OMB NO. 0651-0027 (exp. 6/30/2005)	TSM04-0454			
72-03-04 To the Director of the U.S. Patent 102901856 uments or the new address(es) below.				
O News and address of receiving partyline)				
Name of conveying party(ies)/Execution Date(s):	Name: Taiwan Semiconductor Manufacturing Company,			
Chih-Hsin Ko				
Chung-Hu Ke Chien-Chao Huang	Ltd.			
Chich-Chao Fidang	Internal Address:			
Execution Data(s)				
Execution Date(s) Additional name(s) of conveying party(ies) attached? Yes X No No No Assignment Merger	Street Address: No. 8, Li-Hsin Rd. 6			
	Science-Based Industrial Park			
	City: Hsin-Chu			
	State: Taiwan			
Security Agreement Change of Name	Country: ROC Zip: 300-77			
Government Interest Assignment				
Executive Order 9424, Confirmatory License				
Other				
	Additional name(s) & address(es) attached? Yes X No			
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.	Enclosed			
Suite 1000				
City: Dallas	None required (government interest not affecting title)			
State: <u>Texas</u> Zip: <u>75252-5793</u>	8. Payment Information			
Phone Number: 972-732-1001	- Condit Cond. I and AM make a			
Fax Number: 972-732-9218	a. Credit Card Last 4 Numbers Expiration Date			
Email Address: slater@slater-matsil.com				
	b. Deposit Account Number50-1065			
	Authorized User Name Steven H. Slater			
9. Signature: Signature	3 DECO 4 Date			
Steven H. Slater, Reg. No. 35,361 Name of Person Signing	Total number of pages including cover sheet, attachments, and documents:			

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

12/14/2004 ECOOPER 00000375 501065 11004690 01 FC:8021 40.00 BA

ATTORNEY DOCKET NO. TSM04-0454

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	Improve Transistor Mobility by Adjusting Stress in Shallow Trench Isolation			
SIGNATURE OF INVENTOR AND NAME	Chih-Hsin Ko	Chury-Hu, Ke Chung-Hu Ke	Chia-Cha (L) Chien-Chao Huang	
DATE	Dec.02,2004	(2e(,02,200C	Dec. 02, 2004	
RESIDENCE (City, County, State)	Fongshan City, Taiwan, R.O.C.	Taipei, Taivan, R.O.(Hsin-Chu, Taiwan, R.O.C.	

T\$M04-0454

RECORDED: 12/03/2004

Page 1 of 1

Assignment

PATENT TOTAL P. RR

REEL: 016067 FRAME: 0070