1008 El Refer to Docu	ment ID # 103491921
Form <b>PFO-1595</b> (Rev. 07/05)	U.S. DEPARTMENT OF COMMERCE
To the Director of the U.S. Patent and Trauding 103	498940 nents or the new address(es) below.
1. Name of conveying party(ies)	2. Name and address of receiving party(ies)
Gefter, Peter	Name: MKS Instruments
Gehlke, Scott Levit, Lawrence	Internal Address: do John Menear
Additional name(s) of conveying party(ies) attached? Yes N	0
3. Nature of conveyance/Execution Date(s):	Street Address: 1750 North Loop Road
Execution Date(s) 4/1/08, 4/11/08, 4/10/08	Suite 100
Assignment Merger	Suite 100
Security Agreement Change of Name	City: Alameda
Joint Research Agreement	State: California
Government Interest Assignment	State. Samornia
Executive Order 9424, Confirmatory License	Country: United States Zip: 94502
Other	Additional name(s) & address(es) attached? Yes
	Additional name(s) & address(es) attached? Yes document is being filed together with a new application
A. Patent Application No.(s)	B. Patent No.(s)
Additional numbers a  5. Name and address to whom correspondence	6. Total number of applications and patents
concerning document should be mailed:	involved: 1
Name: MKS Instruments	7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00
Internal Address: C/o John Menear	Authorized to be charged by credit card
	. Authorized to be charged to deposit account
Street Address: 1750 North Loop Road	Enclosed - Previously PAID
Suite 100	None required (government interest not affecting to
City: Alameda	8. Payment Information
State: California Zip:94502	a. Credit Card Last 4 Numbers Expiration Date
Phone Number: 510-217-0600, X-466	
Fax Number: <u>510-217-0484</u>	b. Deposit Account Number
Email Address: jmenear@ion.com	Authorized User Name
9. Signature: John & Man	2.47 4/10/08
Signature	

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

John E. Menear

Name of Person Signing

Total number of pages including cover

sheet, attachments, and documents:

#### **ASSIGNMENT OF APPLICATION**

**Peter Gefter** 

Whereas, I,

Number (Optional)

176 Cymbidium Circle, South San Francisco

CA 94080		hereafter			
referred to as applicant, ha	ve invented c	ertain new and u	seful improvements t	for	
PREVENTION OF	EMITTER CO	NTAMINATION V	VITH ELECTRONIC W	/AVEFORMS	
for which an applica	ation for a Uni	tad States Patent	was executed on	March 14, 2009	and
ioi wilici: all applica	ition for a one	teu States Fatem	was executed on	March 14, 2008	and
Whereas, MKS Instrument	S	-of	Alameda, CA		here referred
to "assignee" whose maili	ng address is	1750 North Lo	op Road, Suite 100,	Alameda, CA 94502	is
desirous of acquiring the e	ntire right, tit	le and interest in	the same;		
Now, therefore, in consideration of the sum of zero dollars (\$ 0.00 ) the receipt whereof is acknowledge, and other good and valuable consideration, I/We, the applicant(s), by these presents do sell, assign and transfer unto said assignee the full and exclusive right to the said invention in the United States and the entire rights, title and interest in and to any and all Patents which may be granted therefore in the United States. I/We hereby authorize and request the Director of the U.S. Patent and Trademark Office to issue said United States Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use and behoof; and for the use and behoof of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.  Executed this 10 <sup>th</sup> day of April 2008					
				Signature /	6efter
State of	SS:		Printed Name/	Registration No., if a	annlicable
County of			- Jilled Hallie		-pp::045/6
Before me personally appeared said					
and acknowledged the foregoing instrument to be his free act and deed this					
day of	2008		•		
Seal  Note: Signatures of all the inventors or assignees of record of the entire interest or their representative (s) are required. Submit multiple forms if more than one signature is required, See below*.					
Total of  This form offers a sample or suggested	forms are submitt- format for an assid		sample form is not an OMB o	fficially approved form	

-of

PATENT REEL: 020858 FRAME: 0579

# **CALIFORNIA ALL-PURPOSE** CERTIFICATE OF ACKNOWLEDGMENT

State of California		
County of <u>Mameda</u>		
Or April 10, 2008 before me, K. J.  personally appeared Peter Sex to	earney, (Here insertame and	Notary Public, and title of the officery
who proved to me on the basis of satisfactory evid the within instrument and acknowledged to me the capacity(ies), and that by his/her/their signature(s) which the person(s) acted, executed the instrument	at he/ <del>she/they</del> execution the instrument the	ted the same in his/her/their authorized
I certify under PENALTY OF PERJURY under the is true and correct.	e laws of the State of	f California that the foregoing paragraph
WITNESS my kand and official seal.  Signature of Notary Public	—— (Notary Seal)	K. KEARNEY COMM. # 1772399 NOTARY PUBLIC - CALIFORNIA ALAMEDA COUNTY My Comm. Expires Oct. 7, 2011
ADDITIONAL OI	PTIONAL INFORM	MATION
DESCRIPTION OF THE ATTACHED DOCUMENT  (Statement of Application (Title or description of attached document continued)	Any acknowledgment co appears above in the no properly completed and document is to be recort acknowledgment verbiag verbiage does not requit California (i.e. certifyin	IONS FOR COMPLETING THIS FORM ompleted in California must contain verbiage exactly a cotary section or a separate acknowledgment form must be attached to that document. The only exception is if ded outside of California. In such instances, any alternative ge as may be printed on such a document so long as the rethe notary to do something that is illegal for a notary if the authorized capacity of the signer). Please check the roper notarial wording and attach this form if required.
Number of Pages / Document Date #/10/18	State and County info	ormation must be the State and County where the documer

#### CAPACITY CLAIMED BY THE SIGNER

(Additional information)

- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☐ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other

- signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e.
- he/she/they, is /are ) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording. The notary seal impression must be clear and photographically reproducible.
- Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form. · Signature of the notary public must match the signature on file with the office of
  - the county clerk. Additional information is not required but could help to ensure this
    - acknowledgment is not misused or attached to a different document. Indicate title or type of attached document, number of pages and date.
    - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document

### **ASSIGNMENT OF APPLICATION**

Number (Optional)

Whereas, I,	Scott Gehlke		-of	434 Vassar A	Avenue, Berkeley, C	A 94708
CA 94080		hereafter				
referred to as app	olicant, have invented c	ertain new and us	eful im	provements f	or	
PREVE	NTION OF EMITTER CO	NTAMINATION W	ITH EL	ECTRONIC W	AVEFORMS	
for which a	an application for a Uni	ted States patent	was ex	ecuted on	March 14, 2008	and
Whereas, MKS In	nstruments	-of	Alame	eda, CA		here referred
to "assignee" wh	ose mailing address is	1750 North Loc	p Road	d, Suite 100, A	Mameda, CA 94502	is
desirous of acqui	ring the entire right, tit	e and interest in t	he sam	e;		
and transfer unto rights, title and in hereby authorize Patent to said ass for the use and be granted, as fully a made.	d other good and valual said assignee the full a seriest in and to any and and request the Directorignee, of the entire righeroof of his legal represented entirely as the same	and exclusive right d all Patents which or of the U.S. Paten nt, title, and intere sentatives, to the	t to then may bent and its and	said invention be granted the Frademark Off and to the same of the term fo	n in the United State refore in the United fice to issue said Ur e, for his sole use ar or which said Paten	es and the entire States. I/We nited States nd behoof; and t may be
		,		Set	Signature	
State of	SS:		Pr		egistration No., if a	oplicable
County of						
Before me person	ally appeared said					
and acknowledged	d the foregoing instrum	ent to be his free	act and	deed this		
day of	2008					

Seai

Note: Signatures of all the inventors or assignees of record of the entire interest or their representative (s) are required. Submit multiple forms if more than one signature is required, See below\*.

Total of

-forms are submitted.

This form offers a sample or suggested format for an assignment document. This sample form is not an OMB officially approved form.

PATENT REEL: 020858 FRAME: 0581

# CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

State of California	
County of <u>Manuala</u>	
or Spil 11, 2008 before me, He personally appeared Scatt Se	Here insert name and title of the officer)  Alle
the within instrument and acknowledged to me that	nce to be the person(s) whose name(s) is/are subscribed to he/she/they executed the same in his/her/their authorized in the instrument the person(s), or the entity upon behalf of
I certify under PENALTY OF PERJURY under the is true and correct.	laws of the State of California that the foregoing paragraph
WITNESS my hand and official seal.	K. KEARNEY COMM. # 1772399 NOTARY PUBLIC - CALIFORNIA ALAMEDA COUNTY My Comm. Expires Oct. 7, 2011
Signature of Notary Public	()
ADDITIONAL OPT	TIONAL INFORMATION
DESCRIPTION OF THE ATTACHED DOCUMENT  (Title or description of attached document)  (Title or description of attached document continued)	INSTRUCTIONS FOR COMPLETING THIS FORM Any acknowledgment completed in California must contain verbiage exactly as appears above in the notary section or a separate acknowledgment form must be properly completed and attached to that document. The only exception is if a document is to be recorded outside of California. In such instances, any alternative acknowledgment verbiage as may be printed on such a document so long as the verbiage does not require the notary to do something that is illegal for a notary in California (i.e. certifying the authorized capacity of the signer). Please check the document carefully for proper notarial wording and attach this form if required.
Number of Pages Document Date 4/11/0 \( \)	<ul> <li>State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.</li> <li>Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.</li> </ul>
(Additional information)	<ul> <li>The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).</li> <li>Print the name(s) of document signer(s) who personally appear at the time of protein the name (s).</li> </ul>
CAPACITY CLAIMED BY THE SIGNER  Individual (s) Corporate Officer  (Title) Partner(s) Attorney-in-Fact	<ul> <li>Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. he/she/they, is /are) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.</li> <li>The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.</li> <li>Signature of the notary public must match the signature on file with the office of the county clerk.</li> </ul>
☐ Trustee(s)	Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.

2008 Version CAPA v12.10.07 800-873-9865 www.NotaryClasses.com

Other \_\_\_\_

PATENT REEL: 020858 FRAME: 0582

Indicate title or type of attached document, number of pages and date.

corporate officer, indicate the title (i.e. CEO, CFO, Secretary).

· Securely attach this document to the signed document

Indicate the capacity claimed by the signer. If the claimed capacity is a

### **ASSIGNMENT OF APPLICATION**

Number (Optional)

Whereas, I,	Lawrence Levit		-of	1865 Monte Sereno Drive, Alamo
CA 94507		hereafter		
referred to as a	pplicant, have invented o	ertain new and us	eful im	mprovements for
PREV	ENTION OF EMITTER CO	ONTAMINATION W	ITH EL	ELECTRONIC WAVEFORMS
for whic	h a an application for a U	nited States paten	ts was	s executed on March 14, 2008 and
Whereas, MKS	Instruments	-of	Alame	neda, CA here referred
to "assignee" v	vhose mailing address is	1750 North Loc	p Road	ad, Suite 100, Alameda, CA 94502 is
desirous of acq	uiring the entire right, tit	le and interest in t	he sam	me;
acknowledge, a and transfer un rights, title and hereby authoriz Patent to said a for the use and	to said assignee the full a interest in and to any an se and request the Directon ssignee, of the entire rig behoof of his legal repre	ble consideration, and exclusive right deal Patents which or of the U.S. Pater ht, title, and interestentatives, to the t	I/We, the to the may the tand string and str	the receipt whereof is the applicant(s), by these presents do sell, assign he said invention in the United States and the entire to be granted therefore in the United States. I/We do Trademark Office to issue said United States and to the same, for his sole use and behoof; and and of the term for which said Patent may be by me had this assignment and sale not been
State of	SS:		Pı	Signature  Printed Name/Registration No., if applicable
County of	<b>55</b> .		• •	. miled Name/Negistration No., ii applicable
Before me perso	onally appeared said			
and acknowledg	ed the foregoing instrum	ent to be his free a	act and	nd deed this
day of	2008			
Seal  October Signatures of all the inventors or assignees of record of the entire interest or their representative (s) are required. Submit multiple forms if more than one signature is required, See below*.				

This form offers a sample or suggested format for an assignment document. This sample form is not an OMB officially approved form.

-forms are submitted.

Total of

PATENT REEL: 020858 FRAME: 0583

# CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

County of <u>Clameda</u>	
or April 10, 2008 before me, Keeppersonally appeared Lawrence B	(Herginsert hamf and title of the officer)  Level,
the within instrument and acknowledged to me that	ence to be the person(s) whose name(s) is/are subscribed to the/she/they executed the same in his/her/their authorized on the instrument the person(s), or the entity upon behalf of
I certify under PENALTY OF PERJURY under the is true and correct.	laws of the State of California that the foregoing paragraph
WITNESS my hand and official seal.  Klassyly  Signature of Natary Public	K. KEARNEY COMM. # 1772399 NOTARY PUBLIC - CALIFORNIAN ALAMEDA COUNTY My Comm. Expires Oct. 7, 2011
DESCRIPTION OF THE ATTACHED DOCUMENT  (Title or description of attached document)  (Title or description of attached document continued)	INSTRUCTIONS FOR COMPLETING THIS FORM  Any acknowledgment completed in California must contain verbiage exactly as appears above in the notary section or a separate acknowledgment form must be properly completed and attached to that document. The only exception is if a document is to be recorded outside of California. In such instances, any alternative acknowledgment verbiage as may be printed on such a document so long as the verbiage does not require the notary to do something that is illegal for a notary in California (i.e. certifying the authorized capacity of the signer). Please check the document carefully for proper notarial wording and attach this form if required.
Number of Pages / Document Date 4/10/08  (Additional information)	<ul> <li>State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.</li> <li>Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.</li> <li>The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).</li> </ul>
CAPACITY CLAIMED BY THE SIGNER  Individual (s) Corporate Officer (Title) Partner(s)	<ul> <li>Print the name(s) of document signer(s) who personally appear at the time of notarization.</li> <li>Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. he/she/they, is /are) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.</li> <li>The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.</li> <li>Signature of the notary public must match the signature on file with the office of the nounts clock.</li> </ul>

the county clerk.

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☐ Attorney-in-Fact

☐ Trustee(s)

☐ Other

State of California

PATENT REEL: 020858 FRAME: 0584

Additional information is not required but could help to ensure this

acknowledgment is not misused or attached to a different document. Indicate title or type of attached document, number of pages and date. Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).

· Securely attach this document to the signed document

U.S. PTO 12/075967 03/14/2008 Form PTO-1595 (Rev. 07/05) OMB No. 0666 0027 (exp. 6/30/200 U.S. DEPARTMENT OF COMMERCE 03-26 <u>:</u>008 United States Patent and Trademark Office HEET 103491921 To the Director of the U.S. Pak thed documents or the new address(es) below. 1. Name of conveying party(ies) 2. Name and address of receiving party(ies) Gefter, Peter Name: MKS Instruments Gehlke, Scott Levit, Lawrence Internal Address: c/o John Menear Additional name(s) of conveying party(ies) attached? Yes No 3. Nature of conveyance/Execution Date(s): Street Address: 1750 North Loop Road Execution Date(s) 3/13/08, 3/13/08,3/13/08 Suite 100 ✓ Assignment Merger City: Alameda **Security Agreement** Change of Name Joint Research Agreement State: California **Government Interest Assignment** Country: United States Zip:94502 Executive Order 9424, Confirmatory License Other Additional name(s) & address(es) attached? L. Yes 4. Application or patent number(s): This document is being filed together with a new application. B. Patent No.(s) 03/18/2038 TNGUYEN2 62090011 12075967 A. Patent Application No.(s) 68 FC:6921 40.00 P Additional numbers attached? Yes 5. Name and address to whom correspondence 6. Total number of applications and patents concerning document should be mailed: involved: 1 Name: MKS Instruments 7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40 Internal Address: C/o John Menear Authorized to be charged by credit card \_\_ Authorized to be charged to deposit account ✓ Enclosed Street Address: 1750 North Loop Road, None required (government interest not affecting title) Suite 100 8. Payment Information City: Alameda a. Credit Card Last 4 Numbers \_ State: California Zip: Expiration Date Phone Number: 510-217-0600, X-466 b. Deposit Account Number \_\_\_ Fax Number: 510-217-0484 Authorized User Name Email Address: jmenear@ion.com 9. Signature: 3/13/08 Signature Date

> Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to: Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

> > PATENT

Total number of pages including cover sheet, attachments, and documents:

John E. Menear

Name of Person Signing