application No.(s) | B. Patent No.(s)  
Additional numbers attached?  Yes  No

5. Name and address of party to whom  
correspondence concerning document  
should be mailed:  
Name: Frank Chau, Esq.  
Street Address: F. CHAU & ASSOCIATES, LLP  
1900 Hempstead Turnpike, Suite 501  
City: East Meadow State: NY Zip: 11554

6. Total number of applications and  
patents involved: 1  
7. Total fee (37 C.F.R. §3.41): \$40.00  
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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.  
Frank Chau  
Registration No. 34,136  
Name of Person Signing | Signature | Date 1/23/03  
Total number of pages including cover sheet, attachments and documents: 3

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**ASSIGNMENT**

DOCKET NO. 8836-173 (IB11210-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, Mactan-dong, Paldal-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:

**TITLE:** **REFRESH CIRCUIT HAVING VARIABLE RESTORE TIME ACCORDING TO OPERATING MODE OF SEMICONDUCTOR MEMORY DEVICE AND REFRESH METHOD OF THE SAME**

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. 8836-173 (IB11210-US), or is more particularly identified as:

- executed on even date herewith, or
- Serial No. \_\_\_\_\_ filed in the U.S. Patent & Trademark Office on \_\_\_\_\_, or
- executed on \_\_\_\_\_,

and in and to all United States patents which may be granted thereon and therefore, and in and to all certificates of corrections, divisions, continuations, continuations-in-part, reissued and re-examined patents, and to any extensions thereof, said interest being the entire ownership of the patent when granted, to be held and enjoyed by said **SAMSUNG ELECTRONICS CO., LTD.**, my Assignee, its successors, assigns or other legal representatives, to the full end of the term, terms, or any extension or renewal thereof, for which said patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by me or us if this assignment, sale and 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.

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**

**Witness(es)**

1) Jongyeal Park (Seal) Jan. 15, 2003 \_\_\_\_\_  
Jong-Yeol PARK