

**PATENT ASSIGNMENT**

Electronic Version v1.1  
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| SUBMISSION TYPE:   | NEW ASSIGNMENT                                   |               |                |                     |            |              |            |                   |            |
|--|--|---------------|----------------|---------------------|------------|--------------|------------|-------------------|------------|
| NATURE OF CONVEYANCE:  | ASSIGNMENT                                       |               |                |                     |            |              |            |                   |            |
| <b>CONVEYING PARTY DATA</b>  |  |               |                |                     |            |              |            |                   |            |
| <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;">Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>R. H. CHEN</td> <td>06/02/2006</td> </tr> <tr> <td>Kuo-Hua WANG</td> <td>06/02/2006</td> </tr> <tr> <td>Chien-Hsiung CHEN</td> <td>06/02/2006</td> </tr> </tbody> </table> |  | Name          | Execution Date | R. H. CHEN          | 06/02/2006 | Kuo-Hua WANG | 06/02/2006 | Chien-Hsiung CHEN | 06/02/2006 |
| Name   | Execution Date                                   |               |                |                     |            |              |            |                   |            |
| R. H. CHEN   | 06/02/2006                                       |               |                |                     |            |              |            |                   |            |
| Kuo-Hua WANG   | 06/02/2006                                       |               |                |                     |            |              |            |                   |            |
| Chien-Hsiung CHEN  | 06/02/2006                                       |               |                |                     |            |              |            |                   |            |
| <b>RECEIVING PARTY DATA</b>  |  |               |                |                     |            |              |            |                   |            |
| Name:  | TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD. |               |                |                     |            |              |            |                   |            |
| Street Address:  | No. 8, Li-Hsin Road 6                            |               |                |                     |            |              |            |                   |            |
| Internal Address:  | Science-Based Industrial Park                    |               |                |                     |            |              |            |                   |            |
| City:  | Hsin-Chu   |               |                |                     |            |              |            |                   |            |
| State/Country:   | TAIWAN   |               |                |                     |            |              |            |                   |            |
| Postal Code:   | 300-77   |               |                |                     |            |              |            |                   |            |
| <b>PROPERTY NUMBERS Total: 1</b>   |  |               |                |                     |            |              |            |                   |            |
| <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>11457645</td> </tr> </tbody> </table>  |  | Property Type | Number         | Application Number: | 11457645   |              |            |                   |            |
| Property Type  | Number   |               |                |                     |            |              |            |                   |            |
| Application Number:  | 11457645   |               |                |                     |            |              |            |                   |            |
| <b>CORRESPONDENCE DATA</b>   |  |               |                |                     |            |              |            |                   |            |
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| Email:   | bonnie.boyle@haynesboone.com                     |               |                |                     |            |              |            |                   |            |
| Correspondent Name:  | Haynes and Boone, LLP                            |               |                |                     |            |              |            |                   |            |
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| ATTORNEY DOCKET NUMBER:  | 24061.744  |               |                |                     |            |              |            |                   |            |
| NAME OF SUBMITTER:   | David M. O'Dell                                  |               |                |                     |            |              |            |                   |            |
| Total Attachments: 2<br>source=744Assignment#page1.tif   |  |               |                |                     |            |              |            |                   |            |

CH \$40.00 11457645



**ASSIGNMENT**

WHEREAS, we,

- |     |                   |    |  |
|-----|-------------------|----|--|
| (1) | R. H. CHEN        | of | No. 9, Lane 48, Sec. 3, Haidian Road, Annan District<br>Tainan City 709, Taiwan, R.O.C.    |
| (2) | Kuo-Hua WANG      | of | 13F-2, No. 5, Lane 712, Junxiao Road, Nanzi District<br>Kaohsiung City 811, Taiwan, R.O.C. |
| (3) | Chien-Hsiung CHEN | of | 5F, No. 18, Yonghua 2nd Street, Sinshih Township<br>Tainan County, Taiwan, R.O.C.          |

have invented certain improvements in

**CARRIER TRANSPORTATION MANAGEMENT SYSTEM AND  
METHOD FOR INTERNAL BUFFER PROCESS TOOLS**

for which we have executed an application for Letters Patent of the United States of America,

\_\_\_\_\_ of even date filed herewith; and  
  X   filed on July 14, 2006 and assigned application number 11/457,645; 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 One Dollar (\$1.00) and other 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.

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Inventor Name: Ren-Hour CHEN

Residence Address: No. 9, Lane 48, Sec. 3, Haidian Road, Annan District  
Tainan City 709, Taiwan, R.O.C.

Dated: 06/02/2006

Ren-Hour Chen  
Inventor Signature

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Inventor Name: Kuo-Hua WANG

Residence Address: 13F-2, No. 5, Lane 712, Junxiao Road, Nanzi District  
Kaohsiung City 811, Taiwan, R.O.C.

Dated: 06/02/2006

Kuo-Hua Wang  
Inventor Signature

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Inventor Name: Chien-Hsiung CHEN

Residence Address: 5F, No. 18, Yonghua 2nd Street, Sinshih Township  
Tainan County, Taiwan, R.O.C.

Dated: 06/02/2006

Chien-Hsiung Chen  
Inventor Signature