

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

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>Jerry KAO</td> <td>05/09/2012</td> </tr> <tr> <td>King-Ho TAM</td> <td>05/09/2012</td> </tr> <tr> <td>Meng-Xiang LEE</td> <td>05/09/2012</td> </tr> <tr> <td>Li-Chung HSU</td> <td>05/09/2012</td> </tr> <tr> <td>Chi-Yeh YU</td> <td>05/09/2012</td> </tr> <tr> <td>Chung-Min FU</td> <td>05/09/2012</td> </tr> <tr> <td>Chung-Hsing WANG</td> <td>05/09/2012</td> </tr> </tbody> </table>		Name	Execution Date	Jerry KAO	05/09/2012	King-Ho TAM	05/09/2012	Meng-Xiang LEE	05/09/2012	Li-Chung HSU	05/09/2012	Chi-Yeh YU	05/09/2012	Chung-Min FU	05/09/2012	Chung-Hsing WANG	05/09/2012
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<b>RECEIVING PARTY DATA</b>																	
Name:	Taiwan Semiconductor Manufacturing Co., 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"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13468055</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13468055												
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Application Number:	13468055																
<b>CORRESPONDENCE DATA</b>																	
Fax Number:	(215)689-4905																
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Email:	jsjulianti@duanemorris.com																
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>																	
Correspondent Name:	DUANE MORRIS LLP (TSMC) IP DEPARTMENT																
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CH \$40.00 13468055

ATTORNEY DOCKET NUMBER:	N1085-00997
NAME OF SUBMITTER:	Jarrad M. Gunther
Total Attachments: 4 source=ExecutedAssign#page1.tif source=ExecutedAssign#page2.tif source=ExecutedAssign#page3.tif source=ExecutedAssign#page4.tif	

Serial No. 13/468,055

May 10, 2012

**ATTORNEY DOCKET NO.: 2012.0020/1085.997**

**ASSIGNMENT AND AGREEMENT**

For value received, we, **Jerry KAO, King-Ho TAM, Meng-Xiang LEE, Li-Chung HSU, Chi-Yeh YU, Chung-Min FU and Chung-Hsing WANG**, hereby transfer to **Taiwan Semiconductor Manufacturing Co., Ltd.**, with its principal place of business located at No. 8, Li-Hsin Road 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, Republic of China, and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to **SYSTEM AND METHOD OF ELECTROMAGNETIC AVOIDANCE FOR AUTOMATIC PLACE-AND-ROUTE**, described in a non-provisional application and under any and all Letters Patent and any divisions, continuations, continuations-in-part, reexamination certificates, reissues, and extensions thereof, or claiming priority therefrom that may be granted in the United States for said inventions; and we also concurrently hereby sell, assign and transfer to **Taiwan Semiconductor Manufacturing Co., Ltd.** the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

We authorize **Taiwan Semiconductor Manufacturing Co., Ltd.** to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of **Taiwan Semiconductor Manufacturing Co., Ltd.** to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.


We request that any and all patents for said inventions be issued to **Taiwan Semiconductor Manufacturing Co., Ltd.** in the United States and in all countries foreign to the United States, or to such nominees as **Taiwan Semiconductor Manufacturing Co., Ltd.** may designate.

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We agree that, when requested, we shall, without charge to Taiwan Semiconductor Manufacturing Co., Ltd. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

Inventor No. 1

Dated: 05/09/2012

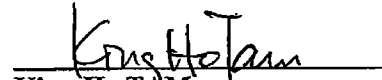
  
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Inventor No. 2

Dated: 05/09/2012

  
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Inventor No. 6

Dated: May 9, 2012

Chung-Min Fu  
Chung-Min FU

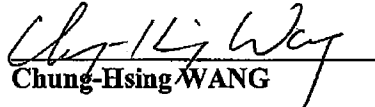
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Inventor No. 7

Dated: 5/9/2012

  
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