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SAMS09-94003

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1. Name of conveying party(ies)/Execution Date(s):

Joo-Hyun Lee Jong-Ho Lee Kyung-Ho Park
Sung-Soo Hwang Sung-Yoon Jung Jong-Sub Cha
Sang-Boh Yun Joonhyuk Kang Namseok Chang
Keon-Kook Lee

Execution Date(s) May 7, 2009, respectivelyAdditional name(s) of conveying party(ies) attached? ☐ Yes ☒ No**2. Name and address of receiving party(ies)**Name: Samsung Electronics Co., Ltd.

Internal Address: _____

Street Address: 416, Maetan-dong, Yeongtong-gu,Suwon-si, Gyeonggi-do, 442-370

City: _____

State: _____

Country: Republic of Korea Zip: _____Additional name(s) & address(es) attached? ☒ Yes ☐ No**3. Nature of conveyance:**

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Government Interest Assignment
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☐ Other _____

4. Application or patent number(s):☒ This document is being filed together with a new application.

A. Patent Application No.(s)

12/454,272

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No**5. Name and address to whom correspondence concerning document should be mailed:**Name: Docket Clerk

Internal Address: _____

Street Address: P.O. Drawer 800889City: DallasState: Texas Zip: 75380Phone Number: 972-628-3600Fax Number: 972-628-3616

Email Address: _____

6. Total number of applications and patents involved:1**7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00**

- ☐ Authorized to be charged by credit card
☒ Authorized to be charged to deposit account
☒ Enclosed
☐ None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers _____

Expiration Date _____

b. Deposit Account Number 50-0208Authorized User Name William A. Munck**9. Signature:**

Signature

July 17, 2009

Date

William A. Munck

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

13

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PATENT

700413283

REEL: 022977 FRAME: 0979

DOCKET NO. SPX200904-0003US (SAMS09-94003)

PATENT

ASSIGNMENT

WHEREAS, We, Joo-Hyun LEE, a resident of Gyeonggi-do, Republic of Korea, and a citizen of Republic of Korea, Sung-Soo HWANG, a resident of Gyeonggi-do, Republic of Korea, and a citizen of Republic of Korea, Sang-Boh YUN, a resident of Gyeonggi-do, Republic of Korea, and a citizen of Republic of Korea, Jong-Ho LEE, a resident of Seoul, Republic of Korea, and a citizen of Republic of Korea, Sung-Yoon JUNG, a resident of Seoul, Republic of Korea, and a citizen of Republic of Korea, Joon-Hyuk KANG, a resident of Seoul, Republic of Korea, and a citizen of Republic of Korea, Kyung-Ho PARK, a resident of Seoul, Republic of Korea, and a citizen of Republic of Korea, Jong-Sub CHA, a resident of Seoul, Republic of Korea, and a citizen of Republic of Korea, Nam-Seok CHANG, a resident of Gyeonggi-do, Republic of Korea, and a citizen of Republic of Korea, and Keon-Kook LEE, a resident of Daejeon, Republic of Korea, and a citizen of Republic of Korea, have invented certain new and useful improvements in a

**"ITERATIVE TREE SEARCH-BASED PRECODING TECHNIQUE FOR
MULTIUSER MIMO COMMUNICATION SYSTEM"**

disclosed in an application for United States Letters Patent (Application No. _____/_____, filed on _____, said application having been executed concurrently herewith;

WHEREAS, SAMSUNG ELECTRONICS CO., LTD, a corporation organized under the laws of the Republic of Korea, having a place of business at 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, 442-370, Republic of Korea and INFORMATION AND COMMUNICATIONS UNIVERSITY, RESEARCH AND INDUSTRIAL COOPERATION GROUP, having a place of business at 103-6, Munji-dong, Yuseong-gu, Daejeon, Republic of Korea, (hereinafter referred to as "ASSIGNEES"), are desirous of acquiring my entire right, title and interest in and to the invention, and in and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we do hereby sell, assign and transfer unto said ASSIGNEES, their successors, assigns and legal representatives, the full and exclusive right, title and interest in and to said invention and in and to said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, continuations-in-part and extensions thereof; We authorize William A. Munck or John T. Mockler of Munck Carter, LLP to insert in the parenthesis above the application number and filing date of said application when known; and we hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patents resulting therefrom, insofar as our interest is concerned, to the said ASSIGNEES of our entire right, title and interest.

We also hereby sell and assign to said ASSIGNEES, their successors, assigns and legal representatives the full and exclusive rights, title and interest to the invention disclosed in said application throughout the world, including the right to file applications and obtain patents, utility

models, industrial models and designs for said invention in its own name throughout the world including all rights of priority, all rights to publish cautionary notices reserving ownership of said invention and all rights to register said invention in appropriate registries; and I further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such rights, title and interest in ASSIGNEES, its successors, assigns and legal representatives.

I hereby further agree that I will communicate to said ASSIGNEES, or to its successors, assigns and legal representatives, any facts known to me respecting any improvements; and, at the expense of said ASSIGNEES, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, continuation-in-part, reissue and substitute applications, and make all lawful oaths, and generally do everything possible to vest title in said ASSIGNEES and to aid said ASSIGNEES, its successors, assigns and legal representatives to obtain and enforce proper protection for said invention in all countries.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 7 day of May, 2009

Joo Hyun Lee
Joo-Hyun LEE

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 17 day of May, 2009

SUNG SOO HWANG

Sung-Soo HWANG

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 7 day of May, 2009

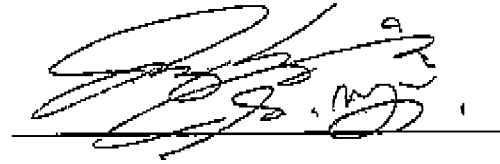
Sung Boh Yun

Sang-Boh YUN

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 7 day of May, 2009


Jong-Ho Lee
Jong-Ho LEE

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 7 day of May, 2009

A handwritten signature in black ink, appearing to read 'Sung-Yoon JUNG', is written over a horizontal line.

Sung-Yoon JUNG

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 7 day of May, 2008



Joonghyuk Kang

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 7 day of May, 2009.



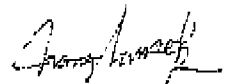
Kyung-Ho PARK

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 7 day of MAY. 2009

차중섭


Jong-Sub CHA

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 7 day of May 2009



Namseok Chang

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 7 day of
May, 2009.


Keon-Kook LEE