506311539 10/20/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6358288

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SEONGWOO KIM	10/05/2020
DONGIL HYUN	10/05/2020

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:	17072672

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.

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

Address Line 1: P.O. BOX 8910

Address Line 4: RESTON, VIRGINIA 20195

ATTORNEY DOCKET NUMBER:	2557-003246-US	
NAME OF SUBMITTER:	JOHN A. CASTELLANO, REG. NO. 35,094	
SIGNATURE:	/John A. Castellano/	
DATE SIGNED:	10/20/2020	

Total Attachments: 5

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> PATENT REEL: 054107 FRAME: 0973

506311539

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

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: SPEECH PROCESSING APPARATUS AND METHOD USING A PEURALITY OF MICROPHONES for which Assignor is about to make or has made United States or International application for patent. WHEREAS, as a below named inventor(s), I/(we) hereby declare that: Section I. Declaration This declaration is directed to: The attached U.S. non-provisional patent application, or U.S. non-provisional patent application number	The undersigned acknowled	iges that this docum	ent is being used both	as an assignment of
Title: SPEECH PROCESSING APPARATUS AND METHOD USING A PLURALITY OF MICROPHONES for which Assignor is about to make or has made United States or International application for patent. WHEREAS, as a below named inventor(s), I/(we) hereby declare that: Section I. Declaration This declaration is directed to: \[\textstyle{\textstyle{\textstyle{1}}}\] The attached U.S. non-provisional patent application, or \[\textstyle{\textstyle{1}}\] PCT international patent application number	the invention and as the de	claration (37 CFR 1.6	i3) for a Utility or Desig	n Application.
for which Assignor is about to make or has made United States or International application for patent. WHEREAS, as a below named inventor(s), i/(we) hereby declare that: Section I. Declaration This declaration is directed to: \[\begin{array}{cccccccccccccccccccccccccccccccccccc	WHEREAS, the undersigned	, hereinafter referre	d to collectively as Assi	ignor, has invented:
for patent. WHEREAS, as a below named inventor(s), I/(we) hereby declare that: Section I. Declaration This declaration is directed to: \[\textstyle{\textstyle{\textstyle{1}}}\] The attached U.S. non-provisional patent application, or \[\textstyle{\textstyle{1}}\] U.S. non-provisional patent application number		ING APPARATUS	AND METHOD USIN	G A PLURALITY OF
Section I. Declaration This declaration is directed to: The attached U.S. non-provisional patent application, or U.S. non-provisional patent application number	for which Assignor is about	to make or has mad	e United States or Inte	rnational application
This declaration is directed to: The attached U.S. non-provisional patent application, or U.S. non-provisional patent application number	for patent.			
This declaration is directed to: The attached U.S. non-provisional patent application, or U.S. non-provisional patent application number	WHEREAS, as a below name	ed inventor(s), i/(we) hereby declare that:	
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. This form requires the use of an Application Data Sheet.	This declaration is directed The attache U.5. non-pro on PCT internal	d U.S. non-provision ovisional patent appl 	ication number or tion number	filed
both. 1 This form requires the use of an Application Data Sheet:	I (we) believe that I am (we invention in the above-ide	e are) the original in- ntified application.	ventor (original joint in	ventors) of a claimed
	I (we) hereby acknowledge punishable under 18 U.S.C	s that any willful fals	e statement made in the prisonment of not more	nis declaration is e than five (5) years, or
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SEC Ref No. IB-201912-022-1-US0 Attorney Ref No. 2557-003246-US	SEC Ref No. IB-2015	912-022-1-US0	Attorney Ref No.	255/-W0240-U5

Page 1 of 5

PATENT REEL: 054107 FRAME: 0974 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;

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-

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COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 2 of 5

PATENT REEL: 054107 FRAME: 0975 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 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.

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

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FIRST NVENTOR/ASSIGNOR	KIM Harring Harriston C	Seongwaa	
	ñ	DATE	2020, (0.5)

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
SECOND NVENTOR/ASSIGNOR	напи	Dongil	
SIGNATURE	Yr-	DATE	2020 . (0. 5

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COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 3 of 5

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 III as Assignors in this section, hereby sell(s) and assign(s) to

Gwangju Institute Of Science And Technology

having an address at 123, Cheomdangwagi-ro, Buk-gu, Gwangju, 61005, 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, 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

SEC Ref No. <u>IB-201912-022-1-US0</u>	Attorney Ref No.	2557-803246-US

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 4 of 5

PATENT REEL: 054107 FRAME: 0977 SAMSUNG ELECTRONICS CO., LTD.

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
THIRD	SHIN	longwon	
SIGNATURE	3	DATE 	2020 . 9 . 25

LEGAL NAME OF	Family Name	First Given Name	Second Given Name
FOURTH NVENTOR/ASSIGNOR	CHEONG	Sein	
SIGNATURE	75 M17	DATE	2010. 9.25

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