PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Boon Loong Ng	03/15/2013
Krishna Sayana	03/15/2013
Jianzhong Zhang	03/15/2013
Young-Han Nam	03/15/2013

RECEIVING PARTY DATA

Name:	Samsung Electronics Co., Ltd
Street Address:	129, Samsung-ro
Internal Address:	Yeongtong-gu, Suwon-si
City:	Gyeonggi-do
State/Country:	KOREA, REPUBLIC OF
Postal Code:	443-742

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13841791

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	2012.04.004.SR0	
NAME OF SUBMITTER:	Michael G. Rodriguez	

Total Attachments: 5

PATENT REEL: 030021 FRAME: 0902 :H \$40.00 138

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PATENT REEL: 030021 FRAME: 0903

ASSIGNMENT

WHEREAS, We, Boon Loong Ng, resident of Dallas, Dallas County, Texas, citizen of Australia, Krishna Sayana, resident of San Jose, Santa Clara County, California, citizen of India, Jianzhong Zhang, resident of Plano, Collin County, Texas, citizen of China, and Young-Han Nam, resident of Richardson, Collin County, Texas, citizen of Korea, have invented certain new and useful improvements in "HIGH-ORDER MULTIPLE-USER MULTIPLE-INPUT MULTIPLE-OUTPUT OPERATION FOR WIRELESS COMMUNICATION SYSTEMS" 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 my 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, I 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; I 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 I 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 my entire right, title and interest.

I 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 I 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.

I hereby further agree that I will communicate to said ASSIGNEE, or to its successors, assigns and legal representatives, any facts known to me 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

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PATENT REEL: 030021 FRAME: 0904

ASSIGNEE, its successors, assigns and legal refor said invention in all countries.	epresentatives to obtain and enforce proper protection
IN WITNESS WHEREOF, I have her	reunto set my hand and seal this <u>ISM</u> day of
	Boon Loong Ng
STATE OF TEXAS § COUNTY OF §	
On this day of State and County aforesaid, personally appear	, 2013, before me, a Notary Public in and for the red Boon Loong Ng, known to me to be the person going instrument, and acknowledged the same to be
	Notary Public, State of Texas
	My Commission Expires:

Date: 3/15/2013	Krishna Sayana
STATE OF TEXAS COUNTY OF	§ § §
State and County aforesaid, personal	, 2013, before me, a Notary Public in and for the ly appeared Krishna Sayana, known to me to be the person the foregoing instrument, and acknowledged the same to be
	Notary Public, State of Texas
	My Commission Expires:

Date:		Jianzhong Zhan	g	_
STATE OF TEXAS COUNTY OF	\$ \$ \$			
On this day of	ppeared Ji	ianzhong Zhang, k	nown to me to be t	he person
		Notary Public, S	tate of Texas	_
		My Commission	Expires:	

Date:	3/15/2013		Young-Han Nam	
STATE OF TEX		\$ \$ \$		
State and County	aforesaid, personally a signed and sealed the	ppeared Yo	, 2013, before me, a Notary Public in and for the Young-Han Nam, known to me to be the person ag instrument, and acknowledged the same to be	
			Notary Public, State of Texas	
			My Commission Expires:	

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PATENT REEL: 030021 FRAME: 0908

RECORDED: 03/15/2013