**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>Li-Jui Chen</td>
<td>03/08/2012</td>
</tr>
<tr>
<td>Fu-Jye Liang</td>
<td>03/08/2012</td>
</tr>
<tr>
<td>Hsueh-Hung Wu</td>
<td>03/08/2012</td>
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**RECEIVING PARTY DATA**

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<tr>
<th>Name:</th>
<th>Taiwan Semiconductor Manufacturing Company, Ltd.</th>
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<tr>
<td>Street Address:</td>
<td>No. 8, Li-Hsin Rd. 6</td>
</tr>
<tr>
<td>Internal Address:</td>
<td>Science-Based Industrial Park</td>
</tr>
<tr>
<td>City:</td>
<td>Hsin-Chu</td>
</tr>
<tr>
<td>State/Country:</td>
<td>TAIWAN</td>
</tr>
<tr>
<td>Postal Code:</td>
<td>300-77</td>
</tr>
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**PROPERTY NUMBERS Total: 1**

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<tr>
<td>Application Number</td>
<td>12861358</td>
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**CORRESPONDENCE DATA**

Fax Number: 2142000853  
*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*  
Phone: 214-651-5000  
Email: ipdocketing@haynesboone.com  
Correspondent Name: Haynes and Boone, LLP.  
Address Line 1: 2323 Victory Avenue  
Address Line 2: Suite 700  
Address Line 4: Dallas, TEXAS 75219

**ATTORNEY DOCKET NUMBER:** 2003-1386-D3 / 24061.1637

**NAME OF SUBMITTER:** Kyle Howard

Signature: /Kyle Howard/
ASSIGNMENT

WHEREAS, we,

(1) Li-Jui Chen of 18F-1, No. 6, Lane 175, Wu-Ling Road
    Hsinchu City, Taiwan 300, R.O.C.

(2) Fu-Jye Liang of No. 16, Houcun Road, Xiaogang District
    Kaohsiung City 812, Taiwan, R.O.C.

(3) Hsueh-Hung Wu of No. 14, Zhucun 3rd Road, East District
    Hsinchu City 300, Taiwan, R.O.C.

have invented certain improvements in

SYSTEM AND METHOD FOR LITHOGRAPHY PATTERNING

for which we have executed an application for Letters Patent of the United States of America, on
March 2, 2012, and assigned application number 12/411,245; and

WHEREAS, we authorize the attorney of record to update this document to include Patent Office
information as deemed necessary (i.e., filing date, serial number, etc.);

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd., ("TSMC"), No. 8, Li-Hsin Rd. 6,
Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China, is desirous of obtaining
the entire right, title, and interest in, to and under the said invention and the said application in the
United States of America and in any and all countries foreign thereto;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is
hereby acknowledged, and other good and valuable consideration, we have sold, assigned, transferred
and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said TSMC,
its successors, legal representatives, and assigns, the entire right, title, and interest in, to and under the
said invention, and the said application, and all divisional, renewal, substitutional, and continuing
applications thereof, and all Letters Patent of the United States of America which may be granted
thereon and all reissues and extensions thereof, and all applications for Letters Patent which may be
filed for said invention in any country or countries foreign to the United States of America, and all
extensions, renewals, and reissues thereof, and all prior patents and patent applications from which a
filing priority of the above-described patent application may be obtained, including the right to collect
past damages; and we hereby authorize and request the Commissioner of Patents of the United States
of America, and any official of any country or countries foreign to the United States of America,
whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said
invention to the said TSMC, its successors, legal representatives and assigns, in accordance with the
terms of this instrument.

AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and
that we have not executed, and will not execute, any agreement in conflict herewith.
AND WE HEREBY further covenant and agree that we will communicate to said TSMC, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, renewal, substitutional, continuing, and reissue applications, make all rightful declarations and/or oaths and generally do everything possible to aid the said TSMC, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

Inventor Name: Li-Jui Chen
Residence Address: 18F-1, No. 6, Lane 175, Wu-Ling Road
Hsinchu City, Taiwan 300, R.O.C.

Dated: Mar 8, 2012

Inventor Signature

Inventor Name: Fu-Jye Liang
Residence Address: No. 16, Houcuo Road, Xiaogang District
Kaohsiung City 812, Taiwan, R.O.C.

Dated: Mar 8, 2012

Inventor Signature

Inventor Name: Hsueh-Hung Wu
Residence Address: No. 14, Zhucun 3rd Road, East District
Hsinchu City 300, Taiwan, R.O.C.

Dated: May 08, 2012

Inventor Signature