PATENT ASSIGNMENT

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------|----------------|
| Jiun-Hie Huang | 10/04/2011 |
| Chi-Yen Lin | 10/04/2011 |
| Ling-Sung Wang | 10/05/2011 |

RECEIVING PARTY DATA

| Name: | Taiwan Semiconductor Manufacturing Company, Ltd. |
|-------------------|--|
| Street Address: | No. 8, Li-Hsin Rd. 6 |
| Internal Address: | Science-Based Industrial Park |
| City: | Hsin-Chu |
| State/Country: | TAIWAN |
| Postal Code: | 300-77 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13246536 |

CORRESPONDENCE DATA

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Mail.

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ATTORNEY DOCKET NUMBER: 2011-0674/24061.1915

NAME OF SUBMITTER: David M. O'Dell

Total Attachments: 2

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PATENT REEL: 027258 FRAME: 0626 huangeef 2011/10/04 18:55:54

Docket No.: 2011-0674 / 24061.1915

Customer No. 42717

ASSIGNMENT

WHEREAS, we,

| (1) | Jiun-Jie Huang | of | No. 162, Gushan 3rd Road, Gushan District Kaohsiung City 804, Taiwan, R.O.C. |
|-----|----------------|----|--|
| (2) | Chi-Yen Lin | of | No. 115, Chang-An Street, Chia-Li Area Tainan City, Taiwan, R.O.C. |
| (3) | Ling-Sung Wang | of | No. 3, Alley 117, Lane 851, Sec. 2, Zhonghua W. Road West Central District Tainan City 70063, Taiwan, R.O.C. |

have invented certain improvements in

ENHANCED WAFER TEST LINE STRUCTURE

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

| X | of even date filed here | with; and | | |
|---|-------------------------|---------------------------------|------------|--------|
| X | filed on 09-27-2011 | and assigned application number | 13/246,536 | _; 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, 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.

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Inventor Name:

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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.

Jiun-Jie Huang

West Central District

Tainan City 70063, Taiwan, R.O.C.

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|--------------------|---|----------------------------------|-------|
| Residence Address; | No. 162, Gushan 3rd Road, G Kaohsiung City 804, Taiwan, | | |
| Dated: | 104. | Jiwn - Jie Inventor Signature | Huang |
| Inventor Name: | Chi-Yen Lin | | |
| Residence Address: | No. 115, Chang-An Street, Ch Tainan City, Taiwan, R.O.C. | ia-Li Area | |
| Dated: 2011 / | 40/04 | Chi-Yen | Lin |
| | | Inventor Signature | |
| Inventor Name: | Ling-Sung Wang | | |

No. 3, Alley 117, Lane 851, Sec. 2, Zhonghua W. Road

Dated: 7011/10/05

Residence Address:

Inventor Signature

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RECORDED: 11/18/2011

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