To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereto:

1. Name of conveying party(ies):
   Anilkumar P. SHANMUGA NDRAM, Helen ARMER, and Alexander T. SCHWARM
   Additional name(s) of conveying party(ies) attached?  _Yes  X No

2. Name and address of receiving party(ies):
   Name: Applied Materials, Inc.
   Internal Address: 
   Street Address: 3050 Bowers Avenue
   City: Santa Clara  State/Country: CA  ZIP: 95054
   Additional name(s) & address(es) attached?  _Yes  X No

3. Nature of conveyance:
   X Assignment  _ Merger
   _ Security Agreement  _ Change of Name
   _ Other
   Execution Date: June 17, 2002 and June 14, 2002

4. Application number(s) or patent number(s):
   If the document is being filed together with a new application, the execution date of the application is: June 18, 2002
   A. Patent Application No(s).
   B. Patent No(s).
   Additional numbers attached?  _Yes  X No

5. Name and address of party to whom correspondence concerning document should be mailed:
   Name: Applied Materials, Inc.
   Internal Address: Patent Counsel, MS/2061 Legal Affairs Dept.
   Street Address: P.O. Box 450A
   City: Santa Clara  State: CA  ZIP: 95052

6. Total number of applications and patents involved:  1

7. Total fee (37 CFR 3.41)  $40.00
   Enclosed
   X Authorized to be charged to deposit account

8. Deposit account number:
   08-0219

   To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.
   Cynthia K. Nicholson, Registration No. 36,880
   Name and Registration No. of Person Signing  Signature  June 18, 2002  Date

   Total number of pages comprising cover sheet:  1

CMB No. 0851-0011 (exp. 4/94)

07/01/2002 91712977 00000153 000219 10172977
01 FC:581 40.00 CH

PATENT
REEL: 13034 FRAME: 0351
ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

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<tr>
<td>1)</td>
<td>Arulkumar P. Shanmugasundram</td>
<td>2)</td>
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<td>428 Madera Avenue #10</td>
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<td>Sunnyvale, California 94086</td>
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<td>United States of America</td>
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<td>3)</td>
<td>Alexander T. Schwarm</td>
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<td>9303 La Puente Drive</td>
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<td></td>
<td>Austin, Texas 78749</td>
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<tr>
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<td>United States of America</td>
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(hereinafter referred to as Assignors), have invented a certain invention disclosed in an application entitled:

METHOD, SYSTEM AND MEDIUM FOR PROCESS CONTROL
FOR THE MATCHING OF TOOLS, CHAMBERS AND/OR OTHER
SEMICONDUCTOR-RELATED ENTITIES

for which application for Letters Patent in the United States is attached hereto; and

WHEREAS, Applied Materials, Inc., a corporation of the State of Delaware, having a place of business at 3050 Bowers Avenue, Santa Clara, California 95054 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said application (hereinafter referred to as the Application), and the invention disclosed therein (hereinafter referred to as the Invention), and in and to all embodiments of the invention, heretofore conceived, made or discovered by said Assignors, and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter referred to as the Patents) thereon granted in any and all countries and groups of countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every application filed and each and every Patent granted on any application which is a division, substitution, or continuation of said Application; (d) in and to each and every reissue or extension of any of said Patents, and each and every provisional application to which said Application claims priority, or which otherwise relates to said Application, and (e) in and to all rights of action and damages for any past, present or future infringement relating to said Application and said Invention, including all rights of actions and damages from publication of any and all applications and/or issuance of any Patent relating thereto.

2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or
Case # 5918/04/FPS
additional applications covering said Invention; (d) for filing and prosecuting applications for reissuance of any of said Patents; (e) for interference or other priority proceedings involving said Invention; and (f) for legal proceedings involving said Invention and any application therefor and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.

4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

5. The undersigned hereby grant(s) to Assignee and to the firm of Hale and Dorr LLP the power to insert on this Assignment any further identification, including the application number and filing date, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

1) \[\text{Jun 17th, 2002} \]
   \[\text{P. S. B. Kum} \]
   \[\text{Arulkumar P. Shanmugasundram} \]
   \[\text{Witness}\]
   \[\text{Name (typed): Alex Lerner} \]
   \[\text{Witness}\]
   \[\text{Name (typed): Eugene Robinson} \]

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

2) \[\text{Jun 17th, 2002} \]
   \[\text{Helen Armer} \]
   \[\text{Witness}\]
   \[\text{Name (typed): Alex Lerner} \]
   \[\text{Witness}\]
   \[\text{Name (typed): Eugene Robinson} \]
IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

3) 1/19 th d, 2002

Alexander T. Schwarm

Witness
Name (typed): CRAFTON DeNN LAW

Witness
Name (typed): MANAVNATH YEDATEORE