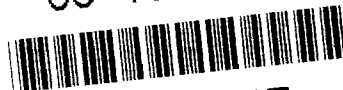


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U.S. DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office

OMB No. 0651-0027 (exp. 5/31/12)

Attorney Docket No. 678-2376 (P12752)

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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

1. Seung-Hoon NAM 5. Won-Il ROH
2. Chan-Soo HWANG 6. Chan-Byoung CHAE
3. Jae-Hak CHUNG
4. Young-Ho JUNG

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other _____

1. June 1, 2006 5. June 5, 2006
2. June 1, 2006 6. June 5, 2006
3. June 1, 2006

Execution Date: 4. June 1, 2006

2. Name and address of receiving party(ies)

Name:

Samsung Electronics Co., Ltd.

416, Maetan-dong, Yeongtong-gu,

Suwon-si

Gyeonggi-do, Republic of Korea

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

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

A. Patent Application No.(s)

11/345,717 Filed: 2/2/2006

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Paul J. Farrell, Esq.

DILWORTH & BARRESE, LLP

333 Earle Ovington Boulevard

Uniondale, New York 11553

U.S. PTO Customer No. 28249

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41).....\$ \$40.00

☒ Enclosed

☐ Authorized to be charged to deposit account

8. Deposit account number: 04-1121

(Attach duplicate copy of this page if paying by deposit account)

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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.

Paul J. Farrell, Reg. No. 33,494

Name of Person Signing

Signature

6/6/06

Date

Total number of pages including coversheet, attachments, and documents: 5

Mail documents to be recorded with required cover sheet information to:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PATENT

REEL: 017984 FRAME: 0008

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-si, Gyeonggi-do, Republic of 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: TRANSMISSION APPARATUS AND METHOD FOR MIMO SYSTEM

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. 678-2376 (P12752), or is more particularly identified as:

- ☐ executed on even date herewith, or
- ☒ Serial No. 11/346,717 filed in the U.S. Patent & Trademark Office on February 2, 2006,
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 Peter G. Dittworth, Reg. No. 26,460 and Paul J. Farrell, Reg. No. 33,494, 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.

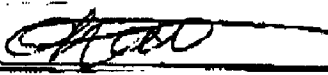
And I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

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

<u>INVENTOR(S)</u>	<u>Date Signed</u>	<u>Witness(es)</u>
1) _____ Seung-Hoon NAM	(Seal) _____	_____
2) _____ Chan-Soo HWANG	(Seal) _____	_____
3) _____ Jae-Hak CHUNG	(Seal) _____	_____
4) _____ Young-Ho JUNG	(Seal) _____	_____
5)  _____ Won-Il ROH	(Seal) June 5, 2006	_____
6) _____ Chan-Byoung CHAE	(Seal) _____	_____

And I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

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<u>INVENTOR(S)</u>	<u>Date Signed</u>	<u>Witness(es)</u>
1) _____ (Seal) _____ Seung-Hoon NAM	_____	_____
2) _____ (Seal) _____ Chan-Soo HWANG	_____	_____
3) _____ (Seal) _____ Jae-Hak CHUNG	_____	_____
4) _____ (Seal) _____ Young-Ho JUNG	_____	_____
5) _____ (Seal) _____ Won-IL ROH	_____	_____
6)  _____ (Seal) _____ Chan-Byoung CHAE	2006. 6. 5.	_____