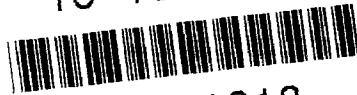


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RE

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Phillip CHEN
R.L. TSAI

Additional name(s) of conveying party(ies) attached? Yes No

2. Name and address of receiving party(ies)

Name: Taiwan Semiconductor Manufacturing Co., Ltd.

Internal Address: _____

Street Address: No. 8, Li-Hsin Rd. 6

Science-Based Industrial Park

City: Hsin-Chu

State: _____

Country: Taiwan, R.O.C. Zip: 300-77

Additional name(s) & address(es) attached? Yes No

3. Nature of conveyance/Execution Date(s):

Execution Date(s) September 23, 2005

- Assignment Merger
- Security Agreement Change of Name
- Joint Research Agreement
- Government Interest Assignment
- Executive Order 9424, Confirmatory License
- Other _____

4. Application or patent number(s):

This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? Yes No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Daniel R. McClure

Internal Address: Thomas, Kayden, Horstemeyer &

Risley, LLP

Street Address: 100 Galleria Parkway

Suite 1750

City: Atlanta

State: Georgia Zip: 30339

Phone Number: 770-933-9500

Fax Number: 770-951-0933

Email Address: dan.mcclure@tkhr.com

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

- Authorized to be charged by credit card
- Authorized to be charged to deposit account
- Enclosed
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8. Payment Information

a. Credit Card Last 4 Numbers 1009
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9. Signature:

Daniel R. McClure
Signature

Oct 7, 2005
Date

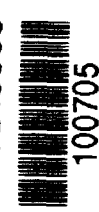
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ASSIGNMENT

WHEREAS, Phillip CHEN and R.L.TSAI hereafter referred to as ASSIGNOR, has/have invented certain new and useful improvements as described and set forth in the below identified application for United States Letters Patent:

Title: SYSTEMS AND METHODS FOR PRODUCTION PLANNING

Filed: _____ Serial No. _____

Executed on: September 23, 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.

IN TESTIMONY WHEREOF, Assignor has/have signed his/her/their name(s) on the date(s) indicated.

Phillip Chen
Phillip CHEN

2005/9/23
Date:

R.L. TSAI
R.L. TSAI

2005/9/23
Date: