PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4473330

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date	
YOUNG HOON SON	06/13/2017	

RECEIVING PARTY DATA

Name:	PLUTO SOLUTION INC.
Street Address:	B-1501, 2, GASAN DIGITAL 1-RO
Internal Address:	GEUMCHEON-GU
City:	SEOUL
State/Country:	KOREA, REPUBLIC OF

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15628725

CORRESPONDENCE DATA

Fax Number: (703)668-8200

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: 703-668-8000

Email: dcmailroom@hdp.com

Correspondent Name: HARNESS, DICKEY & PIERCE, P.L.C.

Address Line 1: P.O. BOX 8910

Address Line 4: RESTON, VIRGINIA 20195

ATTORNEY DOCKET NUMBER:	8947-001188-US
NAME OF SUBMITTER:	JOHN A. CASTELLANO, REG NO.: 35094
SIGNATURE:	/John A. Castellano/
DATE SIGNED:	06/22/2017

Total Attachments: 7

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PATENT 504426630 REEL: 042788 FRAME: 0175

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PATENT REEL: 042788 FRAME: 0176

COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM¹ FOR MORE THAN ONE ASSIGNEE

The undersigned acknowledge 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 inventors have invented:

me:	waren Cannien
	ch Inventors are about to make or has made United States or International
applica	tion for patent.
WHERE	AS, as a below named inventor(s), I/(we) hereby declare that:
Section	I. Declaration
	claration is directed to: The attached U.S. non-provisional patent application, or
	U.S. non-provisional patent application number \$1728288, filed on, or
	PCT international patent application number, filed on
The abo	ove-identified application was made or authorized to be made by me (us).
	relieve that I am (we are) the original inventor (original joint inventors) of a claimed on in the above-identified application.
• ,	ereby acknowledge that any willful false statement made in this declaration is able under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or
¹ This fo	rm requires the use of an Application Data Sheet.
SEC Ref	No. IB-201608-069-1-US0 Attorney Ref No. 8947-001188-US

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

PATENT REEL: 042788 FRAME: 0177 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, collectively referred to in Section II as Assignors in this section, 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;

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,

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

divisional, renewal or substitute thereof, and as to letters patent any reissue, reexamination, 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 Harness, Dickey & Pierce, P.L.C. 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.

Inventor(s)/Assignor(s) Signature(s) for Section II.

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FIRST INVENTOR/ASSIGNOR	\$#17 %(M 8/4/4)		3.3
	L		
SIGNATURE	237	DATE	2011, 6.15

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LEGAL NAME OF SECOND	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	IUNG	Philwoong	
			3
SIGNATURE	11 12 2	DATE	2017.6.13
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LEGAL NAME OF	Family Name	ş F	irst Given	Name	Second Given	Name
THIRD INVENTOR/ASSIGNOR	LEE		Yoonn	ni .		
· · · · · · · · · · · · · · · · · · ·						
SIGNATURE	o) (au)			DATE	2017.6.	<u> </u>

생산성보고그끊(기흥/화성단시)/신반영/91/18288

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FOURTH INVENTOR/ASSIGNOR	LIM	Hangryong	
	4		
SIGNATURE	일 불통	DATE	2019.6.15
	9944		

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SEC Ref No.	TB-201608-069-1-US0	Attorney Ref No	8947-001188-US	

LEGAL NAME OF FIFTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	SHIN	Manyoung	
SIGNATURE	A ness	DATE	2017/6/12

생산정보1그룹(기흥/화성단지)/신탈영/91728288

SEC Ref No.	IB-201608-069-1-US0	Attorney Ref No.	8947-001188-US

Section III. Assignment

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, collectively referred to in Section II as Assignors in this section, hereby sell(s) and assign(s) to

Pluto Solution Inc.

having an address at **B-1501**, **2**, **Gasan digital 1-ro**, **Geumcheon-gu**, **Seoul**, **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;

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, reexamination, 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

SEC Ref No. ______ **IB-201608-069-1-US0** _____ Attorney Ref No. _____ **8947-001188-US**

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

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 Harness, Dickey & Pierce, P.L.C. 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.

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

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SIXTH INVENTOR/ASSIGNOR	SON	Young Hoon	
			
	4->	DATE	6/13/2017
SIGNATURE	Section		

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SEC Ref No. 18-201608-069-1-US0 Attorney Ref No. 8947-001188-US