1000	ed States Patent and Trademark Office  Atty Docket No. TSM04-0810  996357
10 110 21100101 01 110 0.0.1 110110 110 11	2. Name and address of receiving party(ies)
Name of conveying party(ies)/Execution Date(s):      Chih-Hao Wang Pang-Yen Tsai Shang-Chih Chen Ching-Wei Tsai Ta-Wei Wang  Execution Date(s) April 27, 2005	Name: Taiwan Semiconductor Manufacturing Company.
Additional name(s) of conveying party(ies) attached? Yes X No	Street Address. No. 6, LI-HSIII Rd. 6
3. Nature of conveyance:	Science-Based Industrial Park
X Assignment Merger	City: Hsin-Chu
Security Agreement Change of Name Government Interest Assignment Executive Order 9424, Confirmatory License	State: Taiwan  Country: ROC Zip: 300-77
4. Application or patent number(s):  A. Patent Application No.(s)	Additional name(s) & address(es) attached? Yes X No is document is being filed together with a new application.  B. Patent No.(s)
Additional numbers at	tached? Yes X No
5. Name and address to whom correspondence concerning document should be mailed: Name: Steven H. Slater	6. Total number of applications and patents involved:
Slater & Matsil, L.L.P.	7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00
Internal Address:	Authorized to be charged by credit card  X Authorized to be charged to deposit account
Street Address: 17950 Preston Rd.	
Suite 1000	Enclosed
City: Dallas	None required (government interest not affecting title)
State: Tevas 7in: 75252 5702	

05/04/2005 01 FC:8021

Email Address: slater@slater-matsil.com			
DBYRNE	00000140 501065	11115484	
	40.00 BA	$\bigcirc$	

Phone Number: 972-732-1001

Fax Number: 972-732-9218

involved:	
	e (37 CFR 1.21(h) & 3.41) \$ 40.00 thorized to be charged by credit card
X Aut	thorized to be charged to deposit account
Enc	closed
No.	ne required (government interest not affecting title)
8. Payment	t Information

b. Deposit Account Number 50-1065 Authorized User Name \_ Ira S. Matsil

Expiration Date \_\_\_

a. Credit Card Last 4 Numbers \_

9. Signature: April 27, 2005 Signature Date

Total number of pages including cover sheet, attachments, and documents: Ira S. Matsil, Reg. No. 35,272 Name of Person Signing

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to: Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

**PATENT** REEL: 016511 FRAME: 0690

ATTORNEY DOCKET NO. TSM04-0810

## **ASSIGNMENT**

WHEREAS, i, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd. (TSMC), a corporation organized and existing under the laws of Taiwan, the Republic of China, with its principal office at No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, R.O.C., is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon in the United States and all other countries throughout the world;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TSMC, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner for Patents to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said TSMC, as assignee of my entire right, title and interest. I declare that I have not executed and will not execute any agreement in conflict herewith.

I also hereby sell and assign to TSMC, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including, but not limited to, the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said TSMC, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention or the file history thereof, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said TSMC, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year:

TITLE OF INVENTION	High Performance CMOS Device Design			
SIGNATURE OF INVENTOR AND NAME	Chih-Hao Wang Chih-Hao Wang	Shang-Chih Chen	Ching-Wei Testi	Ta-Wei Wang
DATE	Apr. 27, 2005	Apri, 27, 2005	April, 2) . 2005	April >7, >005
RESIDENCE (City, County, State)	Hsin-Chu, Taiwan, R.O.C.	Jiadong Township Taiwan, R.O.C.	Taoyuan City Taiwan, R.O.C.	Taipei Taiwan, R.O.C.

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Assignment

PATENT REEL: 016511 FRAME: 0691

ATTORNEY DOCKET NO. TSM04-0810

## **ASSIGNMENT**

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd. (TSMC), a corporation organized and existing under the laws of Taiwan, the Republic of China, with its principal office at No. 8, Li-HsIn Rd. 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, R.O.C., is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon in the United States and all other countries throughout the world;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TSMC, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner for Patents to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said TSMC, as assignee of my entire right, title and interest. I declare that I have not executed and will not execute any agreement in conflict herewith.

I also hereby sell and assign to TSMC, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including, but not limited to, the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said TSMC, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention or the file history thereof, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, relssue and substitute applications, make all lawful oaths, and generally do everything possible to aid said TSMC, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	High Performance CMOS Device Design			
SIGNATURE OF INVENTOR AND NAME	Pang-Yen Tsai			
DATE	3005, Ting 61			
RESIDENCE (City, County, State)	Jhu-bei City Hsin-Chu Hsian Taiwan, R.O.C.			

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Assignment

TOTAL P.05

REEL: 016511 FRAME: 0692