505389308 03/22/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5436101

SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT		
CONVEYING PARTY D	ΑΤΑ				
		Name	Execution	Date	
HYEOK-JONG LEE			02/15/2019		
RECEIVING PARTY DA	ATA				
Name:	SAMSUNG ELECTRONICS CO., LTD.				
Street Address:	129, SA	MSUNG-RO, YEONGTONG-GU,			
City:	SUWON	J-SI, GYEONGGI-DO			
State/Country:	KOREA	, REPUBLIC OF			
Postal Code:	16677				
	Total: 1				
Property Type		Number			
Application Number:		16361783			
CORRESPONDENCE D	ΑΤΑ				
Fax Number: <i>Correspondence will b</i>	e sent to	516)692-8889 the e-mail address first; if that is ; if that is unsuccessful, it will be		ent	
Fax Number: <i>Correspondence will b</i>) e sent to provided	the e-mail address first; if that is		ent	
Fax Number: <i>Correspondence will b using a fax number, if</i> Phone: Email:) pe sent to provided t	<i>the e-mail address first; if that is; if that is unsuccessful, it will be</i> 516-692-8888 mail@chauiplaw.com		ent	
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name:) provided t r F	<i>the e-mail address first; if that is; if that is unsuccessful, it will be</i> 516-692-8888 mail@chauiplaw.com F. CHAU & ASSOCIATES, LLC		ent	
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1:) provided f r f 1	<i>the e-mail address first; if that is; if that is unsuccessful, it will be</i> 516-692-8888 mail@chauiplaw.com F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD		ent	
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name:) provided f r f 1	<i>the e-mail address first; if that is</i> <i>; if that is unsuccessful, it will be</i> 516-692-8888 mail@chauiplaw.com F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NEW YORK 11797		ent	
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	(provided, tr F 1	<i>the e-mail address first; if that is; if that is unsuccessful, it will be</i> 516-692-8888 mail@chauiplaw.com F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD		ent	
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1:	(provided, tr F 1	<i>the e-mail address first; if that is</i> <i>; if that is unsuccessful, it will be</i> 516-692-8888 mail@chauiplaw.com F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NEW YORK 11797		ent	
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	(provided, tr F 1	the e-mail address first; if that is ; if that is unsuccessful, it will be 516-692-8888 mail@chauiplaw.com F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NEW YORK 11797 8054S-1328/AYL		ent	
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUME AME OF SUBMITTER: BIGNATURE:	(provided, tr F 1	the e-mail address first; if that is ; if that is unsuccessful, it will be 516-692-8888 mail@chauiplaw.com F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NEW YORK 11797 8054S-1328/AYL FRANK CHAU		ent	
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NU	(provided, tr F 1	the e-mail address first; if that is ; if that is unsuccessful, it will be 516-692-8888 mail@chauiplaw.com F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NEW YORK 11797 8054S-1328/AYL FRANK CHAU /Frank Chau/	e sent via US Mail.		
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUME NAME OF SUBMITTER: SIGNATURE:	(provided, tr F 1	the e-mail address first; if that iscif that is unsuccessful, it will be516-692-8888mail@chauiplaw.comc CHAU & ASSOCIATES, LLC130 WOODBURY ROADWOODBURY, NEW YORK 117978054S-1328/AYLFRANK CHAU/Frank Chau/03/22/2019	e sent via US Mail.		
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUME NAME OF SUBMITTER: DATE SIGNED: Total Attachments: 4 source=8054S-1328-Com	(provided, tr F UMBER:	the e-mail address first; if that is ; if that is unsuccessful, it will be 516-692-8888 mail@chauiplaw.com F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NEW YORK 11797 8054S-1328/AYL FRANK CHAU /Frank Chau/ 03/22/2019 This document serves as an	e sent via US Mail.		
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUME ATTORNEY DOCKET NUME NAME OF SUBMITTER: DATE SIGNED: Total Attachments: 4 source=8054S-1328-Com source=8054S-1328-Com	(provided, f f f f f f f f f f f f f f f f f f f	the e-mail address first; if that is if that is unsuccessful, it will be 516-692-8888 mail@chauiplaw.com F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NEW YORK 11797 8054S-1328/AYL FRANK CHAU /Frank Chau/ 03/22/2019 This document serves as an c-Assign#page1.tif c-Assign#page2.tif	e sent via US Mail.		
Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUME NAME OF SUBMITTER: DATE SIGNED: Total Attachments: 4 source=8054S-1328-Com	(provided, f r F UMBER: UMBER:	the e-mail address first; if that is ; if that is unsuccessful, it will be 516-692-8888 mail@chauiplaw.com F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NEW YORK 11797 8054S-1328/AYL FRANK CHAU /Frank Chau/ 03/22/2019 This document serves as an c-Assign#page1.tif c-Assign#page2.tif c-Assign#page3.tif	e sent via US Mail.		

COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM¹

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

Title: METHOD OF OPERATING AN IMAGE SENSOR, IMAGE SENSOR PERFORMING THE SAME, AND ELECTRONIC SYSTEM INCLUDING THE SAME

for which As	signor is about to make or has made United States or International application
for patent.	
	s a below named inventor(s), i/(we) hereby declare that:
	construction of the second
Section I. Di	eclaration
This declarat	ion is directed to: Service 및 2은 및 2010년 2년 4년 11:021 7023
\boxtimes	The attached U.S. non-provisional patent application, or
	U.S. non-provisional patent application number
	00, jor
	PCT international patent application number, filed on

The above-identified application was made or authorized to be made by me (us).

I (we) believe that I am (we are) the original inventor (original joint inventors) of a claimed invention in the above-identified application.

¹ This form requ	ires the use of an Application Data S	heet.	
SEC Ref No.	IB-201805-012-1-US0	Attorney Ref No.	8054S-1328 (CY6023US)
COMBINED DEC	ELARATION (37 CFR 1.63) FOR UTI	LITY PATENT APPLICATION © 1 of 4	
Sensor설계팀(S.USI)/이혁종/10	217024/2019-02-15 14:29		PATENT L: 048672 FRAME: 0910

I (we) hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

I acknowledge that I am aware of the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

Section II. Assignment

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, the undersigned hereby sell(s) and assign(s) to

Samsung Electronics Co., Ltd.

having an address at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 16677, Republic of Korea (hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application, to the aforesaid application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

SEC Ref No.	IB-201805-012-1-US0	Attorney Ref No.	8054S-1328 (CY6023US)
COMBINED DECL	ARATION (37 CFR 1.63) FOR UTI	LITY PATENT APPLICATION	AND ASSIGNMENT FORM
Sensor설계팀(5.LSI)/이혁종/102	Pag 17024/2019-02-15 14:29	e 2 of 4	PATENT

REEL: 048672 FRAME: 0911

SAMSUNG ELECTRONICS CO., LTD.

Sensor

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

The undersigned hereby grant(s) the law firm of F. Chau & Associates, LLC the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

See 비전계 팀의 3만 여보통 크린 1954

SEC Ref No.	1B-201805-012-1-US0	Attorney Ref No.	80548-1328	
			(CY6023US)	
COMBINED DEC	LARATION (37 CFR 1.63) FOR UT	ILITY PATENT APPLICATION	AND ASSIGNMENT FORM	
[계팀(S.LSI)/0]혁종/10	Pa. 217024/2019-02-15 14:29	ge 3 of 4	PATENT	
		REEI	L: 048672 FRAME: 0	912

SAMSUNG ELECTRONICS CO., LTD.

Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF FIRST INVENTOR/ASSIGNOR	Family Name	First Given Name	Second Given Name
			I
SIGNATURE	o(\$7.3	DATE	2019 2.15

SEC Ref N	lo. IB-201805-012-1-US0	Attorney Ref No.	8054S-1328 (CY6023US)
COMBINE	D DECLARATION (37 CFR 1.63) FOR U		AND ASSIGNMENT FORM
Sensor설계팀(SLSI)/이호	우 옥종/10217024/2019-02-15 14:29	age 4 of 4	PATENT
RECORDED:	03/22/2019	REEL	.: 048672 FRAME: 0913

RECORDED: 03/22/2019