503026043 10/20/2014 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3072643

SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT			
CONVEYING PARTY I	ΟΑΤΑ					
		Name	Execution Date			
JIN-WOO KIM			09/30/2014			
CHAO-HUNG STEVE	TUNG		09/30/2014			
TAYLOR BUSCH			10/03/2014			
RECEIVING PARTY D	ΑΤΑ					
Name:	BOARD	OF TRUSTEES OF THE UNIVERSITY C	DF ARKANSAS			
Street Address:	2404 NC	ORTH UNIVERSITY AVENUE				
City:	LITTLE	ROCK				
State/Country:	ARKAN	SAS				
Postal Code:	72207					
	C Tatal: 1					
PROPERTY NUMBER Property Type		Number				
Application Number:	1	3951664				
		3951664				
CORRESPONDENCE	DATA					
CORRESPONDENCE Fax Number:	DATA (501)376-9442	ccessful, it will be sent			
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CORRESPONDENCE Fax Number: <i>Correspondence will</i> <i>using a fax number, in</i> Phone: Email: Correspondent Name	DATA (be sent to f provided; 5 k : F	501)376-9442 <i>the e-mail address first; if that is unsuc</i> <i>if that is unsuccessful, it will be sent</i> of 5013710808 bglasgow@wlj.com RICHARD BLAKELY GLASGOW	via US Mail.			
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CORRESPONDENCE Fax Number: <i>Correspondence will</i> <i>using a fax number, in</i> Phone: Email: Correspondent Name Address Line 1: Address Line 4:	DATA (be sent to f provided, 5 k : : F 2 L	501)376-9442 <i>the e-mail address first; if that is unsuc</i> <i>if that is unsuccessful, it will be sent</i> of 5013710808 bglasgow@wlj.com RICHARD BLAKELY GLASGOW 200 WEST CAPITOL AVENUE, SUITE 23 .ITTLE ROCK, ARKANSAS 72201	via US Mail.			
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CORRESPONDENCE Fax Number: Correspondence will using a fax number, in Phone: Email: Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER SIGNATURE: DATE SIGNED: Fotal Attachments: 6	DATA (be sent to f provided, E k : : : : : : : : : : : : : : : : : :	501)376-9442 the e-mail address first; if that is unsuccessful, it will be sent with the sent with	via US Mail. 300			

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PATENT REEL: 033985 FRAME: 0807

DECLARATION AND ASSIGNMENT

As a below named inventor, I hereby declare that:

This declaration is directed to United States application number 13/951,664 filed on July 26, 2013.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application, including the claims.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations §1.56.

I 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.

WHEREAS, I, Jin-Woo Kim, residing at 2887 Deaver Circle, Fayetteville, Arkansas 72703, have jointly with Chao-Hung Steve Tung, residing at 1784 N. Barrington Drive, Fayetteville, Arkansas 72701 and Taylor Busch, residing at 951 Greenside Drive, Apartment 8213, Richardson, Texas 75080, invented certain new and useful improvements disclosed in the above-identified application; and

WHEREAS, the Board of Trustees of the University of Arkansas, a public body politic and corporate, duly established under and pursuant to the laws and Constitution of the State of Arkansas, having an office and place of business at the University of Arkansas, 2404 North University Avenue, Little Rock, Arkansas 72207-3608 (hereinafter designated as "Assignee"), is desirous of acquiring my entire right, title and interest in and to said improvements, in said application, and in any Letters Patent or Patents, United States or foreign, to be obtained thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over unto the said Assignee my entire right, title and interest in and to said improvements, said application, all applications for Letters Patent or Patents heretofore or hereafter filed for said improvements in the United States of America and in any foreign country (including related rights such as utility model registrations, inventor's certificates and the like), and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted thereon, and in and to all substitutions, divisions, continuations and continuations-in-part of said United States or foreign applications, or renewals, extensions, reissues or reexaminations of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, including all rights to claim priority; and

1163514-v1

PATENT REEL: 033985 FRAME: 0808

I hereby covenant that I have the full right to convey the entire interest herein assigned and that no assignment, sale, agreement or encumbrance has been or will be entered into which would conflict with this assignment; and

I hereby covenant and agree that I will communicate to said Assignee any fact known to me respecting said improvements, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent or Patents for said improvements, without further consideration from said Assignee, but at the cost and expense of said Assignee; and

I hereby request the Director of the United States Patent and Trademark Office, and any officials of foreign countries whose duty it is to issue patents on applications as aforesaid, to issue said Letters Patent to said Assignee.

SIGNED this 30th day	of September	, 2014
Inventor's Signature Inventor's Name	Jin-Woo Kim	<i>U</i>

ACKNOWLEDGMENT

STATE OF ARKANSAS COUNTY OF WASHWESTON)

On this <u>Soch</u> day of <u>set for the personally appeared Jin-Woo Kim</u>, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument, and acknowledged that he executed the same for the purposes contained therein.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

My commission expires:

Susie J. Engle Notary Public Washington County - Arkansas Expires June 29, 2016 Commission No. 12349038

DECLARATION AND ASSIGNMENT

As a below named inventor, I hereby declare that:

This declaration is directed to United States application number 13/951,664 filed on July 26, 2013.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application, including the claims.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations §1.56.

I 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.

WHEREAS, I, Chao-Hung Steve Tung, residing at 1784 N. Barrington Drive, Fayetteville, Arkansas 72701, have jointly with Jin-Woo Kim, residing at 2887 Deaver Circle, Fayetteville, Arkansas 72703, and Taylor Busch, residing at 951 Greenside Drive, Apartment 8213, Richardson, Texas 75080, invented certain new and useful improvements disclosed in the above-identified application; and

WHEREAS, the Board of Trustees of the University of Arkansas, a public body politic and corporate, duly established under and pursuant to the laws and Constitution of the State of Arkansas, having an office and place of business at the University of Arkansas, 2404 North University Avenue, Little Rock, Arkansas 72207-3608 (hereinafter designated as "Assignee"), is desirous of acquiring my entire right, title and interest in and to said improvements, in said application, and in any Letters Patent or Patents, United States or foreign, to be obtained thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over unto the said Assignee my entire right, title and interest in and to said improvements, said application, all applications for Letters Patent or Patents heretofore or hereafter filed for said improvements in the United States of America and in any foreign country (including related rights such as utility model registrations, inventor's certificates and the like), and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted thereon, and in and to all substitutions, divisions, continuations and continuations-in-part of said United States or foreign applications, or renewals, extensions, reissues or reexaminations of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, including all rights to claim priority; and

1163514-v1

PATENT REEL: 033985 FRAME: 0810

I hereby covenant that I have the full right to convey the entire interest herein assigned and that no assignment, sale, agreement or encumbrance has been or will be entered into which would conflict with this assignment; and

I hereby covenant and agree that I will communicate to said Assignee any fact known to me respecting said improvements, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent or Patents for said improvements, without further consideration from said Assignee, but at the cost and expense of said Assignee; and

I hereby request the Director of the United States Patent and Trademark Office, and any officials of foreign countries whose duty it is to issue patents on applications as aforesaid, to issue said Letters Patent to said Assignee.

SIGNED this 30	_day of 201	4
Inventor's Signature	SECR	
Inventor's Name	Chao-Hung Steve Tung	
	ţ	
	ACKNOWLEDGMENT	

COUNTY OF WASHEWGYON))SS

On this <u>SOURCE</u>, in the year 2014, before me, <u>SUSUE SUCCE</u>, a Notary Public in and for the State of Arkansas, personally appeared Chao-Hung Steve Tung, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument, and acknowledged that he executed the same for the purposes contained therein.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

Notary Public

My commission expires:

STATE OF ARKANSAS

10-29-14

Susie J. Engle Notary Public Washington County - Arkansas Expires June 29, 2016 Commission No. 12349038

DECLARATION AND ASSIGNMENT

As a below named inventor, I hereby declare that:

This declaration is directed to United States application number 13/951,664 filed on July 26, 2013.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application, including the claims.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations §1.56.

I 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.

WHEREAS, I, Taylor Busch, residing at 951 Greenside Drive, Apartment 8213, Richardson, Texas 75080, have jointly with Jin-Woo Kim, residing at 2887 Deaver Circle, Fayetteville, Arkansas 72703, and Chao-Hung Steve Tung, residing at 1784 N. Barrington Drive, Fayetteville, Arkansas 72701, invented certain new and useful improvements disclosed in the above-identified application; and

WHEREAS, the Board of Trustees of the University of Arkansas, a public body politic and corporate, duly established under and pursuant to the laws and Constitution of the State of Arkansas, having an office and place of business at the University of Arkansas, 2404 North University Avenue, Little Rock, Arkansas 72207-3608 (hereinafter designated as "Assignee"), is desirous of acquiring my entire right, title and interest in and to said improvements, in said application, and in any Letters Patent or Patents, United States or foreign, to be obtained thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over unto the said Assignee my entire right, title and interest in and to said improvements, said application, all applications for Letters Patent or Patents heretofore or hereafter filed for said improvements in the United States of America and in any foreign country (including related rights such as utility model registrations, inventor's certificates and the like), and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted thereon, and in and to all substitutions, divisions, continuations and continuations-in-part of said United States or foreign applications, or renewals, extensions, reissues or reexaminations of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, including all rights to claim priority; and I hereby covenant that I have the full right to convey the entire interest herein assigned and that no assignment, sale, agreement or encumbrance has been or will be entered into which would conflict with this assignment; and

I hereby covenant and agree that I will communicate to said Assignee any fact known to me respecting said improvements, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent or Patents for said improvements, without further consideration from said Assignee, but at the cost and expense of said Assignee; and

I hereby request the Director of the United States Patent and Trademark Office, and any officials of foreign countries whose duty it is to issue patents on applications as aforesaid, to issue said Letters Patent to said Assignee.

SIGNED this _	3 RD	_day of	DONOBER	, 2014
Inventor's Sign Inventor's Nam		T	aylor Busch	de la

ACKNOWLEDGMENT

STATE OF MINNESOLA)ss COUNTY OF Dakota

On this <u>3rd</u> day of <u>October</u>, in the year 2014, before me, <u>Dava C. Gronzatez</u>, a Notary Public in and for the State of <u>Minnesot</u>, personally appeared Taylor Busch, personally known to me (or proved to me on the basis of

satisfactory evidence) to be the person whose name is subscribed to this instrument, and acknowledged that he executed the same for the purposes contained therein.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

My commission expires:

01-31-2019



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PATENT REEL: 033985 FRAME: 0813

RECORDED: 10/20/2014