505927652 02/20/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5974370

SUBMISSION TYPE:	NEW ASSIGNMENT	NEW ASSIGNMENT	
NATURE OF CONVEYAN	CE: ASSIGNMENT	ASSIGNMENT	
CONVEYING PARTY DA	TA		
	Name	Execution Date	
KYUNGJUN CHOI		01/10/2020	
MINSEOK NOH	01/10/2020		
JINSAM KWAK		01/10/2020	
RECEIVING PARTY DAT	٨		
Name:	WILUS INSTITUTE OF STANDARDS AND TECHNOLOGY INC.		
Street Address:	216 HWANGSAEUL-RO BUNDANG-GU SEONGNAM-SI		

City:	GYEONGGI-DO
State/Country:	KOREA, REPUBLIC OF
Postal Code:	13595

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16781934

CORRESPONDENCE DATA

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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.

Email:	la_mail@la.ladas.com
Correspondent Name:	LADAS & PARRY LLP
Address Line 1:	4525 WILSHIRE BLVD., SUITE 240
Address Line 4:	LOS ANGELES, CALIFORNIA 90010

ATTORNEY DOCKET NUMBER:	B-10318CON 632460-6
NAME OF SUBMITTER:	AZATUHI CHINARYAN
SIGNATURE:	/AZATUHI CHINARYAN/
DATE SIGNED:	02/20/2020

Total Attachments: 6

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COMBINED DECLARATION (37 C.F.R. §1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. §1.76) AND ASSIGNMENT OF INVENTION

Title of Invention	METHOD, APPARATUS, AND SYSTEM FOR TRANSMITTING OR RECEIVING DATA CHANNEL AND CONTROL CHANNEL IN WIRELESS COMMUNICATION SYSTEM
	DECLARATION
As the below	v named inventor, I hereby declare that:
This declara	tion is directed to:
×	The attached application, or
[] on	United States application or PCT international application number filed
The above-ic	lentified application was made or authorized to be made by me.
I believe tha application.	t I am the original inventor or an original joint inventor of a claimed invention in the
	nowledge that any willful false statement made in this declaration is punishable under 18 1 by fine or imprisonment of not more than five (5) years, or both.
has reviewed	F.R. §1.63(c) states, "A person may not execute an oath or declaration unless the person I and understands the contents of the application, including the claims and is aware of the ose to the Office all information known to be material to patentability as defined in §1.56."
In the event that the filing date and/or application number are not entered above at the time I execute this document, and if such information is deemed necessary. I hereby authorize and request the attorney of record to insert above the filing date and/or application number of the application.	

ASSIGNMENT

WHEREAS, I am the inventor of an invention described and/or claimed in the application identified in this document; and

WHEREAS, for good and valuable consideration, I hereby assign to

WILUS INSTITUTE OF STANDARDS AND TECHNOLOGY INC.

having a place of business at <u>5F 216 Hwangsaeul-ro Bundang-gu Seongnam-si Gyeonggi-do 13595</u> <u>Republic of Korea</u> ("ASSIGNEE") the entire right, title, and interest for the United States as defined in 35 U.S.C. §100, in the aforesaid invention;

I hereby confirm any prior assignment to ASSIGNEE, and to the extent that I have not already done so, agree to assign, and hereby do, 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 application identified in this document, to the application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the application identified in this document, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissnes, reexaminations and extensions thereof, and all copyright rights throughout the world in the application identified in this document 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 the undersigned had this assignment and sale not been made, the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

I hereby covenant and agree 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 aforesaid 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; and

I hereby grant the attorney of record the power to insert on this document any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or other authority for recordation of this document.

Name of Inventor: Kyungjun CHOI		
Signature:	Date: 763-0 - 6/ -	
Kenter Kanana and Andrea An		

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COMBINED DECLARATION (37 C.F.R. §1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. §1.76) AND ASSIGNMENT OF INVENTION

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The above-ic	lentified application was made or authorized to be made by me.
I believe tha application.	I am the original inventor or an original joint inventor of a claimed invention in the
	nowledge that any willful false statement made in this declaration is punishable under 18 1 by fine or imprisonment of not more than five (5) years, or both.
has reviewed	F.R. §1.63(c) states, "A person may not execute an oath or declaration unless the person I and understands the contents of the application, including the claims and is aware of the ose to the Office all information known to be material to patentability as defined in §1.56."
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Page 1 of 2

Client Ref: WILP-180094-OS Wilus Ref: FN5GNRW-180014-OS Our Ref: B-10318CON-632460-6

ASSIGNMENT

WHEREAS, I am the inventor of an invention described and/or claimed in the application identified in this document; and

WHEREAS, for good and valuable consideration, I bereby assign to

WILUS INSTITUTE OF STANDARDS AND TECHNOLOGY INC.

having a place of business at <u>5F 216 Hwangsaeul-ro Bundang-gu Seongnam-si Gyeonggi-do 13595</u> <u>Republic of Korea</u> ("ASSIGNEE") the entire right, title, and interest for the United States as defined in 35 U.S.C. §100, in the aforesaid invention;

I hereby confirm any prior assignment to ASSIGNEE, and to the extent that I have not already done so, agree to assign, and hereby do, 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 application identified in this document, to the application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the application identified in this document, 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 application identified in this document 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 the undersigned had this assignment and sale not been made, the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

I hereby covenant and agree 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 aforesaid 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; and

I hereby grant the attorney of record the power to insert on this document any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or other authority for recordation of this document.

Name of Inventor:	
Minseok NOH	
Signature:	Date: 2020-01-10

Page 2 of 2

COMBINED DECLARATION (37 C.F.R. §1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. §1.76) AND ASSIGNMENT OF INVENTION

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This declara	ion is directed to:	
\boxtimes	The attached application, or	
[] on	United States application or PCT international application number filed	
The above-ic	lentified application was made or authorized to be made by me.	
I believe that application.	I am the original inventor or an original joint inventor of a claimed invention in the	
	nowledge that any willful false statement made in this declaration is punishable under 18 I by fine or imprisonment of not more than five (5) years, or both.	
has reviewed	F.R. §1.63(c) states, "A person may not execute an oath or declaration unless the person and understands the contents of the application, including the claims and is aware of the ose to the Office all information known to be material to patentability as defined in §1.56."	
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Client Ref. WILP-180094-OS Wilus Ref. FN5GNRW-180014-OS Our Ref. B-10318CON 632460-6

ASSIGNMENT

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WHEREAS, for good and valuable consideration, Thereby assign to

WILUS INSTITUTE OF STANDARDS AND TECHNOLOGY INC.

having a place of business at <u>5F 216 Hwangsaeul-ro Bundang-gu Seongnam-si Gyeonggi-do 13595</u> <u>Republic of Korea</u> ("ASSIGNEE") the entire right, title, and interest for the United States as defined in 35 U.S.C. §100, in the aforesaid invention;

I hereby confirm any prior assignment to ASSIGNEE, and to the extent that I have not already done so, agree to assign, and hereby do, 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 application identified in this document, to the application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the application identified in this document, 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 application identified in this document 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 the undersigned had this assignment and sale not been made, the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights:

I bereby covenant and agree 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 aforesaid 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; and

I hereby grant the attorney of record the power to insert on this document any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or other authority for recordation of this document.

Name of Inventor: Jinsam KWAK	
Signature:	Date; Jan, 10, 2020
//	Page 2 of 2

PATENT REEL: 051882 FRAME: 0355

RECORDED: 02/20/2020