

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	Bohyun NAM	04/04/2017
	Namhee KIM	04/17/2017
	Jinju KIM	04/04/2017
	Hyeonjeong AN	04/04/2017
	Jungbae HWANG	04/26/2017
	Philjae HWANG	04/26/2017
	Mantae HWANG	04/26/2017
	Eunji SUNG	04/25/2017
	Taekgi LEE	04/26/2017
RECEIVING PARTY DATA		
Name:	LG Electronics Inc.	
Street Address:	128, Yeoui-daero, Yeongdeungpo-gu Seoul 07336	
Internal Address:	Republic of Korea	
City:	Seoul	
State/Country:	Republic of Korea	
Postal Code:	07336	
PROPERTY NUMBERS Total: 1		
	Property Type	Number
	Application Number:	16051072
CORRESPONDENCE DATA		
Fax Number:	(877)769-7945	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>		
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ATTORNEY DOCKET NUMBER:	20519-0305006	

PATENT

NAME OF SUBMITTER:	MELISSA ANDERSEN
SIGNATURE:	/Melissa Andersen/
DATE SIGNED:	08/23/2019
Total Attachments: 4 source=Executed_Assignment#page1.tif source=Executed_Assignment#page2.tif source=Executed_Assignment#page3.tif source=Executed_Assignment#page4.tif	

Attorney Docket No. 20519-0305001

ASSIGNMENT

(1-8) *Insert Name(s) of Inventor(s)*

(1) Bohyun NAM
(2) Namhee KIM
(3) Jinju KIM
(4) Hyeonjeong AN

(5) Jungbae HWANG
(6) Philjae HWANG
(7) Mantae HWANG
(8) Eunji SUNG
(9) Taekgi LEE

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) Republic of Korea

(11) *Insert address of Assignee*

(11) 128, Yeoui-daero, Yeongdeungpo-gu, Seoul, 07336, Republic of 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) **CLEANER**

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.

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 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.

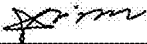
The undersigned hereby appoints the **Attorneys associated with Customer No. 035884** the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

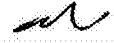
PATENT

REEL: 050151 FRAME: 0815

Date: April 4, 2017 Signature of Inventor (1) 

Date: _____ Signature of Inventor (2) _____

Date: April 4, 2017 Signature of Inventor (3) 

Date: April 4, 2017 Signature of Inventor (4) 

Date: _____ Signature of Inventor (5) _____

Date: _____ Signature of Inventor (6) _____

Date: _____ Signature of Inventor (7) _____

Date: _____ Signature of Inventor (8) _____

Date: _____ Signature of Inventor (9) _____

Date: _____ Signature of Inventor (1) _____
Date: 2019. 4. 17 Signature of Inventor (2) 7h 42 21
Date: _____ Signature of Inventor (3) _____
Date: _____ Signature of Inventor (4) _____
Date: _____ Signature of Inventor (5) _____

Date: _____ Signature of Inventor (6) _____
Date: _____ Signature of Inventor (7) _____
Date: _____ Signature of Inventor (8) _____
Date: _____ Signature of Inventor (9) _____

Date: _____ Signature of Inventor (1) _____

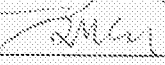
Date: _____ Signature of Inventor (2) _____

Date: _____ Signature of Inventor (3) _____

Date: _____ Signature of Inventor (4) _____

Date: 2017.04.26 Signature of Inventor (5) 

Date: 2017.04.26 Signature of Inventor (6) 

Date: 2017.04.26 Signature of Inventor (7) 

Date: 2017.04.26 Signature of Inventor (8) 

Date: 2017.04.26 Signature of Inventor (9) 