

## 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>Hyun Soo KO</td> <td>12/06/2011</td> </tr> <tr> <td>Min Seok NOH</td> <td>12/06/2011</td> </tr> <tr> <td>Jae Hoon CHUNG</td> <td>12/12/2011</td> </tr> <tr> <td>Seung Hee HAN</td> <td>12/06/2011</td> </tr> <tr> <td>Moon Il LEE</td> <td>12/16/2011</td> </tr> </tbody> </table>		Name	Execution Date	Hyun Soo KO	12/06/2011	Min Seok NOH	12/06/2011	Jae Hoon CHUNG	12/12/2011	Seung Hee HAN	12/06/2011	Moon Il LEE	12/16/2011
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RECEIVING PARTY DATA													
Name:	LG Electronics Inc.												
Street Address:	20 Yeouido-dong, Yeongdeungpo-gu												
City:	Seoul												
State/Country:	REPUBLIC OF KOREA												
Postal Code:	150-721												
PROPERTY NUMBERS Total: 1													
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13379644</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13379644								
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CORRESPONDENCE DATA													
Fax Number:	(213)623-2211												
Phone:	213-623-2221												
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Address Line 4:	LOS ANGELES, CALIFORNIA 90017												
ATTORNEY DOCKET NUMBER:	2101-5163												
NAME OF SUBMITTER:	Harry S. Lee												

OP \$40.00 13379644

**Total Attachments: 4**

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ASSIGNMENT

(1-8) *Insert Name(s) of Inventor(s)* (1) KO, Hyun Soo (5) LEE, Moon Il  
 (2) NOH, Min Seok (6)  
 (3) CHUNG, Jae Hoon  
 (4) HAN, Seung Hee

In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to

(9) *Insert name of Assignee* (9) LG ELECTRONICS INC.  
 (10) *Insert state of Incorporation of Assignee* (10) Korea  
 (11) *Insert address of Assignee* (11) 20 Yeouido-dong, Yeongdeungpo-gu, Seoul 150-721  
 Seoul, Korea

(hereinafter designated as the Assignee) the entire worldwide right, title and interest in the invention known as

(12) *Insert identification of invention, such as Title, Case Number or Foreign Application Number* (12) METHOD AND APPARATUS FOR TRANSMITTING REFERENCE SIGNALS IN UPLINK MULTIPLE INPUT MULTIPLE OUTPUT (MIMO) TRANSMISSION

for which the undersigned has (have) executed an application for patent in the United States of America and all patent applications in foreign countries corresponding thereto or based thereon.

1) The undersigned agree(s) to execute all papers necessary in connection with any original, reissue, divisional and continuing United States and foreign applications for the above-identified invention and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

2) The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation or division thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

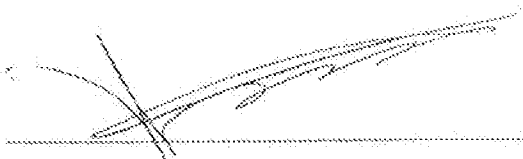
3) The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

4) The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

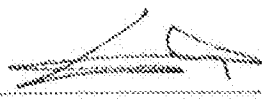
5) The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed any agreement in conflict herewith.

The undersigned hereby appoints the Attorneys associated with Customer No. 035884 the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recording of this document.

Date: 14 Dec 2011 Signature of Inventor 1 [Signature]

Date: Dec 06, 2011 Signature of Inventor 2 

Date: Dec 04th, 2011 Signature of Inventor 3 Joe Brown

Date: 6. Dec. 2011 Signature of Inventor 4 

Date: \_\_\_\_\_ Signature of Inventor 5 \_\_\_\_\_

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Date: \_\_\_\_\_ Signature of Inventor 2 \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Inventor 3 \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Inventor 4 \_\_\_\_\_

Date: Dec. 16th, 2011 Signature of Inventor 5 \_\_\_\_\_

