504240438 02/22/2017

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WON-JOON HWANG	02/13/2017
HYUN-SEOK RYU	02/13/2017
JEONG-HO PARK	02/13/2017
PENG XUE	02/13/2017
SANG-WON CHOI	02/13/2017

RECEIVING PARTY DATA

Name:	SAMSUNG ELECTRONICS CO., LTD	
Street Address:	129, SAMSUNG-RO, YEONGTONG-GU, GYEONGGI-DO,	
City:	SUWON-SI	
State/Country:	tate/Country: KOREA, REPUBLIC OF	
Postal Code:	16677	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15505903

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NAME OF SUBMITTER: NEIL G. FERRARI	
SIGNATURE: /Neil G. Ferrari/	
DATE SIGNED:	02/22/2017

Total Attachments: 2

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PATENT REEL: 041347 FRAME: 0719

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PATENT REEL: 041347 FRAME: 0720

ASSIGNMENT

WHEREAS, We, Won-Joon HWANG, resident of Suwon-si, Gyeonggi-do, Republic of Korea, citizen of Republic of Korea, Hyun-Seok RYU, resident of Yongin-si, Gyeonggi-do, Republic of Korea, citizen of Republic of Korea, Jeong-Ho PARK, resident of Seocho-gu, Seoul, Republic of Korea, citizen of Republic of Korea, Peng XUE, resident of Hwaseong-si, Gyeonggi-do, Republic of Korea, citizen of china, Sang-Won CHOI, resident of Suwon-si, Gyeonggi-do, Republic of Korea, citizen of Republic of Korea, have invented certain new and useful improvements in "METHOD AND APPARATUS FOR ESTIMATING POSITION IN A WIRELESS COMMUNICATION SYSTEM" disclosed in an application for United States Letters Patent (A pplication Serial No. __/_____, filed on _______, said application having be en 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, 16677, 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.

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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.

Date:_	February13, 2017	
		Won Joon HWANG
Date:	February13, 2017	Hym-seck Ryu.
		Hyun-Seok RYU
Date:_	February13, 2017	JEONG NO PARK
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Date:	February13, 2017	Sangwan Chai
Date:	February13, 2017	Sang-Won Choi