504784777 02/20/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4831508

SUBMISSION TYPE: NATURE OF CONVEYANCE:		NEW ASSIGNMENT	NEW ASSIGNMENT	
		ASSIGNMENT		
CONVEYING PARTY D	ΑΤΑ			
		Name	Execution Date	
INJONG RHEE			12/20/2017	
KWANG-SEOK KIM			12/20/2017	
JOONWON PARK			12/20/2017	
YONGSEOK PARK			12/20/2017	
HYO-JIN JUNG			12/20/2017	
SUNGJU PARK			12/20/2017	
RECEIVING PARTY DA	ТА			
Name:	SAMSL	SAMSUNG ELECTRONICS CO., LTD.		
Street Address:	129, SA	129, SAMSUNG-RO, YEONGTONG-GU		
City:	SUWO	SUWON-SI, GYEONGGI-DO		
State/Country:	KOREA	, REPUBLIC OF		
PROPERTY NUMBERS Total: 1 Property Type		Number]	
		15697912	-	
Application Number:				
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if µ</i> Phone: Email:	e sent to provideo	<i>the e-mail address first; if that is uns</i> <i>; if that is unsuccessful, it will be ser</i> 202-293-0804 usdocketing@jeffersonip.com JEFFERSON JP LAW, J LP		
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if µ</i> Phone: Email: Correspondent Name:	e sent to provideo	; if that is unsuccessful, it will be ser 202-293-0804	nt via US Mail.	
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if µ</i> Phone: Email: Correspondent Name: Address Line 1:	e sent to provideo	l ; if that is unsuccessful, it will be ser 202-293-0804 usdocketing@jeffersonip.com JEFFERSON IP LAW, LLP	nt via US Mail.	
CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if µ</i> Phone:	e sent ta providea	<i>; if that is unsuccessful, it will be ser</i> 202-293-0804 usdocketing@jeffersonip.com JEFFERSON IP LAW, LLP 1130 CONNECTICUT AVE., NW, SUIT	nt via US Mail.	
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	e sent ta providea	<i>; if that is unsuccessful, it will be ser</i> 202-293-0804 usdocketing@jeffersonip.com JEFFERSON IP LAW, LLP 1130 CONNECTICUT AVE., NW, SUIT WASHINGTON, D.C. 20036	nt via US Mail.	
CORRESPONDENCE D Fax Number: <i>Correspondence will be using a fax number, if µ</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	e sent ta providea	<i>; if that is unsuccessful, it will be ser</i> 202-293-0804 usdocketing@jeffersonip.com JEFFERSON IP LAW, LLP 1130 CONNECTICUT AVE., NW, SUIT WASHINGTON, D.C. 20036	nt via US Mail.	

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RECORDATION FORM COVER SHEET PATENTS ONLY					
To the Director of the U.S. Patent and Trademark Office: Please	se record the attached documents or the new address(es) below.				
1. Name of conveying party(ies)	2. Name and address of receiving party(ies)				
1) Kwang-Seok KIM, 2) Injong RHEE, 3) Joonwon PARK,	Name: Samsung Electronics Co., Ltd.				
4) Yongseok PARK, 5) Hyo-Jin JUNG, and 6) Sungju PARK	Internal Address:				
Additional name(s) of conveying party(ies) attached? Yes V No 3. Nature of conveyance/Execution Date(s): Execution Date(s) <u>12/20/2017</u>	Street Address: 129, Samsung-ro, Yeongtong-gu				
Assignment Greement Greement Joint Research Agreement	City: <u>Suwon-si, Gyeonggi-do</u>				
Government Interest Assignment Executive Order 9424, Confirmatory License	Country: Republic of Korea Zip:				
Other	Additional name(s) & address(es) attached? Yes 🖌 No				
 4. Application or patent number(s): This A. Patent Application No.(s) 15/697,912 Additional numbers at 	document is being filed together with a new application. B. Patent No.(s)				
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: One				
Name: Jefferson IP Law, LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$				
Internal Address: Raymond B Persino	Authorized to be charged by credit card				
Street Address: 1130 Connecticut Ave., NW, Suite 420	Enclosed None required (government interest not affecting title)				
City: Washington	8. Payment Information				
State: <u>DC</u> Zip:20036	a. Credit Card Last 4 Numbers Expiration Date				
Phone Number: 202-293-0804	b. Deposit Account Number				
Fax Number: <u>202-403-3587</u>					
Email Address: usdocketing@jeffersonip.com	Authorized User Name				
9. Signature:/Raymond B PERSINO/ Reg. Signature	Date				
Raymond B Persino Name of Person Signing	Total number of pages including cover 7 sheet, attachments, and documents:				
Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to: Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450					

<u>Assignment</u>

WHEREAS, the following inventors, namely 1) Injong RHEE, 2) Kwang-Seok KIM, 3) Joonwon PARK, 4) Yongseok PARK, 5) Hyo-Jin JUNG, and 6) Sungju PARK (hereinafter called "Assignors"), having made or discovered certain new, useful and non-obvious improvements in an invention having a working title of:

ELECTRONIC APPARATUS AND OPERATING METHOD THEREOF,

for which a United States Patent Application is being filed concurrently herewith or, if not being concurrently filed, was filed on <u>September 7, 2017</u>, and assigned Serial No. <u>15/697,912</u>; and

WHEREAS, Samsung Electronics Co., Ltd., a corporation duly organized under the laws of the Republic of Korea, located and doing business at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, 16677 (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein;

NOW, THEREFORE, BE IT KNOWN that for and in good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignors do hereby sell, assign and transfer unto said Assignee the entire and exclusive worldwide right, title and interest in and to all said inventions and discoveries disclosed in said application, and in and to said application, any and all substitutions, divisions, provisionals, conversions of provisionals and continuations thereof, and in and to all Letters Patent, United States and all other foreign countries, that may be granted for said inventions and discoveries, and in and to all extensions, renewals and reissues thereof; and the right to file any other foreign country application and/or claim priority under the provisions of any international treaty or convention arising from this application or any divisional, continuing, substitute or reissue application therefrom. The aforesaid assignment includes the right in and to all income, royalties, damages and payments, now or hereafter due or payable with respect to any Letters Patent which may be granted, and in and to all causes of action (either in law or in equity), and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment, as fully and entirely as the same would have been held and enjoyed by Assignors if this sale, assignment and transfer had not been made.

Assignors covenant and agree, without further compensation to said Assignors but at Assignee's expense:

a. to execute:

- all papers to be used in connection with this application and any divisional, continuing, substitute or reissue application thereof, as the Assignee may deem necessary or expedient, and
- all papers in connection with any interference, litigation, mediation, arbitration or other proceeding relating to this application or any divisional, continuing, substitute or reissue application thereof, as may be necessary or expedient;
- to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other

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proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;

- to communicate to the Assignee any facts relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof, including evidence for any interference, litigation, mediation, arbitration or other proceeding relating to said invention, whenever requested;
- to testify in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof whenever requested; and
- e. to perform all other affirmative acts which may be necessary or desirable to secure full and complete protection of the inventions and discoveries or that may be necessary or desirable to vest in Assignee the complete title to the inventions and discoveries and Letters Patent hereby conveyed and to enable Assignee to record title.

Assignors hereby authorize and request the United States Patent and Trademark Office or any other issuing authority to issue any and all Letters Patent that may be granted upon this invention and/or this application or any divisional, continuing, substitute or reissue application thereof to the Assignee, its legal representatives, successors and assigns.

Assignors each hereby represents, covenants and warrants that he or she has the full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.

The provisions of this Assignment are binding upon Assignors' heirs, legal representatives and/or administrators and assigns.

Assignors hereby grant to the law firm of Jefferson IP Law, LLP of Washington, DC and its attorneys and agents as associated with **Customer No. 68103** the authority and power to insert on this instrument any further identification which may be necessary or desirable for purposes of recordation in the United States Patent and Trademark Office or a Patent Office of any foreign country.

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Signature of Inventor:	an Ad	2
	Injong RHEE	December 20, 2017 Date
Signature of Inventor:	Kisang Seesh Kina	December 20, 2017
	Kisang-Seek Kim Kwang-Seek KIM	Date
Signature of Inventor:		
	Joonwon PARK	Date
Signature of Inventor:	Yord Soon Darle	December 20, 2017
	Yongseok PARK	Date
Signature of Inventor:	HKO JIN JINK	December 20, 2017
	Hyo-Jin JUNG	Date
Signature of Inventor:		
	Sungju PARK	Date

<u>Assignment</u>

WHEREAS, the following inventors, namely 1) Injong RHEE, 2) Kwang-Seok KIM, 3) Joonwon PARK, 4) Yongseok PARK, 5) Hyo-Jin JUNG, and 6) Sungju PARK (hereinafter called "Assignors"), having made or discovered certain new, useful and non-obvious improvements in an invention having a working title of:

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WHEREAS, Samsung Electronics Co., Ltd., a corporation duly organized under the laws of the Republic of Korea, located and doing business at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, 16677 (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein;

NOW, THEREFORE, BE IT KNOWN that for and in good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignors do hereby sell, assign and transfer unto said Assignee the entire and exclusive worldwide right, title and interest in and to all said inventions and discoveries disclosed in said application, and in and to said application, any and all substitutions, divisions, provisionals, conversions of provisionals and continuations thereof, and in and to all Letters Patent, United States and all other foreign countries, that may be granted for said inventions and discoveries, and in and to all extensions, renewals and reissues thereof; and the right to file any other foreign country application and/or claim priority under the provisions of any international treaty or convention arising from this application or any divisional, continuing, substitute or reissue application therefrom. The aforesaid assignment includes the right in and to all income, royalties, damages and payments, now or hereafter due or payable with respect to any Letters Patent which may be granted, and in and to all causes of action (either in law or in equity), and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment, as fully and entirely as the same would have been held and enjoyed by Assignors if this sale, assignment and transfer had not been made.

Assignors covenant and agree, without further compensation to said Assignors but at Assignee's expense:

a. to execute:

- all papers to be used in connection with this application and any divisional, continuing, substitute or reissue application thereof, as the Assignee may deem necessary or expedient, and
- all papers in connection with any interference, litigation, mediation, arbitration or other proceeding relating to this application or any divisional, continuing, substitute or reissue application thereof, as may be necessary or expedient;
- to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other

С.

proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;

- to communicate to the Assignee any facts relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof, including evidence for any interference, litigation, mediation, arbitration or other proceeding relating to said invention, whenever requested;
- to testify in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof whenever requested; and
- e. to perform all other affirmative acts which may be necessary or desirable to secure full and complete protection of the inventions and discoveries or that may be necessary or desirable to vest in Assignee the complete title to the inventions and discoveries and Letters Patent hereby conveyed and to enable Assignee to record title.

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Signature of Inventor:		
	Injong RHEE	Date
Signature of Inventor:		
	Kwang-Seok KIM	Dæe
Signature of Inventor:	-100-	December 20, 2017
	Joonwon PARK	Date
Signature of Inventor:		
	Yongstok PARK	Date
Signature of Inventor:		
	Hyo-Jín JUNG	Date
Signature of Inventor:		······································
	Sungju PARK	<u>December 20, 2017</u> Date

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PATENT REEL: 044978 FRAME: 0069

RECORDED: 02/20/2018