## 504112577 11/28/2016

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4159247

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
JIWON KANG	11/21/2016
INKYU LEE	11/17/2016
SANGRIM LEE	11/18/2016

### **RECEIVING PARTY DATA**

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Street Address:	128, YEOUI-DAERO, YEONGDEUNGPO-GU		
City:	SEOUL		
State/Country: KOREA, REPUBLIC OF			
Postal Code:	150-721		
Name:	KOREA UNIVERSITY RESEARCH AND BUSINESS FOUNDATION		
Street Address:	KOREA UNIVERSITY, ANAM-DONG 5-GA		
Internal Address:	145, ANAM-RO, SEONGBUK-GU		
City:	SEOUL		
State/Country:	KOREA, REPUBLIC OF		
Postal Code:	136-701		

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number		
Application Number:	15314437		

### **CORRESPONDENCE DATA**

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**ATTORNEY DOCKET NUMBER:** 2101-70700

PATENT REEL: 040434 FRAME: 0868

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NAME OF SUBMITTER:	HARRY S. LEE			
SIGNATURE:	/Harry S. Lee/			
DATE SIGNED:	11/28/2016			
Total Attachments: 4				
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source=2101-70700_Assignment#page3.tif				
source=2101-70700_Assignment#page4.tif				

PATENT REEL: 040434 FRAME: 0869

LG Ref.: 14FCCM1235US02 (MHK) Attorney Docket No. 2101-70700

ASSIGNMENT					
(1-8)	Insert Name(s) of	(1)	KANG, Jiwon	(5)	
	Inventor(s)	(2)	LEE, Inkyu	(6)	
		(3)	LEE, Sangrim	(7)	
		(4)		(8)	
	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 #1	(9)	LG ELECTRONICS INC		
(10)	Insert state of Incorporation of Assignee	(10)	Republic of Korea		
(11)	Insert address of Assignee	(11)	LG Electronics Inc. 128, Republic of Korea	Yeoui-daero, Yeongdeungpo	-gu, Seoul 150-721
(12)	Insert name of Assignee #2	(12)	KOREA UNIVERSITY F	RESEARCH AND BUSINESS	FOUNDATION
(13)	Insert state of Incorporation of Assignee	(13)	Republic of Korea		
(14)	Insert address of Assignee	(14)	(Anam-dong 5-ga) Kore 136-701 Republic of Kore	a University 145, Anam-ro, Se rea	ongbuk-gu, Seoul
			einafter designated as the est in the invention know	ne Assignee) the entire work n as	dwide right, title and
(15)	Insert identification of Invention, such as Title, Case Number or Foreign	(15)	METHOD FOR TRANS EFFICIENCY OPTIMIZA	MITTING SIGNAL THROUGH ATION AND BASE STATION	I ENERGY

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.

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.

Application Number

- 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.
- 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.
- 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.
- 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. 35884 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.

> **PATENT** 016 11 21 18 26 REEL: 040434 FRAME: 0870

LG Ref.: 14FCCM1235US02 (MHK)

Date:	2016-1121	Signature of Inventor (1) KANG, Jiwon	
Date:		Signature of Inventor (2) LEE, Inkyu	
Date:		Signature of Inventor (3) LEE, Sangrim	

PATENT REEL: 040434 FRAME: 0871

LG Ref.: 14FCCM1235US02 (MHK)
Attorney Docket No. 2101-70700

#### **ASSIGNMENT**

(1-8)	Insert Name(s) of	(1)	KANG, Jiwon	(5)	
• •	Inventor(s)	(2)	LEE, Inkyu	(6)	
		(3)	LEE, Sangrim	(7)	
		(4)	. •	(8)	
		`,	valuable considerati	the sum of one dollar (\$1.00) and other guidens paid to each of the undersigned, the undersigned the undersigned the undersigned to each over the sum of t	ersigned
(9)	insert name of Assignee #1	<b>(</b> 9)	LG ELECTRONICS	ing.	
(10)	Insert state of Incorporation of Assignee	(10)	Republic of Korea		
(11)	Insert address of Assignee	(11)	LG Electronics Inc. Republic of Korea	128, Yeoui-daero, Yeongdeungpo-gu, Seoul 1	50-721
(12)	Insert name of Assignee #2	(12)	KOREA UNIVERSI	TY RESEARCH AND BUSINESS FOUNDATION	ON
(13)	Insert state of Incorporation of Assignee	(13)	Republic of Korea		٠
(14)	Insert address of Assignee	• •	136-701 Republic of	Korea University 145, Anam-ro, Seongbuk-gu, if Korea	
		(her	einafter designated	as the Assignee) the entire worldwide right,	title and

Interest in the invention known as

(15) METHOD FOR TRANSMITTING SIGNAL THROUGH ENERGY
EFFICIENCY OPTIMIZATION AND BASE STATION

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.

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.

(15) Insert identification of

Invention, such as Title, Case Number or Foreign

Application Number

- 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.
- 3) 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 Assignée.
- 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. 35884 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.

REEL: 040434 FRAME: 0872

LG Ref.: 14FCCM1235US02 (MHK)

Date:		Signature of Inventor (1) KANG, Jiwon		**************************************
Date:	Nov. 17,2016	Signature of Inventor (2) LEE, Inkyu	9 Km	Len
Date:	10/11/2016	Signature of Inventor (3) LEE, Sangrim		

sangrim.lee/이성함/127.0 0.1-2016-11-18 16:14 **PATENT** 

**REEL: 040434 FRAME: 0873**