**PATENT ASSIGNMENT**

Electronic Version v1.1  
Stylesheet Version v1.1

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<tr>
<th>SUBMISSION TYPE</th>
<th>NEW ASSIGNMENT</th>
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<td>NATURE OF CONVEYANCE</td>
<td>ASSIGNMENT</td>
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**CONVEYING PARTY DATA**

<table>
<thead>
<tr>
<th>Name</th>
<th>Execution Date</th>
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<tbody>
<tr>
<td>Hua Song</td>
<td>07/20/2009</td>
</tr>
<tr>
<td>James P. Shiely</td>
<td>07/29/2009</td>
</tr>
<tr>
<td>Qiaolin Zhang</td>
<td>08/31/2009</td>
</tr>
</tbody>
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**RECEIVING PARTY DATA**

<table>
<thead>
<tr>
<th>Name</th>
<th>SYNOPSYS, INC.</th>
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<tr>
<td>Street Address</td>
<td>700 E. Middlefield Road</td>
</tr>
<tr>
<td>City</td>
<td>Mountain View</td>
</tr>
<tr>
<td>State/Country</td>
<td>CALIFORNIA</td>
</tr>
<tr>
<td>Postal Code</td>
<td>94043</td>
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**PROPERTY NUMBERS Total: 1**

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<th>Property Type</th>
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<tr>
<td>Application Number</td>
<td>12512677</td>
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**CORRESPONDENCE DATA**

Fax Number: (530)759-1665  
Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 530-759-1663
Email: edward@parklegal.com

**CORRESPONDENT NAME:**  
Edward J. Grundler

**ADDRESS**

Address Line 1: Park, Vaughan & Fleming, LLP  
Address Line 2: 2820 Fifth Street  
Address Line 4: Davis, CALIFORNIA 95618

**ATTORNEY DOCKET NUMBER:** SNPS-1188

**NAME OF SUBMITTER:** Edward J. Grundler, Reg. No. 47,615

Total Attachments: 6

csource=SNPS-1188_Assignment#page1.tif
CORPORATE ASSIGNMENT

WHEREAS, the undersigned,

Hua Song
James P. Shiely
Qiaolin Zhang

1122 White Cliff Drive, San Jose, CA 95129
7200 SW 189th Street, Aloha, OR 97007
100 N. Whisman Road #3614, Mountain View, CA 94043

hereinafter termed "Inventor(s)", have invented certain new and useful improvements in

METHOD AND APPARATUS FOR MODELING THIN-FILM TOPOGRAPHY EFFECT ON A PHOTOLITHOGRAPHY PROCESS

and have executed a declaration or oath for an application for a United States patent disclosing and identifying the invention:

On the ___ day of ______________________, 20___;

Or

X Said application having Application Number 12/512,677 and filed on 30 July 2009; and

WHEREAS, SYNOPSYS, INC., a corporation of the State of Delaware, having a place of business at 700 E. Middlefield Road, Mountain View, CA 94043-4033, (hereinafter termed "Assignee"), is desirous of acquiring the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered jointly or severally by said Inventor(s) (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

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

1. Said Inventor(s) do hereby sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention 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 the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a divisional, substitution, continuation, or continuation-in-part of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.

2. Said Inventor(s) hereby jointly and severally covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States and foreign countries. Such cooperation by said Inventor(s) shall include prompt production of pertinent facts and documents, giving of 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 additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said
invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation reissues and reexaminations, opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventor(s) in providing such cooperation shall be paid for by said Assignee.

3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventor(s), their respective heirs, legal representatives and assigns.

4. Said Inventor(s) hereby jointly and severally warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, said Inventors have executed and delivered this instrument to said Assignee as of the dates written below.

__________________________
Hua Song
Date

__________________________
James P. Shiely
Date

__________________________
Qiaolin Zhang
Date

__________________________

Date
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James P. Shiely
Qiaolin Zhang

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invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation reissues and reexaminations, opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventor(s) in providing such cooperation shall be paid for by said Assignee.

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IN WITNESS WHEREOF, said Inventors have executed and delivered this instrument to said Assignee as of the dates written below.

__________________________________________  Date  7-29-09

Hua Song

James P. Shiely

__________________________________________  Date

Qiaolin Zhang

__________________________________________  Date

Date
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Hua Song  
1122 White Cliff Drive, San Jose, CA 95129
James P. Shiely  
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IN WITNESS WHEREOF, said Inventors have executed and delivered this instrument to said Assignee as of the dates written below.

_________________________________________
Hua Song                                      Date

_________________________________________
James P. Sliely                               Date

Qiaolin Zhang                                 08/31/2009

_________________________________________
                                  Date

_________________________________________
                                  Date