

# PATENT ASSIGNMENT

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| <b>NATURE OF CONVEYANCE:</b>   | ASSIGNMENT  |
| <b>CONVEYING PARTY DATA</b>  |   |
| <b>Name</b>  | <b>Execution Date</b>   |
| Sung Jin Kim   | 04/15/2011  |
| Chang Soon Park  | 04/15/2011  |
| Hong Shuan Yang  | 04/01/2011  |
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| <b>City:</b>   | Suwon-si, Gyeonggi-do   |
| <b>State/Country:</b>  | REPUBLIC OF KOREA   |
| <b>Postal Code:</b>  | 443-742   |
| <b>Name:</b>   | Korea University Industrial & Academic Collaboration Foundation |
| <b>Street Address:</b>   | Korea Univ., Anam-dong 5(o)-ga, Seongbuk-gu                     |
| <b>City:</b>   | Seoul   |
| <b>State/Country:</b>  | REPUBLIC OF KOREA   |
| <b>Postal Code:</b>  | 136-701   |
| <b>PROPERTY NUMBERS Total: 1</b>   |   |
| <b>Property Type</b>   | <b>Number</b>   |
| Application Number:  | 13092806  |
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OP \$40.00 13092806

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**PATENT**  
**REEL: 026171 FRAME: 0285**

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| ATTORNEY DOCKET NUMBER:   | 12000.SMG.0959      |
| NAME OF SUBMITTER:  | Nicholas M. Stabler |
| <b>Total Attachments: 4</b><br>source=12000SMG0959_Assignment#page1.tif<br>source=12000SMG0959_Assignment#page2.tif<br>source=12000SMG0959_Assignment#page3.tif<br>source=12000SMG0959_Assignment#page4.tif |                     |

## **ASSIGNMENT**

For valuable consideration, we,

Sung-Jin KIM      437-1901, Cheongmyeong Maeul Samsung Raemian Apt.,  
Yeongtong-dong, Paldal-gu, Suwon-si, Gyeonggi-do, 443-  
737 Korea Republic of Korea

Chang-Soon PARK      381-11 ho, Gyohyeon 2-dong, Chungju-si, Chungbuk,  
380-951 Republic of Korea

Hong-Shuan YANG      Dept. of Electrical and Computer Engineering, University  
of Victoria, P.O. Box 3055 STN CSC, Victoria, B.C.  
V8W 3P6, CANADA

hereby assign to:

**SAMSUNG ELECTRONICS CO., LTD.**, a Republic of Korea

corporation/institute/institution having principal executive office(s) or place of business

at: 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742, Republic of

Korea; and

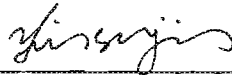
**Korea University Industrial & Academic Collaboration**

**Foundation**, a Republic of Korea corporation/institute/institution having principal  
executive office(s) or place of business at: Korea Univ., Anam-dong 5(o)-ga, Seongbuk-  
gu, Seoul 136-701, Republic of Korea; and

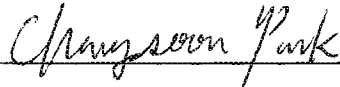
its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of U.S. Patent Application Number 13/092,806 filed 04/22/2011 at the U.S. Patent & Trademark Office signed by us, with title **MULTI-USER MIMO COMMUNICATION SYSTEM AND METHOD USING FEEDBACK INFORMATION**, and we authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and application serial number of said application when known; this Assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, preliminary statements and other lawful documents as the Assignee may reasonably request to effectuate fully this Assignment.

IN TESTIMONY/WITNESS WHEREOF, we, undersigned inventors (Assignors) intending to be legally bound, have hereto affixed our signatures.

This 15th day of April, 2011

  
Signature: Sung-Jin KIM

This 15th day of April, 2011

  
Signature: Chang-Soon PARK

This \_\_\_\_\_ day of \_\_\_\_\_, 2011

\_\_\_\_\_  
Signature: Hong-Shuan YANG

## ASSIGNMENT

For valuable consideration, we,

Sung-Jin KIM            437-1901, Cheongmyeong Maeul Samsung Raemian Apt.,  
Yeongtong-dong, Paldal-gu, Suwon-si, Gyeonggi-do, 443-  
737 Korea Republic of Korea

Chang-Soon PARK      381-11 ho, Gyohyeon 2-dong, Chungju-si, Chungbuk,  
380-951 Republic of Korea

Hong-Shuan YANG     Dept. of Electrical and Computer Engineering, University  
of Victoria, P.O. Box 3055 STN CSC, Victoria, B.C.  
V8W 3P6, CANADA

hereby assign to:

**SAMSUNG ELECTRONICS CO., LTD.**, a Republic of Korea

corporation/institute/institution having principal executive office(s) or place of business

at: 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742, Republic of

Korea; and

**Korea University Industrial & Academic Collaboration**

**Foundation**, a Republic of Korea corporation/institute/institution having principal  
executive office(s) or place of business at: Korea Univ., Anam-dong 5(o)-ga, Seongbuk-  
gu, Seoul 136-701, Republic of Korea; and

its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of U.S. Patent Application Number 13/092,806 filed 04/22/2011 at the U.S. Patent & Trademark Office signed by us, with title **MULTI-USER MIMO COMMUNICATION SYSTEM AND METHOD USING FEEDBACK INFORMATION**, and we authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and application serial number of said application when known; this Assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, preliminary statements and other lawful documents as the Assignee may reasonably request to effectuate fully this Assignment.

IN TESTIMONY/WITNESS WHEREOF, we, undersigned inventors (Assignors) intending to be legally bound, have hereto affixed our signatures.

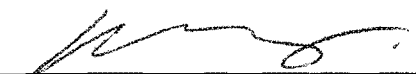
This \_\_\_\_\_ day of \_\_\_\_\_, 2011

\_\_\_\_\_  
Signature: Sung-Jin KIM

This \_\_\_\_\_ day of \_\_\_\_\_, 2011

\_\_\_\_\_  
Signature: Chang-Soon PARK

This 1st day of April, 2011

  
\_\_\_\_\_  
Signature: Hong-Shuan YANG