

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT2647967

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>PETER F. KURUNCZI</td> <td>12/10/2013</td> </tr> <tr> <td>BON-WOONG KOO</td> <td>12/04/2013</td> </tr> <tr> <td>JOHN A. FRONTIERO</td> <td>12/05/2013</td> </tr> <tr> <td>WILLIAM T. LEVAY</td> <td>12/06/2013</td> </tr> <tr> <td>CHRISTOPHER J. LEAVITT</td> <td>12/11/2013</td> </tr> <tr> <td>TIMOTHY J. MILLER</td> <td>12/10/2013</td> </tr> <tr> <td>VIKRAM M. BHOSLE</td> <td>12/05/2013</td> </tr> <tr> <td>JOHN W. GRAFF</td> <td>12/05/2013</td> </tr> <tr> <td>NICHOLAS PT BATEMAN</td> <td>12/05/2013</td> </tr> </tbody> </table>		Name	Execution Date	PETER F. KURUNCZI	12/10/2013	BON-WOONG KOO	12/04/2013	JOHN A. FRONTIERO	12/05/2013	WILLIAM T. LEVAY	12/06/2013	CHRISTOPHER J. LEAVITT	12/11/2013	TIMOTHY J. MILLER	12/10/2013	VIKRAM M. BHOSLE	12/05/2013	JOHN W. GRAFF	12/05/2013	NICHOLAS PT BATEMAN	12/05/2013
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<table border="1"> <tr> <td>Name:</td> <td>VARIAN SEMICONDUCTOR EQUIPMENT ASSOCIATES, INC.</td> </tr> <tr> <td>Street Address:</td> <td>35 DORY ROAD</td> </tr> <tr> <td>City:</td> <td>GLOUCESTER</td> </tr> <tr> <td>State/Country:</td> <td>MASSACHUSETTS</td> </tr> <tr> <td>Postal Code:</td> <td>01930</td> </tr> </table>		Name:	VARIAN SEMICONDUCTOR EQUIPMENT ASSOCIATES, INC.	Street Address:	35 DORY ROAD	City:	GLOUCESTER	State/Country:	MASSACHUSETTS	Postal Code:	01930										
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CORRESPONDENCE DATA																					
Fax Number:	(508)898-2020																				
Phone:	508-898-1818																				
Email:	rob.frame@iplawboutique.com																				
<i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i>																					
Correspondent Name:	NIELDS, LEMACK & FRAME, LLC																				
Address Line 1:	176 E. MAIN STREET																				
Address Line 2:	SUITE 5																				

Address Line 4: WESTBORO, MASSACHUSETTS 01581	
ATTORNEY DOCKET NUMBER:	21256
NAME OF SUBMITTER:	ROBERT C. FRAME
Signature:	/Robert C. Frame, Reg. No. 54,104/
Date:	12/13/2013
<p>Total Attachments: 7</p> <p>source=021256-Assignment-#page1.tif</p> <p>source=021256-Assignment-#page2.tif</p> <p>source=021256-Assignment-#page3.tif</p> <p>source=021256-Assignment-#page4.tif</p> <p>source=021256-Assignment-#page5.tif</p> <p>source=021256-Assignment-#page6.tif</p> <p>source=021256-Assignment-#page7.tif</p>	

**ASSIGNMENT**

**WHEREAS**, the undersigned, to wit:

**Peter F. Kurunczi**, 2277 Massachusetts Avenue, Cambridge, Massachusetts 02140

**Bon-Woong Koo**, 41 Juniper Road Andover, MA 01810

**John A. Frontiero**, 281R Granite Street, Rockport, Massachusetts 01966

**William T. Levay**, 303 Sandy Bay Terrace Rockport, MA 01966

**Christopher J. Leavitt**, 288 Magnolia Avenue Gloucester, MA 01930

**Timothy J. Miller**, 3 Herrick Drive Ipswich, MA 01938

**Vikram M. Bhosle**, 134 Elm Street, North Reading, Massachusetts 01864

**John W. Graff**, 25 Walker Road, Swampscott, MA 01907

**Nicholas PT Bateman**, 55 Pasture Road, Reading, Massachusetts 01967

(Hereinafter collectively **ASSIGNOR**), have/has made a certain new and useful invention as set forth in an application for United States Letters Patent, entitled:

**Method For Implant Productivity Enhancement**

(X only one):

- (A) ☐ which was executed concurrently herewith and is being filed herewith in the United States Patent and Trademark Office;
- (B) ☐ which was executed on \_\_\_\_\_, 20\_\_, and is being filed herewith in the United States Patent and Trademark Office;
- (C) ☒ which was filed as US Patent Appln. No. **14/090,001**, filed on **November 26, 2013**.

**AND WHEREAS**, Varian Semiconductor Equipment Associates, Inc., (hereinafter **ASSIGNEE**), a corporation organized and existing under the laws of the state of Delaware, and having its principal place of business at 35 Dory Road, Gloucester, Massachusetts, 01930, is desirous of acquiring the entire right, title, and interest in and to said invention and any and all patents that may be obtained therefore, and in and to said application and any and all patents that may issue therefrom;

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, **ASSIGNOR** does hereby sell, assign, transfer, and set over unto said **ASSIGNEE**, its successors, assigns, and legal representatives, all right, title, and interest in and to said invention throughout the world, and any and all patents of the United States and foreign countries that may be obtained therefor, and in and to said application, including any and all continuations,

ATTORNEY DOCKET NO. 21256

continuations-in-part, divisionals, reissues, re-examinations, substitutions, and extensions thereof, and any and all patents of the United States and foreign countries that may issue therefrom, such right, title, and interest including the right to file applications and obtain patents, utility models, industrial models and designs for said invention in the name of said **ASSIGNEE**, its successors, assigns, and legal representatives throughout the world, including all rights of priority, all rights to publish cautionary notices reserving ownership of said invention, and all rights to register said invention in appropriate registries;

**ASSIGNOR** also does hereby covenant that it has the full right to convey the entire right, title, and interest herein assigned, and that it has not and will not execute any agreement in conflict herewith;

**ASSIGNOR** also does hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States on said invention or resulting from said application, including any continuations, continuations-in-part, divisions, reissues, re-examinations, substitutions, and extensions thereof, to said **ASSIGNEE**, its successors, assigns, and legal representatives as the **ASSIGNEE** of the entire right, title, and interest herein assigned;

**ASSIGNOR** also does hereby agree to, at any time, upon request, without further or additional consideration, but at the expense of said **ASSIGNEE**, its successors, assigns, or legal representatives, execute and deliver any and all papers, make all rightful oaths, and do all lawful acts that may be necessary or desirable to perfect the entire right, title, and interest here assigned in said **ASSIGNEE**, its successors, assigns, and legal representatives, and generally do everything possible to vest the entire right, title and interest herein assigned in said **ASSIGNEE**, its successors, assigns, and legal representatives;

**ASSIGNOR** also does hereby agree to, at any time, upon request, without further or additional consideration, but at the expense of said **ASSIGNEE**, its successors, assigns, or legal representatives, execute and deliver any and all papers, make all rightful oaths, and do all lawful acts that may be necessary or desirable to make application for and obtain any and all continuations, continuations-in-part, divisions, reissues, re-examinations, substitutions, and extensions of said application, or any application on said invention, or any patent issuing therefor or therefrom;

**ASSIGNOR** also does hereby agree to, at any time, upon request, without further or additional consideration but at the expense of said **ASSIGNEE**, its successors, assigns, and legal representatives, communicate to said **ASSIGNEE**, its successors, assigns, and legal representatives, any known facts relating to said invention or said application or any patent issuing therefor or therefrom, and testify as to the same in any interference or other litigation proceeding when requested to do so, and aid said **ASSIGNEE**, its successors, assigns, and legal representatives, in obtaining and enforcing property protection for said invention in all countries;

**ASSIGNOR** also does hereby grant the Legal Department of Varian Semiconductor Equipment Associates, Inc., at the address shown above, the power to insert on this assignment any further information, including, but not limited to application number(s) and filing date(s), which may be necessary or desirable in order to comply with any rule or request of the United States Patent and Trademark Office for the purposes of recording this document.

**ASSIGNOR** also does now hereby execute this document on the date(s) indicated below:

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 10 day of Dec, 2013.

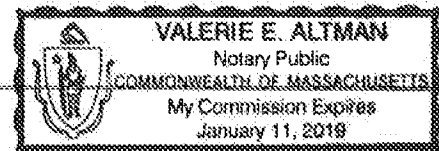
Name: **Peter F. Kurucz**

**COMMONWEALTH/STATE OF MASSACHUSETTS  
COUNTY OF ESSEX**

Before me, a Notary Public did personally appear the above-named Peter F. Kurucz personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this 10 day of December, 2013.

Notary Public

My Commission Expires:



IN WITNESS WHEREOF, I have hereunto set my hand and seal this 4 day of December, 2013.

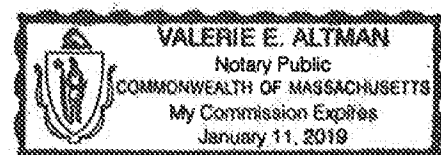
Name: **Bon-Woong Koo**

**COMMONWEALTH/STATE OF MASSACHUSETTS  
COUNTY OF ESSEX**

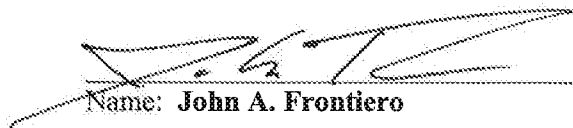
Before me, a Notary Public did personally appear the above-named Bon-Woong Koo personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this 4<sup>th</sup> day of December, 2013.

Notary Public

My Commission Expires:



IN WITNESS WHEREOF, I have hereunto set my hand and seal this 5 day of December 2013.

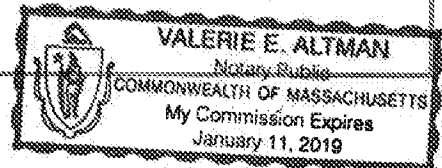
  
Name: **John A. Frontiero**

**COMMONWEALTH/STATE OF MASSACHUSETTS  
COUNTY OF ESSEX**

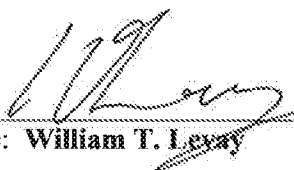
Before me, a Notary Public did personally appear the above-named John A. Frontiero personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this 5 day of December, 2013.

  
Notary Public

My Commission Expires:

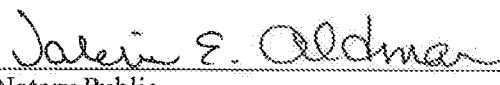


IN WITNESS WHEREOF, I have hereunto set my hand and seal this 6 day of December 2013.

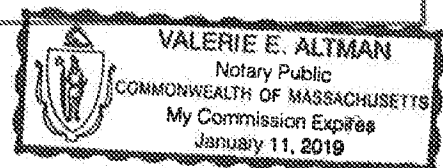
  
Name: **William T. Levay**

**COMMONWEALTH/STATE OF MASSACHUSETTS  
COUNTY OF ESSEX**

Before me, a Notary Public did personally appear the above-named William T. Levay personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this 6<sup>th</sup> day of December, 2013.

  
Notary Public

My Commission Expires:



IN WITNESS WHEREOF, I have hereunto set my hand and seal this 11 day of December 2013.

Chris Leavitt

Name: Christopher J. Leavitt

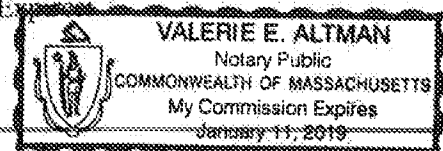
COMMONWEALTH/STATE OF MASSACHUSETTS  
COUNTY OF ESSEX

Before me, a Notary Public did personally appear the above-named Christopher J. Leavitt personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this 11<sup>th</sup> day of December, 2013.

Valerie E. Altman

Notary Public

My Commission Expires:



IN WITNESS WHEREOF, I have hereunto set my hand and seal this 10<sup>th</sup> day of December 2013.

Timothy J. Miller

Name: Timothy J. Miller

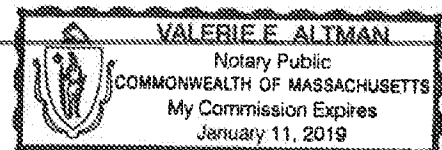
COMMONWEALTH/STATE OF MASSACHUSETTS  
COUNTY OF ESSEX

Before me, a Notary Public did personally appear the above-named Timothy J. Miller personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this 10<sup>th</sup> day of December, 2013.

Valerie E. Altman

Notary Public

My Commission Expires:



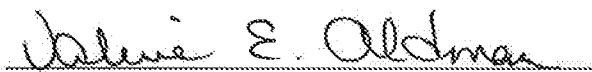
IN WITNESS WHEREOF, I have hereunto set my hand and seal this 5 day of December 2013.



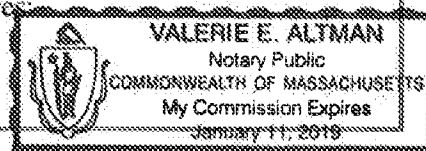
Name: **Vikram M. Bhosle**

**COMMONWEALTH/STATE OF MASSACHUSETTS  
COUNTY OF ESSEX**

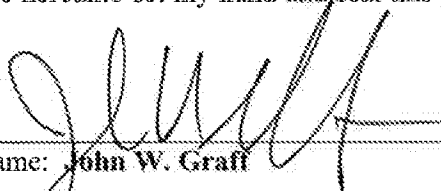
Before me, a Notary Public did personally appear the above-named Vikram M. Bhosle personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this 5 day of December, 2013.

  
Notary Public

My Commission Expires:



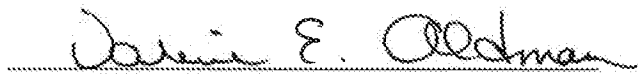
IN WITNESS WHEREOF, I have hereunto set my hand and seal this 5 day of DEC 2013.



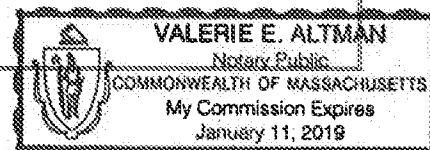
Name: **John W. Graff**

**COMMONWEALTH/STATE OF MASSACHUSETTS  
COUNTY OF ESSEX**

Before me, a Notary Public did personally appear the above-named John W. Graff personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this 5 day of December, 2013.

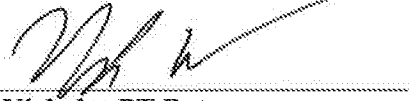
  
Notary Public

My Commission Expires:





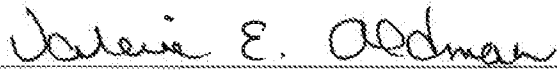
IN WITNESS WHEREOF, I have hereunto set my hand and seal this 5 day of December, 2013.



Name: **Nicholas PT Bateman**

**COMMONWEALTH/STATE OF MASSACHUSETTS  
COUNTY OF ESSEX**

Before me, a Notary Public did personally appear the above-named Nicholas PT Bateman personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this 5 day of December, 2013.



Notary Public

My Commission Expires:

