505238517 12/14/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
HYUN SOO KO	10/29/2012
JAE HOON CHUNG	10/26/2012
SEUNG HEE HAN	10/29/2012
MOON IL LEE	10/29/2012

RECEIVING PARTY DATA

Name:	LG ELECTRONICS INC.	
Street Address:	20 YEOUIDO-DONG, YEONGDEUNGPO-GU	
City:	SEOUL	
State/Country:	KOREA, REPUBLIC OF	
Postal Code:	ostal Code: 150-721	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16221123	

CORRESPONDENCE DATA

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NAME OF SUBMITTER:	MICHAEL E. MONACO	
SIGNATURE:	/Michael Monaco/	
DATE SIGNED:	12/14/2018	

Total Attachments: 2

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PATENT REEL: 047785 FRAME: 0032 505238517

ASSIGNMENT

- (1-8) Insert Name(s) of Inventor(s)
- (1) KO, Hyun Soo
- (2) CHUNG, Jae Hoon
- (3) HAN, Seung Hee
- (4) LEE, Moon II

In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to

- (9) Insert name of Assignee
- (9) LG ELECTRONICS INC.
- (10) Insert state of Incorporation of Assignee
- (10) Korea
- (11) Insert address of Assignee
- (11) 20 Yeouido-dong, Yeongdeungpo-gu, Seoul, 150-721, Korea

(hereinafter designated as the Assignee) the entire worldwide right, title and interest in the invention known as

(12) Insert identification of Invention, such as Title, Case Number or Foreign Application Number

(12) SIGNAL TRANSMISSION METHOD AND APPARATUS USING CODEBOOK IN WIRELESS COMMUNICATION SYSTEM SUPPORTING MULTIPLE ANTENNAS

for which the undersigned has (have) executed an application for patent in the United States of America and all patent applications in foreign countries corresponding thereto or based thereon.

(13) Insert Date of Signing of Application

(13)

- 1) The undersigned agree(s) to execute all papers necessary in connection with any original, reissue, divisional and continuing United States and foreign applications for the above-identified invention and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.
- 2) The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation or division thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.
- S) The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.
- 4) The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.
- 5) The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has

(they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed any agreement in conflict herewith.

The undersigned hereby appoints the Attorneys associated with Customer No. 035884 the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Date:	Oct. 29, 7012	Signature of Inventor	
Date:	ace 26,2012	Signature of Inventor	Jae Hoon Clif
Date:	act 29, 2012	Signature of Inventor	and the state of t
Date:	0612f. WIV	Signature of Inventor	2-