## 503582522 11/23/2015

# PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

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JIANZHONG ZHANG	11/18/2015
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#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	14930374

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DATE SIGNED:	11/23/2015

### **Total Attachments: 3**

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PATENT 503582522 REEL: 037123 FRAME: 0091

# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT

Title of Invention	METHODS AND APPARATUS FOR DOWNLINK CONTROL CHANNELS TRANSMISSIONS IN WIRELESS COMMUNICATIONS SYSTEMS
As the undersi	gned inventor, I hereby declare that:
This combined assignment is	declaration and ☐The attached application, or ☐United States application or PCT International application number 14/930,374 filed on November 2, 2015, as amended herewith.
The above-ide	ntified application was made or authorized to be made by me.
I believe that I	am the original inventor or an original joint inventor of a claimed invention in the application.
I have reviewe assignment is t	d and understand the contents of the application including the claims, for which this combined declaration and being submitted.
I am aware of 1.56.	the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR
WHEREAS, <u>Samsung Electronics Co., Ltd., a Korean corporation, having a place of business at 129, Samsung-ro, Yeongtong-gu Suwon-si, Gyeonggi-do, 16677, Korea</u> (hereinafter referred to as "ASSIGNEE"), desires to acquire the entire right, title and interest in said invention and to any patent that may be granted thereon in the United States and foreign countries;	
NOW, THEREFORE, for good and valuable consideration, the receipt whereof is hereby acknowledged, We, the below named inventors, hereby sell, assign and transfer to said ASSIGNEE, its successors and assigns, the entire right, title and interest in the above-identified application and the invention disclosed therein in all countries, including all divisional applications, continuation applications, and corresponding priority applications including those to which priority is claimed under the International Convention of Paris including under 35 U.S.C. 119, substitutions, and renewals thereof, and to all patents that may be granted thereon, and all reissues thereof.	
We hereby authorize and request the Patent Office Officials in the United States and all foreign countries to issue patents, when granted, to said ASSIGNEE, its successors and assigns. Further, We agree that said ASSIGNEE, its successors and assigns, may apply for patents for the invention in foreign countries without further authorization from us. Also, We agree to execute all papers and generally to do everything possible to aid said ASSIGNEE, its successors and assigns, in obtaining and enforcing patents for the invention in all countries.	
I hereby acknowledge that any willful false statement made in this combined declaration and assignment is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.	
LEGAL NAME OF FIRST INVENTOR (e.g., full first name, middle initial, last name)	
Inventor:	Syu/Han Date: 11/14/2015
Signature:	

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LEGAL NAME OF SECOND INVENTOR (e.g., full first name, middle initial, last name)		
Inventor: Jianzhong Zhang	Date:	
Signature:		

LEGAL NAME OF THIRD INVENTOR (e.g., full first name, n	niddle initial, last name)
Inventor: Younsun Kim	_ Date:
Signature:	/

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2012.02.005.SR1

**PATENT** REEL: 037123 FRAME: 0094

**RECORDED: 11/23/2015**