

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

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>Hyoungju JI</td> <td>05/17/2012</td> </tr> <tr> <td>Younsun KIM</td> <td>05/17/2012</td> </tr> <tr> <td>Jinkyu HAN</td> <td>05/21/2012</td> </tr> <tr> <td>Youngbum KIM</td> <td>05/17/2012</td> </tr> <tr> <td>Cheng SHAN</td> <td>05/18/2012</td> </tr> </tbody> </table>		Name	Execution Date	Hyoungju JI	05/17/2012	Younsun KIM	05/17/2012	Jinkyu HAN	05/21/2012	Youngbum KIM	05/17/2012	Cheng SHAN	05/18/2012
Name	Execution Date												
Hyoungju JI	05/17/2012												
Younsun KIM	05/17/2012												
Jinkyu HAN	05/21/2012												
Youngbum KIM	05/17/2012												
Cheng SHAN	05/18/2012												
RECEIVING PARTY DATA													
Name:	Samsung Electronics Co., Ltd.												
Street Address:	129, Samsung-ro, Yeongtong-gu												
City:	Suwon-si, Gyeonggi-do												
State/Country:	KOREA, REPUBLIC OF												
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>13481163</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13481163								
Property Type	Number												
Application Number:	13481163												
CORRESPONDENCE DATA													
Fax Number:	(516)228-8475												
Phone:	5162283565												
Email:	Genmail@farrelliplaw.com												
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>													
Correspondent Name:	Paul J. Farrell												
Address Line 1:	290 Broadhollow Road, Suite 210E												
Address Line 4:	Melville, NEW YORK 11747												
ATTORNEY DOCKET NUMBER:	1398-490												
NAME OF SUBMITTER:	Paul J. Farrell												
Total Attachments: 6													

OP \$40.00 13481163

source=ASSIGNMENT#page1.tif  
source=ASSIGNMENT#page2.tif  
source=ASSIGNMENT#page3.tif  
source=ASSIGNMENT#page4.tif  
source=ASSIGNMENT#page5.tif  
source=ASSIGNMENT#page6.tif

**ASSIGNMENT**

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:** 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 443-742, 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:** CONTROL CHANNEL TRANSMISSION METHOD AND APPARATUS FOR TRANSMITTING DEDICATED REFERENCE SIGNAL IN WIRELESS COMMUNICATION 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. 1398-490 (YPF201205-0006/US\_DMC), or is more particularly identified as:

- executed on even date herewith, or May 25, 2012  
 Serial No. 13/481,163 filed in the U.S. Patent & Trademark Office on \_\_\_\_\_, or  
 executed on \_\_\_\_\_

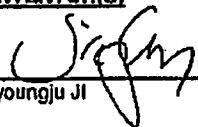





and in and to all United States patents which may be granted thereon and therefore, and in and to all certificates of corrections, divisions, continuations, continuations-in-part, reissued and re-examined patents, and to any extensions thereof, said interest being the entire ownership of the patent when 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 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) <u></u> Hyoungju JI	(Seal) <u>May 19, 2012</u>	<u></u>
2) <u></u> Younsun KIM	(Seal) <u>May 17, 2012</u>	<u></u>
3) _____ Jinkyu HAN	(Seal) _____	_____
4) <u></u> Youngbum KIM	(Seal) <u>May 17, 2012</u>	<u></u>
5) _____ Cheng SHAN	(Seal) _____	_____

**ASSIGNMENT**

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:** 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 443-742, 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:** CONTROL CHANNEL TRANSMISSION METHOD AND APPARATUS FOR TRANSMITTING DEDICATED REFERENCE SIGNAL IN WIRELESS COMMUNICATION 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. 1398-490 (YPF201205-0006/US\_DMC), or is more particularly identified as:

- executed on even date herewith, or May 25, 2012  
 Serial No. 13/481,163 filed in the U.S. Patent & Trademark Office on \_\_\_\_\_, or  
 executed on \_\_\_\_\_

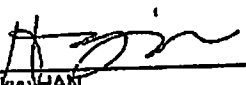

and in and to all United States patents which may be granted thereon and therefore, and in and to all certificates of corrections, divisions, continuations, continuations-in-part, reissued and re-examined patents, and to any extensions thereof, said interest being the entire ownership of the patent when 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 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) _____ (Seal) _____ Hyungju Ji	_____	_____
2) _____ (Seal) _____ Yoonsun KIM	_____	_____
3)  _____ (Seal) _____ Jinkyu HAN	5/21/2012	
4) _____ (Seal) _____ Youngbum KIM	_____	_____
5) _____ (Seal) _____ Cheng SHAN	_____	_____

ASSIGNMENT

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: 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 443-742, 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: CONTROL CHANNEL TRANSMISSION METHOD AND APPARATUS FOR TRANSMITTING DEDICATED REFERENCE SIGNAL IN WIRELESS COMMUNICATION 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. 1398-490 (YPF201205-0006/US\_DMC), or is more particularly identified as:

- executed on even date herewith, or May 25, 2012  
 Serial No. 13/481,163 filed in the U.S. Patent & Trademark Office on \_\_\_\_\_, 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 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) _____ Hyoungju JI	(Seal) _____	_____
2) _____ Younsun KIM	(Seal) _____	_____
3) _____ Jinkyu HAN	(Seal) _____	_____
4) _____ Youngbum KIM	(Seal) _____	_____
5) _____ Cheng SHAN	(Seal) 2012.5.18	_____