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No

PATENT APPLICATION Attorney's Do. No. 4591-153

101575554 UNITED STATES PATENT AND TRADEMARK OFFICE

BOX ASSIGNMENT Commissioner of Patents and Trademarks Washington, D.C. 20231

Please record the attached original document or copy thereof and return the recorded instrument to the undersigned.

1. Name of party(ies) conveying an interest:

Name and address of party(ies) receiving an interest:

Samsung Electronics Co., Ltd.
416 Maetan-dong, Paldal-gu
Suwon-City, Kyungki-do KOREA

3. Description of the interest conveyed:

2.

Date of execution of attached document: November 6, 2000

4. Application number(s) or patent number(s). Additional sheet attached?

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.

09/653,442, filed September 1, 2000

5. Name and address of party to whom correspondence concerning document should be mailed:

MARGER JOHNSON & McCOLLOM, P.C.

1030 S.W. Morrison Street Portland, Oregon 97205 Telephone: (503) 222-3613

- 6. Number of applications and patents involved: 1
- 7. Enclosed is our check for \$40
- Any deficiency or overpayment should be charged or credited to deposit account number 13-1703.
- 9. 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.

Dated: December 18, 2000

01/08/2001 STON11 00000301 03653442

MARGER JOHNSON & McCOLLOM, P.C. 1030 SW Morrison Street Portland, OR 97205 (503) 222-3613

Respectfully submitted,

B. Patent No.

MARGER JOHNSON & McCOLLOM, P.C.

Eun-cheol KIM

Alan T. McCollom Reg. No. 28,881

Total number of pages comprising cover sheet and attached assignment: 3

PATENT REEL: 011396 FRAME: 0712

PATENT APPLICATION Atty's Do. No. 4591-153

Korean Priority Document No.: 99-37153

Hana Ref. ID9056-US

ASSIGNMENT

U.S.A. Patent Application
Sole or Joint
For Inventions Made Outside U.S.A.
Executed With Application

In consideration of the sum of Ten Dollars (10.00) and other good and valuable considerations paid to each of the undersigned, to wit:

(1) Eun-cheol KIM

[] X if continued on separate page

the receipt and sufficiency of which are hereby acknowledged by the undersigned who hereby sell(s), assign(s) and transfer(s) unto:

SAMSUNG ELECTRONICS CO., LTD. 416 MAETAN-DONG, PALDAL-KU SUWON-CITY, KYUNGKI-DO REPUBLIC OF KOREA

(hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States Of America as defined in 35 U.S.C. §100, in and to the invention known as:

ADDRESS GENERATING AND DECODING CIRCUIT FOR USE IN A BURST-TYPE AND HIGH-SPEED RANDOM ACCESS MEMORY DEVICE WHICH HAS A SINGLE DATA RATE AND A DOUBLE DATA RATE SCHEME

for which an application for Letters Patent of the United States of America filed on September 1, 2000, Serial Number 09/653,442 has been executed herewith by the undersigned, and in and to any and all divisionals, continuations, substitutes, and reissues thereof; and all resulting patents and the undersigned hereby authorizes and requests the United States Assistant Commissioner of Patents to issue said Letters Patent to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

And the undersigned hereby agrees to testify and execute any papers for ASSIGNEE, its successors, assigns and legal representatives, deemed essential by ASSIGNEE to ASSIGNEE'S full protection and title in and to the invention hereby transferred.

PATENT REEL: 011396 FRAME: 0713 Please sign concurrently with Oath or Declaration and Power of Attorney

SIGNED ON THE DATE(S) INDICATED BESIDE MY/OUR SIGNATURE(S):

INVENTOR(S)

DATE SIGNED

WITNESSED

(1) Euncheol Em Nov 6, 2000 Eun-cheol KIM

FOR ADDITIONAL INVENTORS, "X" BOX [] AND CONTINUE ON SEC- 2.005

PLEASE RETURN RECORDED ASSIGNMENT TO:

Alan T. McCollom Marger Johnson & McCollom 1030 S.W. Morrison Street Portland, OR 97205

RECORDED: 12/22/2000

PATENT REEL: 011396 FRAME: 0714