PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Carl E. Wagner	06/28/2013
Peter W. Jurutka	06/28/2013
Pamela A. Marshall	06/28/2013
Arjan van der Vaart	07/22/2013

RECEIVING PARTY DATA

Name:	Arizona Board of Regents, a Body Corporate of the State of Arizona Acting for and on Behalf of Arizona State University	
Street Address:	1475 North Scottsdale Road	
Internal Address:	Skysong-Suite 200	
City:	Scottsdale	
State/Country:	ARIZONA	
Postal Code:	85257-3538	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13579551

CORRESPONDENCE DATA

Fax Number: 9528764098

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 952-876-4084

Email: dgherity@vhpglobalip.com Correspondent Name: Viksnins Harris & Padys PLLP Address Line 1: 7900 International Drive, Suite 670 Address Line 4: Bloomington, MINNESOTA 55425

ATTORNEY DOCKET NUMBER:	17555.009US1
NAME OF SUBMITTER:	Ann S. Viksnins
	PATENT

REEL: 030900 FRAME: 0618

502438217

Signature:	/Ann S. Viksnins/
Date:	07/30/2013
Total Attachments: 8 source=17555.009US1-Assignment to be F	iled#page2.tif iled#page3.tif iled#page4.tif iled#page5.tif iled#page5.tif iled#page6.tif iled#page7.tif

PATENT REEL: 030900 FRAME: 0619

ASSIGNMENT

WHEREAS, We, <u>Carl E. Wagner</u>, <u>Peter W. Jurutka</u>, <u>Pamela A. Marshall</u>, <u>Arjan van der Vaart</u>, made certain new and useful inventions and improvements for which we filed a patent application in the United States on <u>August 16</u>, <u>2012</u>, which application was assigned U.S. Patent Application Serial Number <u>13/579,551</u>.

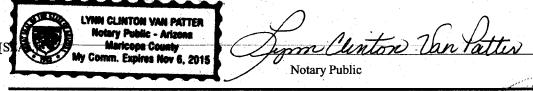
AND WHEREAS, Arizona Board of Regents, a Body Corporate of the State of Arizona Acting for and on Behalf of Arizona State University, a university organized and existing under and by virtue of the laws of the state of Arizona having an office and place of business at 1475 North Scottsdale Road Skysong-Suite 200 Scottsdale, Arizona 85257-3538 (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to any Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof are hereby acknowledged, we hereby sell, assign, transfer and set over unto said Assignee, including its successors and assigns, our entire right, title and interest to all inventions disclosed in the aforesaid application(s), including all rights to claim priority therefrom, and to any and all present or future patent applications to such inventions filed in the United States or any other country or region, inclusive of, but not limited to, all divisions, continuations, continuations-in-part, renewals thereof, substitutions, reexaminations, reissues, provisional patent applications, applications filed under the Patent Cooperation Treaty, certificates of addition, utility models, and petty patents, as well as all other intellectual property related to the applications, inclusive of, but not limited to, supplementary protection certificates, and to any and all Letters Patents and any related patent term extensions that may be granted for said Letters Patents with respect to the applications; all of the above to be held by Assignee as fully and entirely as the same would have been held by us had this Assignment not been made.

PATENT REEL: 030900 FRAME: 0620 AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore, we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

	TIMONY WHEREOF, I	have hereunto set my	hand this 🛂 🐧 d	ay of
June	, 2012. 2013 lug	3		
		Cares.	way	ne
	Carl	E. Wagner		
STATE OF	iona)	and the second second		
()	JSS			
COUNTY OF	aricopa	A transport of the second of t		
(2013 lup		
On this	28 day of June	, 2012 before m	ne personally appear	ared Carl E. Wagner
to me known and kr	nown to me to be the per	son described in and w	ho executed the fo	oregoing instrument,
and she/he duly ack	nowledged to me that sh	e/he executed the same	e for the uses and	purposes therein set
forth.				



REEL: 030900 FRAME: 0621

IN TESTIMONY WHEREOF, I have hereunto set my hand this 28 day of
June ,2017 2013 lup Peth U. July
Peter W. Jurutka
STATE OF Augena)ss COUNTY OF Marcopa
ha)ss
COUNTY OF Marcopa
On this 28 day of June, 2013 lup 2013 lup 2013 lup
Jurutka to me known and known to me to be the person described in and who executed the foregoing
instrument, and she/he duly acknowledged to me that she/he executed the same for the uses and purposes
therein set forth.
LYMN CLINTON VAM PATTER Notary Public - Arizona Maricopa County My Comm. Expires Nov 6, 2015 Notary Public
IN TESTIMONY WHEREOF, I have hereunto set my hand this 28 day of
June ,2012- 2013 lup 1
Paner Nyarshu
Pamela A. Marshall
STATE OF Augona)
)ss
COUNTY OF Marieopa)
On this 28 day of June, 2013 lup 2013 lup 2013 lup 2013 lup
Marshall to me known and known to me to be the person described in and who executed the foregoing
instrument, and she/he duly acknowledged to me that she/he executed the same for the uses and purposes
therein set forth.
SEA STATE LYNN CLINTON VAN PATTER Symm Clinton Van Patter
Maricopa County My Comm. Expires Nov 8, 2015 Notary Public

IN TESTIN	MONY WHEREOF, I	have hereunto set	t my hand this _	day of	
	_, 2012.				
	·				· · ·
	<u>Arja</u>	n van der Vaart			
STATE OF					
)ss				
COUNTY OF					
On this	day of	, 2012 be	fore me persona	ally appeared Arj	an van der
Vaart to me known an	d known to me to b	e the person des	cribed in and v	vho executed the	foregoing
instrument, and she/he					
therein set forth.					
[SEAL]		· .			
		Notai	ry Public		

ASSIGNMENT

WHEREAS, We, <u>Carl E. Wagner</u>, <u>Peter W. Jurutka</u>, <u>Pamela A. Marshall</u>, <u>Arjan van der Vaart</u>, made certain new and useful inventions and improvements for which we filed a patent application in the United States on <u>August 16</u>, 2012, which application was assigned U.S. Patent Application Serial Number <u>13/579,551</u>.

AND WHEREAS, Arizona Board of Regents, a Body Corporate of the State of Arizona Acting for and on Behalf of Arizona State University, a university organized and existing under and by virtue of the laws of the state of Arizona having an office and place of business at 1475 North Scottsdale Road Skysong-Suite 200 Scottsdale, Arizona 85257-3538 (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to any Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof are hereby acknowledged, we hereby sell, assign, transfer and set over unto said Assignee, including its successors and assigns, our entire right, title and interest to all inventions disclosed in the aforesaid application(s), including all rights to claim priority therefrom, and to any and all present or future patent applications to such inventions filed in the United States or any other country or region, inclusive of, but not limited to, all divisions, continuations, continuations-in-part, renewals thereof, substitutions, reexaminations, reissues, provisional patent applications, applications filed under the Patent Cooperation Treaty, certificates of addition, utility models, and petty patents, as well as all other intellectual property related to the applications, inclusive of, but not limited to, supplementary protection certificates, and to any and all Letters Patents and any related patent term extensions that may be granted for said Letters Patents with respect to the applications; all of the above to be held by Assignee as fully and entirely as the same would have been held by us had this Assignment not been made.

PATENT REEL: 030900 FRAME: 0624 AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore, we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

IN TEST	TIMONY WHERE	EOF, I have hereunto set my hand this day of
	, 2012.	
		Carl E. Wagner
STATE OF		
)ss
COUNTY OF		
On this	day of	, 2012 before me personally appeared Carl E. Wagner
to me known and kne	own to me to be th	he person described in and who executed the foregoing instrument,
and she/he duly ackr	nowledged to me t	hat she/he executed the same for the uses and purposes therein set
forth.		
rop at 1		
[SEAL]		Notary Public
		Notary Fublic

Docket No: 17555.009US1

Page 3 of 4

IN TESTIMONY WHEREOF, I have hereunto set my hand this $\frac{\partial Q}{\partial x}$ day of $\frac{\partial Q}{\partial x}$.
Arjan van der Vaart
STATE OF Florida
COUNTY OF Hills borough
On this day of, 2042 before me personally appeared Arjan van der
<u>Vaart</u> to me known and known to me to be the person described in and who executed the foregoing
instrument, and she/he duly acknowledged to me that she/he executed the same for the uses and purposes
therein set forth.
[SEAL] KIMBERLY READ Commission # EE 209797 My Commission Expires September 10, 2016 Notary Public

PATENT REEL: 030900 FRAME: 0627

RECORDED: 07/30/2013