

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Yong-Hwan Lee</td> <td>05/16/2012</td> </tr> <tr> <td>Han-Jun Park</td> <td>05/16/2012</td> </tr> <tr> <td>Keon-Wook Lee</td> <td>05/16/2012</td> </tr> </tbody> </table>		Name	Execution Date	Yong-Hwan Lee	05/16/2012	Han-Jun Park	05/16/2012	Keon-Wook Lee	05/16/2012		
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<table border="1"> <tr> <td>Name:</td> <td>SNU R&amp;DB FOUNDATION</td> </tr> <tr> <td>Street Address:</td> <td>San 56-1, Shillim-dong</td> </tr> <tr> <td>City:</td> <td>Gwanak-gu, Seoul</td> </tr> <tr> <td>State/Country:</td> <td>KOREA, REPUBLIC OF</td> </tr> <tr> <td>Postal Code:</td> <td>151-742</td> </tr> </table>		Name:	SNU R&DB FOUNDATION	Street Address:	San 56-1, Shillim-dong	City:	Gwanak-gu, Seoul	State/Country:	KOREA, REPUBLIC OF	Postal Code:	151-742
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CORRESPONDENCE DATA											
<p>Fax Number: (509)838-3424          Phone: 509-624-4276          Email: docketing@wellsstjohn.com  <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i></p> <p>Correspondent Name: D. Brent Kenady          Address Line 1: 601 West First Avenue          Address Line 2: Suite 1300          Address Line 4: Spokane, WASHINGTON 99201-3828</p>											
ATTORNEY DOCKET NUMBER:	HA126-001										
NAME OF SUBMITTER:	D. Brent Kenady										
Total Attachments: 4 source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif source=Assignment#page4.tif											

OP \$40.00 13479939

ASSIGNMENT

PARTIES TO THE ASSIGNMENT:

INVENTOR:

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[INVENTOR CITIZENSHIP] Republic of Korea

[SECOND INVENTOR NAME] PARK, Han-Jun  
[INVENTOR ADDRESS] 674-10, Gonghang-dong, Gangseo-gu, Seoul  
157-240, Republic of Korea  
[INVENTOR CITIZENSHIP] Republic of Korea

[THIRD INVENTOR NAME] LEE, Keon-Wook  
[INVENTOR ADDRESS] 1212, Halla Billions Officetel, Guro 3-dong,  
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[INVENTOR CITIZENSHIP] Republic of Korea

ASSIGNEE:

[ASSIGNEE NAME] SNU R&DB FOUNDATION  
[ASSIGNEE ADDRESS] San 56-1, Shillim-dong, Gwanak-gu, Seoul 151-742,  
Republic of Korea  
[ASSIGNEE CITIZENSHIP—IF APPLICABLE] Republic of Korea

**BACKGROUND OF THIS ASSIGNMENT:**

INVENTOR has conceived certain new and useful inventions disclosed in a United States patent application entitled: **METHOD AND APPARATUS FOR ESTIMATING CHANNEL USING DEDICATED PILOT SIGNAL IN OFDM-BASED WIRELESS COMMUNICATION SYSTEM**

**SNU R&DB FOUNDATION** (hereinafter referred to as "ASSIGNEE") desires to acquire the entire right, title and interest in said inventions and with respect to any Letters Patent that may be granted with respect to the inventions in both the United States and in all foreign countries.

**THE PARTIES AGREE AS FOLLOWS:**

In consideration of good and valuable consideration, the receipt, sufficiency and adequacy of which is hereby acknowledged, INVENTOR has sold, assigned and transferred, and by these present do hereby sell, assign and transfer to ASSIGNEE the entire right, title and interest in the above-identified inventions and application and to any reissues, renewals, divisions or continuations of the application thereof, and hereby authorizes the Commissioner of Patents and Trademarks to issue such Letters Patent to ASSIGNEE for the sole use of ASSIGNEE, its successors or assigns.

INVENTOR further agree to execute, at the request and expense of ASSIGNEE, such other formal documents as may be required to fully convey the interest transferred herein and will similarly execute any patent application papers (foreign or domestic) required for the filing of any divisional, continuation, renewal or reissue of the patent application or resulting Letters Patent; and will generally do everything necessary or desirable to obtain and enforce proper protection for the inventions assigned hereby.

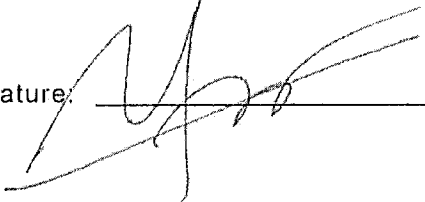
INVENTOR further assign to ASSIGNEE the whole right, title and interest in the inventions disclosed in the application throughout all countries foreign to the United States. ASSIGNEE is hereby authorized to apply for patents relating to the inventions in its own name in countries where such procedure is proper; to claim the benefit of the International Convention; to file and prosecute International Applications relating to the inventions under the Patent Cooperation Treaty; and to file and prosecute applications relating to the inventions under the European Patent Convention. INVENTOR agrees to execute applications relating to the inventions in those countries and under those conventions where it is necessary that the same be executed by the inventor, and to execute assignments of such applications and the resulting Letters Patent to ASSIGNEE as well as all other necessary papers in relation to such applications and Letters Patent. INVENTOR hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any

document which may be required in any country as proof of the right of ASSIGNEE to apply for patent and other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

To be binding on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

INVENTOR: LEE, Yong-Hwan

Dated: May 16, 2012

Signature: 

INVENTOR: PARK, Han-Jun

Dated: May 16, 2012

Signature: Han-Jun Park

INVENTOR: LEE, Keon-Wook

Dated: May 16, 2012

Signature: Keon-Wook Lee