

**PATENT ASSIGNMENT**

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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
<b>CONVEYING PARTY DATA</b>													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Min-Feng Kao</td> <td>07/13/2011</td> </tr> <tr> <td>Dun-Nian Yaung</td> <td>07/13/2011</td> </tr> <tr> <td>Jen-Cheng Liu</td> <td>07/13/2011</td> </tr> <tr> <td>Chun-Chieh Chuang</td> <td>07/13/2011</td> </tr> <tr> <td>Wen-De Wang</td> <td>07/13/2011</td> </tr> </tbody> </table>		Name	Execution Date	Min-Feng Kao	07/13/2011	Dun-Nian Yaung	07/13/2011	Jen-Cheng Liu	07/13/2011	Chun-Chieh Chuang	07/13/2011	Wen-De Wang	07/13/2011
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Wen-De Wang	07/13/2011												
<b>RECEIVING PARTY DATA</b>													
Name:	Taiwan Semiconductor Manufacturing Company, Ltd.												
Street Address:	No. 8, Li-Hsin Road 6												
City:	Hsin-Chu												
State/Country:	TAIWAN												
Postal Code:	300-77												
<b>PROPERTY NUMBERS Total: 1</b>													
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13185204</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13185204								
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<b>CORRESPONDENCE DATA</b>													
Fax Number:	(214)200-0853												
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>													
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ATTORNEY DOCKET NUMBER:	24061.1811 - ERIC LI												
NAME OF SUBMITTER:	Eric Q. Li												
Total Attachments: 3 source=1811_Assignment#page1.tif source=1811_Assignment#page2.tif source=1811_Assignment#page3.tif													

OP \$40.00 13185204

Docket No.: 2011-0279 / 24061.1811  
Customer No.: 42717

## ASSIGNMENT

WHEREAS, we,

- |     |                   |    |  |
|-----|-------------------|----|--|
| (1) | Min-Feng Kao      | of | No. 15, Lane 224, Wufeng S. Road, East District<br>Chiayi City 600, Taiwan, R.O.C.         |
| (2) | Dun-Nian Yaung    | of | 4F, No. 15, Lane 130, Wansheng Street, Wunshan District<br>Taipei City 116, Taiwan, R.O.C. |
| (3) | Jen-Cheng Liu     | of | 5F, #219 Guan-Dong Road<br>Minsyong Township, Chiayi County 621, Taiwan, R.O.C.            |
| (4) | Chun-Chieh Chuang | of | No. 61, Meinan Street<br>Tainan City, Taiwan, R.O.C.                                       |
| (5) | Wen-De Wang       | of | No. 17, Jhonghe Village<br>Minsyong Township, Chiayi County 621, Taiwan, R.O.C.            |

have invented certain improvements in

## NOVEL CMOS IMAGE SENSOR STRUCTURE

for which we have executed an application for Letters Patent of the United States of America on July 18, 2011, as U.S. Serial No. 13/185,204; 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.

Docket No.: 2011-0279 / 24061.1811  
Customer No.: 42717

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: Min-Feng Kao

Residence Address: No. 15, Lane 224, Wufeng S. Road, East District  
Chiayi City 600, Taiwan, R.O.C.

Dated: 7/13 '2011

Min-Feng Kao  
Inventor Signature

Inventor Name: Dun-Nian Yaung

Residence Address: 4F, No. 15, Lane 130, Wansheng Street, Wunshan District  
Taipei City 116, Taiwan, R.O.C.

Dated: 7/13 '2011

Dun-Nian Yaung  
Inventor Signature

Inventor Name: Jen-Cheng Liu

Residence Address: 5F, #219 Guan-Dong Road  
Minsyong Township, Chiayi County 621, Taiwan, R.O.C.

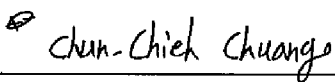
Dated: 7/13 '2011

Jen-Cheng Liu  
Inventor Signature

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Inventor Name: Chun-Chieh Chuang  
Residence Address: No. 61, Meinan Street  
Tainan City, Taiwan, R.O.C.

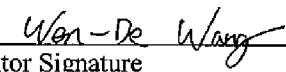
Dated: ✓ 7/13 ' 2011

✓   
Inventor Signature

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Inventor Name: Wen-De Wang  
Residence Address: No. 17, Jhonghe Village  
Minsyong Township, Chiayi County 621, Taiwan, R.O.C.

Dated: ✓ 7/13 ' 2011

✓   
Inventor Signature