

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT								
NATURE OF CONVEYANCE:	ASSIGNMENT								
CONVEYING PARTY DATA									
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Aaron T. Radomski</td> <td>03/22/2013</td> </tr> <tr> <td>Dennis M. Brown</td> <td>03/25/2013</td> </tr> <tr> <td>Nicholas Nelson</td> <td>03/22/2013</td> </tr> </tbody> </table>		Name	Execution Date	Aaron T. Radomski	03/22/2013	Dennis M. Brown	03/25/2013	Nicholas Nelson	03/22/2013
Name	Execution Date								
Aaron T. Radomski	03/22/2013								
Dennis M. Brown	03/25/2013								
Nicholas Nelson	03/22/2013								
RECEIVING PARTY DATA									
Name:	MKS Instruments, Inc.								
Street Address:	2 Tech Drive								
Internal Address:	Suite 201								
City:	Andover								
State/Country:	MASSACHUSETTS								
Postal Code:	01810								
PROPERTY NUMBERS Total: 1									
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13832901</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13832901				
Property Type	Number								
Application Number:	13832901								
CORRESPONDENCE DATA									
Fax Number:	2486410270								
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>									
Phone:	248-641-1600								
Email:	mbaird@hdp.com								
Correspondent Name:	Joseph M. Lafata								
Address Line 1:	P.O. BOX 828								
Address Line 4:	BLOOMFIELD HILLS, MICHIGAN 48303								
ATTORNEY DOCKET NUMBER:	3197-000110/US								
NAME OF SUBMITTER:	Michelle Baird								
Signature:	/Michelle Baird/								
Date:	04/22/2013								
Total Attachments: 4 source=Signed_Assignment#page1.tif source=Signed_Assignment#page2.tif source=Signed_Assignment#page3.tif source=Signed_Assignment#page4.tif									

CH \$40.00 13832901

PATENT

ASSIGNMENT

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

Virtual RF Sensor

for which Assignor is about to make or has made United States or International application for patent

- (a) executed on even date preparatory to filing (each inventor should sign this Assignment on the same day as he/she signs the Declaration and Power of Attorney);
- (b) executed on , _____, _____; or
- (c) filed on March 15, 2013, and assigned U.S. Serial No. or PCT International Application No. 13/832,901; and

WHEREAS MKS Instruments, Inc., 2 Tech Drive, Suite 201, Andover, Massachusetts 01810, hereinafter referred to as Assignee, is desirous of acquiring all right, title, and interest therein:

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy whereof is hereby acknowledged, 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, any derivation proceedings relating thereto, and as to Letters Patent any supplemental examination, derivation proceeding, opposition, post grant review, reissue, re-examination, inter partes review, 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.

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 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.

Aaron T. Radomski

ASSIGNMENT

Aaron T. Radomski

State of New York)
County of Genesee) ss.

On this 22 day of March, 2013, before me personally appeared the foregoing individual, who executed the foregoing instrument and who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.

Notary Public, *Susan M. White*

(seal) **Susan M. White**
Notary Public - State of New York
Qualified in Genesee County
Registration No. 01WH6067103
My Commission Expires 12-03-20 13

Acting in the County Of Genesee

State Of New York

My Commission Expires 12-03-2013

Dennis M. Brown

State of _____)
County of _____) ss.

On this _____ day of _____, 20____, before me personally appeared the foregoing individual, who executed the foregoing instrument and who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.

Notary Public,

(seal)

Acting in the County Of

State Of

My Commission Expires

ASSIGNMENT

Aaron T. Radomski

State of _____)
County of _____) ss.

On this _____ day of _____, 20____, before me personally appeared the foregoing individual, who executed the foregoing instrument and who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.

Notary Public,

(seal)

Acting in the County Of

State Of

My Commission Expires

Dennis M. Brown

Dennis M. Brown

State of New York)
County of Monroe) ss.

On this March day of 25th, 2013, before me personally appeared the foregoing individual, who executed the foregoing instrument and who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.

Notary Public,

Carole A. Sutherland

(seal)

Acting in the County Of

State Of

My Commission Expires

CAROLE A SUTHERLAND
Lic. #015U4923645
Notary Public-State of New York
Qualified in Livingston County
My Commission Expires MARCH 14 2014

Nicholas Nelson

ASSIGNMENT

Nicholas Nelson

State of New York)
County of Monroe) ss.

On this 22nd day of March, 2013 before me personally appeared the foregoing individual, who executed the foregoing instrument and who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.

Notary Public, *Sarah K. Grillo*

Acting in the County Of Monroe

State Of New York

My Commission Expires March 10th, 2016

(seal) Sarah K. Grillo
Notary Public, State of New York
Qualified in Monroe County
No. 01GR6183182
My Commission Expires March 10th, 2016

17571473.1