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N	To the Director of the U.S. Patent and Trademark Office: Pleas	se record the attached documents or the new address(es) below.								
1,1	1. Name of conveying party(ies)	2. Name and address of receiving party(ies)								
	Derek WANG Kun-Chi LIU	Name: Taiwan Semiconductor Manufacturing Co., Ltd.								
	Ta-Chin LIN	Internal Address:								
		Internal Address: 990 200 200 200 200 200 200 200 200 200								
	Additional name(s) of conveying party(ies) attached? Yes V No	300								
	3. Nature of conveyance/Execution Date(s):	Street Address: No. 8, Li-Hsin Rd. 6								
	Execution Date(s) November 15, 2005 ✓ Assignment Merger	Science-Based Industrial Park								
		City: Hsin-Chu								
	Security Agreement Change of Name	Oity. Hishir Only								
	└── Joint Research Agreement	State:								
	Government Interest Assignment	Country: Taiwan, R.O.C. Zip:300-77								
	Executive Order 9424, Confirmatory License									
	Other	Additional name(s) & address(es) attached? Yes Vo								
	4. Application or patent number(s):	document is being filed together with a new application.								
	A. Patent Application No.(s)	B. Patent No.(s)								
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05 FC:80										
VO LETON	Additional numbers att	ttached?								
	5. Name and address to whom correspondence	6. Total number of applications and patents								
	concerning document should be mailed:	involved: 1								
	Name:Daniel R. McClure	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00								
	Internal Address: Thomas, Kayden, Horstemeyer &	Authorized to be charged by credit card								
	Risley, LLP									
		Authorized to be charged to deposit account Enclosed								
	Street Address: 100 Galleria Parkway	None required (government interest not affecting title)								
	Suite 1750									
	City: Atlanta	8. Payment Information								
	State: Georgia Zip:30339	a. Credit Card Last 4 Numbers 1009								
	Phone Number: 770-933-9500	Expiration Date <u>07/09</u>								
	Fax Number: 770-951-0933	b. Deposit Account Number Authorized User Name								
	Email Address: dan.mcclure@tkhr.com									
	9. Signature:	Dec 2, 2005								
	Signature	Date								
	Daniel R. McClure	Total number of pages including cover 3								

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REEL: 017323 FRAME: 0516

PATENT

ASSIGNMENT

WHEREAS,	_Derek	WANG,	Kun-Chi	LIU	and	Ta-Chin	LIN	hereafter referred to	as
ASSIGNOR, has/have invented certain new and useful improvements as described and set forth in the below									
dentified application	on for Unit	ted States	s Letters Pat	ent:					

Title:	MANAGEMENT	SYSTEMS	AND	METHODS		 	
Filed:		 			Serial No	 	
Execut	ed on:	Novembe	er 15,	2005			

WHEREAS, Taiwan Semiconductor Manufacturing Co., Ltd. of No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, R.O.C. hereinafter referred to as ASSIGNEE, is desirous of acquiring ASSIGNOR'S interest in the said invention and application and in any U.S. Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has/have sold, assigned and transferred, and by these presents does/do sell, assign and transfer unto the said Assignee, and Assignee's successors and assigns, all his/her/their rights, title and interest in and to the said invention and application and all future improvements thereon, and in and to any Letters Patent which may hereafter be granted on the same in the United States, the said interest to be held and enjoyed by said Assignee as fully and exclusively as it would have been held and enjoyed by said Assignor had this Assignment and transfer not been made, to the full end and term of any Letters Patent which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees/agree that he/she/they will, without charge to said Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement, and to vest title thereto in said Assignee, or Assignee's successors and assigns.

TSMC2004-0845/0503-A31349US

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IN TESTIMONY	WHEREOF, Assigno	r has/have signed	his/her/their nam	e(s) on the date(s) indicated.

1811	Carek Wang	>005, 11, 15	
Derek WANG		Date:	
	Kun-Chi LIU	20.5.11.15	
Kun-Chi LIU		Date:	

Ta-Chin LIN 2005. 11.15

Date:

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RECORDED: 12/02/2005