# 504495824 08/09/2017

EPAS ID: PAT4542527

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
MOSTAFA EL-KHAMY	08/04/2017
JUNGWON LEE	08/04/2017
HAOYU REN	08/04/2017

### **RECEIVING PARTY DATA**

Name:	SAMSUNG ELECTRONICS CO., LTD
Street Address:	129, SAMSUNG-RO, YEONGTONG-GU
City:	SUWON-SI, GYEONGGI-DO
State/Country:	KOREA, REPUBLIC OF
Postal Code:	16677

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	15671036

### **CORRESPONDENCE DATA**

**Fax Number:** (626)577-8800

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.

**Phone:** 626 795-9900 **Email:** pto@lrrc.com

Correspondent Name: LEWIS ROCA ROTHGERBER CHRISTIE LLP

Address Line 1: P.O. BOX 29001

Address Line 4: GLENDALE, CALIFORNIA 91209

ATTORNEY DOCKET NUMBER:	138227 (414469) MJC/VDW
NAME OF SUBMITTER:	VICKIE D. WALL
SIGNATURE:	/Vickie D. Wall/
DATE SIGNED:	08/09/2017

### **Total Attachments: 4**

source=WB-201704-004-1\_138227 Assignment#page1.tif source=WB-201704-004-1\_138227 Assignment#page2.tif source=WB-201704-004-1\_138227 Assignment#page3.tif source=WB-201704-004-1\_138227 Assignment#page4.tif

PATENT 504495824 REEL: 043243 FRAME: 0312

# COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY OR DESIGN PATENT APPLICATION AND ASSIGNMENT FORM<sup>1</sup>

102050373_1SEC	WB-201704-004-1	Attorney Ref No.	138227
This form req	uires the use of an Application Data Sheet.		
	that I am (we are) the original invented he above-identified application.	ntor (original joint inventor	s) of a claimed
The above-ide	entified application was made or au	thorized to be made by me	(us).
	PCT international patent application	on number	, filed on
_	on <u>August 7, 2017</u> , or		
$\boxtimes$	U.S. non-provisional patent application	ation number <u>15/671,03</u>	6 filed
	The attached U.S. non-provisiona	patent application, or	
This declarati	on is directed to:		
Section I. De	claration		
WHEREAS, as	a below named inventor(s), I/(we)	nereby declare that:	
patent.			
for which Ass	ignor is about to make or has made	United States or Internation	onal application for
	EW AND WETTIOD FOR DEEP LEARNING	I WAGE SOFER RESOLUTION	'
Title: <b>SYST</b> I	EM AND METHOD FOR DEEP LEARNING	S IMAGE SLIPER RESOLUTION	
WHEREAS, th	e undersigned, hereinafter referred	to collectively as Assignor,	has invented:
invention and	d as the declaration (37 CFR 1.63) fo	r a Utility or Design Applica	tion.
The undersign	ned acknowledges that this docume	nt is being used both as an	assignment of the

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 1 of 4

PATENT REEL: 043243 FRAME: 0313

### SAMSUNG ELECTRONICS CO., LTD.

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 and according to the provisions of the Assignor's employment agreement(s), 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 or design 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 or designs as described in the aforesaid application, to the aforesaid application itself, and to provisional application(s) 62/483,924 to which the aforesaid application claims priority, and to all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application or provisional, 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

SEC																	
					1						1 (1)						

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 2 of 4

PATENT REEL: 043243 FRAME: 0314

### SAMSUNG ELECTRONICS CO., LTD.

relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

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 LEWIS ROCA ROTHGERBER CHRISTIE LLP 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.

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

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FIRST INVENTOR/ASSIGNOR	EL-KHAMY	Mostafa	
SIGNATURE	Aldillion.	DATE	8/4/7017

Y		- 63																						4000		w .																						
Y 1		• 53		- Ye 1					* *			13.5		2.1		- 13	4.1		•					100	٠.	x.					- 11		2	K 5							39.1	0.0		w				
C.	. (	13	10	N.	3				33	/ 1		7 . 1		31	4.	. 33	11	4	1					್ರ	١,	¥.			^	48	- 23		4	ĸε	•					1	21	ຂາ		73				
C.	1	R	OF	N	1				88	/ 18		7:1		71	4.	. ()	H).	4	1						١.	¥	1	,,,	0	16	N	42	ŧ.	M	n					1	21	X)	. ,	7				
ςį	(	R	erf	N	ñ.				11	18		Ž ( I	1	70	4.	.()	1).	4	ŧ					1	1	ř	n	13	s	V	R	63	f	N	n					1	33	٧?	2	7				
Sŧ	C	R	ef	N	O.				11	/ 8	١.,		1	70	4.	.()	0	\$	ŧ					1	١į	ŧ.	0	"	2	V	R	3	f	N	O					1	31	<b>X</b> 2	2	7				
Sŧ	C	R	ef	N	O.				11	1	٠.,	((	1	70	4.	-()	0	<b>4</b>	į					1	١į	Ĭ.	0	"	e	٧	R	3	f	N	0					1	3;	32	2	7				
Sŧ	C	R	ef	N	0				11	B	١.,	Č(I	į	70	4.	-()	0	<b>4</b>	ŧ					1	١į	Ĭ	0	"	£	٧	R	63	f	N	0					1	3;	82	2	7				
Sŧ	C	R	ef	N	O.									100		-()	0	<b>4</b>	į					į	Ì	ţ	0	n	£	Y	R	63	f	N	0	•				1	3;	32	2	7				
Sŧ	C	R	ef	N	O.									100		-()	0	4.	į					1	Ì	ţ	0	n	£	Y	R	63	f	N	0	•				1	3;	82	2	7				
Sŧ	C	R	ef	N	O.									100		()	0	4.	į	 _		 		1	۱,	ţ	Q:	n	£	Y	R	63	f	N	O	•	 	 		 1	3	32	2	7	 	 	 	
Sŧ	C	R	ef	N	0									100		()	0	4.	į	 	 	 		1	1	ŧ	0	11	£	Y	R	63	f	N	O	•	 	 	 	 1	3	82	2	7	 	 	 	
SE	C	R	ef	N	0.									100		()	0	4	į	 	 	 		1	41	ŧ	0	'n	e	Y	R	63	f	N	۵	•	 	 	 	 1	3	82	2	7	 	 	 	

# SAMSUNG ELECTRONICS CO., LTD.

**RECORDED: 08/09/2017** 

LEGAL NAME OF SECOND	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	LEE	Jungwon	
SIGNATURE	Juin frança	DATE	8/4/17

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
THIRD INVENTOR/ASSIGNOR	REN	Наоуи	
SIGNATURE	Delley	DATE	8/4/17

Ç,								0.0																					
			N					8.6				. 13																	
																				м.									

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 4 of 4

PATENT REEL: 043243 FRAME: 0316