

## 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>Young-Han Nam</td> <td>07/31/2012</td> </tr> <tr> <td>Jianzhong Zhang</td> <td>08/01/2012</td> </tr> <tr> <td>Jin-Kyu Han</td> <td>08/01/2012</td> </tr> </tbody> </table>		Name	Execution Date	Young-Han Nam	07/31/2012	Jianzhong Zhang	08/01/2012	Jin-Kyu Han	08/01/2012
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<table border="1"> <tr> <td>Name:</td> <td>Samsung Electronics Co., Ltd.</td> </tr> <tr> <td>Street Address:</td> <td>129, Samsung-ro, Yeongtong-gu, Suwon-si</td> </tr> <tr> <td>City:</td> <td>Gyeonggi-do 443-742</td> </tr> <tr> <td>State/Country:</td> <td>KOREA, REPUBLIC OF</td> </tr> </table>		Name:	Samsung Electronics Co., Ltd.	Street Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si	City:	Gyeonggi-do 443-742	State/Country:	KOREA, REPUBLIC OF
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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>13564469</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13564469				
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CORRESPONDENCE DATA									
<p>Fax Number: 9726283616          Phone: 972-628-3600          Email: patents@munckcarter.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: DOCKET CLERK          Address Line 1: P.O. DRAWER 800889          Address Line 4: DALLAS, TEXAS 75380</p>									
NAME OF SUBMITTER:	Michael G. Rodriguez								
<p>Total Attachments: 4          source=Assignment#page1.tif          source=Assignment#page2.tif          source=Assignment#page3.tif          source=Assignment#page4.tif</p>									

CH \$40.00 13564469

WHEREAS, We, Young-Han Nam, resident of Richardson, Collin County, Texas, citizen of Republic of Korea, Jianzhong Zhang, resident of Plano, Collin County, Texas, citizen of China and Jin-Kyu Han, resident of Allen, Collin County, Texas, citizen of Republic of Korea, have invented certain new and useful improvements in a "APPARATUS AND METHOD FOR UE-SPECIFIC DEMODULATION REFERENCE SIGNAL SCRAMBLING" disclosed in an application for United States Letters Patent (Application No. \_\_\_\_\_, filed \_\_\_\_\_), 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 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742, Republic of Korea (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring our 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 ASSIGNEE, its 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 of Munck Wilson Mandala, 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 ASSIGNEE of our entire right, title and interest.

We also hereby sell and assign to said ASSIGNEE, its 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 we 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 ASSIGNEE, its successors, assigns and legal representatives.

We hereby further agree that we will communicate to said ASSIGNEE, or to its successors, assigns and legal representatives, any facts known to us respecting any improvements; and, at the expense of said ASSIGNEE, 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 ASSIGNEE and to aid said ASSIGNEE, its successors, assigns and legal representatives to obtain and enforce proper protection for said invention in all countries.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 31<sup>st</sup> day of July, 2012.

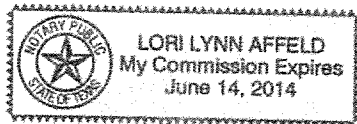
Young-Han Nam  
Young-Han Nam

STATE OF TEXAS

COUNTY OF Collin

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On this 31 day of July, 2012, before me, a Notary Public in and for the State and County aforesaid, personally appeared Young-Han Nam, known to me to be the person named above who signed and sealed the foregoing instrument, and acknowledged the same to be his/her own free act and deed.



Lori Lynn Affeld  
Notary Public, State of Texas

My Commission Expires:

June 14, 2014

Date: 8/1/12

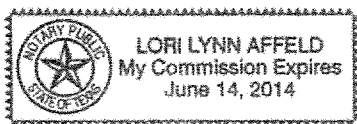
Jianzhong Zhang

STATE OF TEXAS

COUNTY OF Collin

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On this 1 day of August, 2012, before me, a Notary Public in and for the State and County aforesaid, personally appeared Jianzhong Zhang, known to me to be the person named above who signed and sealed the foregoing instrument, and acknowledged the same to be his/her own free act and deed.



Lori Lynn Affeld  
Notary Public, State of Texas

My Commission Expires:

June 14, 2014

Date:

8/1/2012

Jin-Kyu Han

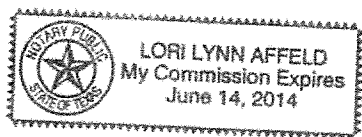
STATE OF TEXAS

COUNTY OF

Collin

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On this 1 day of August, 2012, before me, a Notary Public in and for the State and County aforesaid, personally appeared Jin-Kyu Han, known to me to be the person named above who signed and sealed the foregoing instrument, and acknowledged the same to be his/her own free act and deed.



Lori Lynn Affeld  
Notary Public, State of Texas

My Commission Expires:

June 14, 2014