

<b>PATENT ASSIGNMENT COVER SHEET</b>
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<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KUM-SHO HWANG	07/09/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	PUKYONG NATIONAL UNIVERSITY INDUSTRY-UNIVERSITY COOPERATION FOUNDATION
<b>Street Address:</b>	365, SINSEON-RO, NAM-GU
<b>City:</b>	BUSAN
<b>State/Country:</b>	KOREA, REPUBLIC OF
<b>Postal Code:</b>	48547
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Patent Number:	7659032
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>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.</i>	
<b>Phone:</b>	5712773336
<b>Email:</b>	seungho.lee@insight-pat.com
<b>Correspondent Name:</b>	SEUNG HO LEE
<b>Address Line 1:</b>	8287 SPRING LEAF CT.
<b>Address Line 4:</b>	VIENNA, VIRGINIA 22182
<b>ATTORNEY DOCKET NUMBER:</b>	GN01.ASN004
<b>NAME OF SUBMITTER:</b>	SEUNG HO LEE
<b>SIGNATURE:</b>	/Seung Ho Lee/
<b>DATE SIGNED:</b>	07/09/2018
<b>Total Attachments: 2</b>	
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source=OP07H0014-US_Executed_Assignment#page2.tif	

**PATENT ASSIGNMENT**

This Patent Assignment (the "Assignment") is made from **Kum-Sho HWANG** ("Assignor"), whose address is **109-2102, Myeongjang SK Apt., 55, Sameo-ro, Haeundae-gu, Busan, Republic of Korea**, to **PUKYONG NATIONAL UNIVERSITY Industry-University Cooperation Foundation** ("Assignee"), a corporation organized under the laws of Republic of Korea, having an address at **365, Sinseon-ro, Nam-gu, Busan 48547, Republic of Korea**.

**WHEREAS**, Assignor agrees to assign, and Assignee agrees to accept, the following United States Registered Patent:

U.S. Patent Application No.	U.S. Patent No.
11/779,387	7,659,032

and all existing and any future Patents that may be granted therefor in the United States, reissues, re-examinations, renewals, extensions, provisional, divisional and continuation applications including continuation in part, and any United States and foreign applications and patents that claimed, claim and will claim priorities to those listed above, as well as all patents and patent applications from which those listed above derive, relate, or claim priority (collectively, the "Patent Rights").

**NOW THEREFORE**, in exchange for good and valuable consideration under the Agreement, the receipt and sufficiency of which Assignor hereby acknowledges, Assignor hereby assigns and transfers to Assignee and Assignee accepts, all of the right, title and interest of Assignor throughout the world in and to any and all inventions claimed or disclosed in the Patent Rights.

This Assignment includes all of Assignor's right, title and interest in, to and under each of the Patent Rights (including without limitation, rights to damages and payments for past, present and future infringements or misappropriations, including the right to collect and receive any royalties, or settlements for such infringements, all rights to sue for injunctive or other equitable relief, and any and all causes of action relating to any of the inventions or discoveries thereof), and all continuations, continuations-in-part, divisionals, substitutes, reexaminations, post-opposition foreign counterpart patents and applications, reissues and extensions thereof, if any; and, Assignor requests the Commissioner of Patents of the United States (and all foreign officials, whose duty it is to issue patents and applications as aforesaid) to record Assignee as the owner of such Patent Rights, to the same extent as held by Assignor, and to issue the Letters Patent for such Patent Rights in the name of Assignee, as assignee of the Patent Rights.

This instrument shall inure to the benefit of Assignee and its successors and assigns, and shall be binding upon Assignor and its successors and assigns.

Assignor hereby covenants that it has full right to convey the entire interest herein assigned, and that it has not executed, and will not execute, any agreement in conflict with this Assignment. Assignor hereby further covenants and agrees that it will communicate to Assignee any and all facts known to it respecting the Patent Rights, including the existing licenses, encumbrances or

Assignment of U.S. Patent No. 7,659,032

other restrictions that are expressly binding on successors to the Patent Rights, and testify in any legal proceeding, sign all lawful papers, execute and deliver all papers and take any actions that may be necessary or desirable to perfect the title to any aforementioned patents and inventions, execute all divisional, continuation, reexamination, reissue, substitute applications, and any similar and equivalent procedure under current and future legislations and regulations throughout the world, and make all rightful oaths to aid Assignee to obtain and enforce proper patent protection for said inventions/designs in all countries.

Date: July 9, 2018

ASSIGNOR

K.S. Hwang  
Signature

Kum-Sho HWANG  
Name

ASSIGNEE

**FUKYONG NATIONAL UNIVERSITY**  
Industry-University Cooperation Foundation

[Signature]  
Signature

LEE KYUNG JI/N  
Name

Team Manager  
Title