	10-21-2004	
FORM PTO-1595		U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office
(Rev. 10/02) OMB No. 0651-0027 (exp. 6/30/2005)		2_
To the Honorable Commissioner of Pater	102864803	ginal documents or copy thereof.
Name of conveying part(ies):		e and address of receiving party(ies)
(2) Kun-Chi LIU (7) Lieh-Ju (3) Chien-Wei WANG (8) Fang-N (4) Chih-Chien CHANG (9) Birgie k (5) Chang-Hsi LIN (10) Yi-Fang Additional name(s) of conveying party(ies) att 3. Nature of conveyance: Assignment Merger Security Agreement Change Other: Execution Date: September 29, 200 4. Application number(s) or patent number(s) If this document is being filed together	ng CHEN i WU IUO Stree g SU ached? ⊠Yes □No Additi	e: Taiwan Semiconductor Manufacturing Co., Ltd. t Address: No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, R.O.C. onal name(s) & address(es) attached? Yes No execution date of the application is:
September 29, 2004		B. Patent No.(s)
A. Patent application No.(s)		D Palentinoisi
		<i>B.</i> 7 dis (16)
Ac	ditionał numbers attached? ☐ Yes	• •
According to Section 5. Name and address of party to whom correspond to the section of the secti	ditional numbers attached? ☐ Yes	• •
5. Name and address of party to whom corre	ditional numbers attached? Yes espondence 6. Total 7. Total Risley, L.L.P.	No number of applications/patents involved: [1] fee (37 CFR 3.41) \$ 40.00 inclosed authorization to charge credit card (attached)
 Name and address of party to whom correction concerning document should be mailed: Daniel R. McClure Thomas, Kayden, Horstemeyer & 100 Galleria Parkway, Suite 1750 	ditional numbers attached? Yes espondence 6. Total 7. Total Risley, L.L.P.	No number of applications/patents involved: [1] fee (37 CFR 3.41) \$ 40.00 inclosed
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 Name and address of party to whom correction concerning document should be mailed: Daniel R. McClure Thomas, Kayden, Horstemeyer & 100 Galleria Parkway, Suite 1750 	ditional numbers attached? Yes espondence 6. Total 7. Total Risley, L.L.P. 8. Depo	number of applications/patents involved: [1] fee (37 CFR 3.41) \$ 40.00 inclosed authorization to charge credit card (attached) sit Account Number: 20-0778 plicate copy of this page if paying by Deposit Account)
 5. Name and address of party to whom corrections document should be mailed: Daniel R. McClure Thomas, Kayden, Horstemeyer & 100 Galleria Parkway, Suite 1750 Atlanta, Georgia 30339-5948 9. Statement and signature. To the best of my knowledge and belief, the 	ditional numbers attached? Yes espondence 6. Total 7. Total Risley, L.L.P. 8. Depo	number of applications/patents involved: [1] fee (37 CFR 3.41) \$ 40.00 inclosed authorization to charge credit card (attached) sit Account Number: 20-0778 plicate copy of this page if paying by Deposit Account)

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> **PATENT REEL: 015892 FRAME: 0668**

ASSIGNMENT

WHEREAS, Shiaw-Lin CHI, Kun-Chi LIU, Chien-Wei WANG,

Chih-Chien CHANG, Chang-Hsi LIN, Chien	
CHEN, Fang-Ni WU, Birgie KUO and Yi-Fang	
hereafter referred to as ASSIGNOR, has/have invented cert	
described and set forth in the below identified application f	or United States Letters Patent:
Title: MANUFACTURING MANAGEMENT SYST	EM AND METHOD
	EM AND METHOD
Executed on: September 29, 2004	
Executed on:	
WHEREAS, Taiwan Semiconductor Manu	ufacturing Co., Ltd. of
No. 8, Li-Hsin Rd. 6, Science-Based In	
Taiwan 300-77, R.O.C. hereinafter referred to	
acquiring ASSIGNOR'S interest in the said invention and	
Patent which may be granted on the same;	approached and in any old. Letters
Tatom willow of granted on the same,	
NOW, THEREFORE, TO ALL WHOM IT MAY good and valuable consideration, receipt of which is has Assigner has/have sold, assigned and transferred, and by the transfer unto the said Assignee, and Assignee's successors title and interest in and to the said invention and applie thereon, and in and to any Letters Patent which may here United States, the said interest to be held and enjoyed by said as it would have been held and enjoyed by said Assignor has been made, to the full end and term of any Letters Patent wany division, renewal, continuation in whole or in par prolongation or extension thereof.	nereby acknowledged by Assignor, lese presents does/do sell, assign and and assigns, all his/her/their rights, cation and all future improvements after be granted on the same in the aid Assignee as fully and exclusively had this Assignment and transfer not which may be granted thereon, or of
Assignor further agrees/agree that he/she/th Assignee, but at Assignee's expense, cooperate with A application and/or applications, execute, verify, acknow papers, including applications for Letters Patent and for the assignment and transfer thereof, and will perform such o request, to obtain or maintain Letters Patent for said invertible thereto in said Assignee, or Assignee's successors and IN TESTIMONY WHEREOF, Assignor has/have date(s) indicated.	ssignee in the prosecution of said ledge and deliver all such further e reissue thereof, and instruments of ther acts as Assignee lawfully may nation and improvement, and to vest assigns.
Shiaw-Lin Chi	2004 19/29
Shiaw-Lin CHI	Date:
Kun-chi LIU	Date:
TSMC2003-1630/0503-A30487US	

PATENT REEL: 015892 FRAME: 0669

Chien-Wet Warry	2004/9/29
Chien-Wei WANG	Date:
Chin-Chien Chang Chih-Chien CHANG	2004/9/z9 Date:
Chang-Asi Lin	2004/9/29 Date:
Chien-fer Cheng Chien-Fei CHENG	>00K/9/29 Date:
Lieh-Jung Chen Lieh-Jung CHEN	2004/9/29 Date:
Fang - N: Wu Fang-Ni WU	2004/9/29 Date:
Birgie Kus Birgie Kuo	2004/9/29 Date:
Yi-Fang Su	>004/9/29 Date:

TSMC2003-1630/0503-A30487US

RECORDED: 10/13/2004

PATENT REEL: 015892 FRAME: 0670