

07-01-2005



103033103

U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks

Original documents or copy thereof.

## 1. Name of conveying party(ies):

Chien-Hua Huang

## 2. Name and address of receiving party(ies)

Name: Taiwan Semiconductor Manufacturing Co., Ltd.

Internal Address: \_\_\_\_\_

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

## 3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_

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

Science Based Industrial Park

City: Hsin-Chu

State: \_\_\_\_\_

Zip: \_\_\_\_\_

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

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

Execution Date: 12/23/2004

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s) 11/026,354

B. Patent No.(s) \_\_\_\_\_

Additional numbers attached? ☐ Yes ☒ No

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

Name: Steven E. Koffs, Esquire

Internal Address: Duane Morris LLP

Street Address: One Liberty Place

City: Philadelphia State: PA Zip: 19103

## 6. Total number of applications and patents involved: 1

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

☐ Enclosed☒ Authorized to be charged to deposit account

## 8. Deposit account number:

04-1679

DO NOT USE THIS SPACE

## 9. Signature.

Steven E. Koffs, Esquire

Name of Person Signing

Signature

6/27/2005

Date

Total number of pages including cover sheet, attachments, and documents: 5

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231105 JUN 29 AM 8:49  
OPR/FINANCE

12/30/04

01-14-2005



162920303

Form PTO-1595  
(Rev. 10/02)

RECORD

DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

OMB No. 0651-0027 (exp. 6/30/2005)

Tab settings ⇌ ⇌ ⇌ ▼ ▼ ▼ ▼ ▼ ▼ ▼

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  
Chien-Hua Huang

2. Name and address of receiving party(ies)  
Name: Taiwan Semiconductor Manufacturing  
Internal Address: Co., Ltd.

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

3. Nature of conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Street Address: No. 8, Li-Hsin Road 6  
Science Based Industrial Park

City: Hsin-Chu State: Zip: 300-77

Execution Date: 12/23/2004

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

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: 12/30/04

A. Patent Application No.(s) \_\_\_\_\_  
\_\_\_\_\_

B. Patent No.(s) \_\_\_\_\_  
\_\_\_\_\_

Additional numbers attached? ☐ Yes ☒ No

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

Name: Howard Chen

Internal Address: \_\_\_\_\_

Duane Morris LLP

Street Address: One Market Street

Spear Tower, Suite 2000

City: San Francisco State: CA Zip: 94105-1104

6. Total number of applications and patents involved: 1 ☐

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

- ☐ Enclosed  
☒ Authorized to be charged to deposit account

8. Deposit account number:

04-1679

DO NOT USE THIS SPACE

9. Signature.

Edward J. Lynch, Reg. #24,422 for Howard Chen

Name of Person Signing

Signature

12/30/04  
Date

01/13/2005 DBYRNE 00000092 041679 11026354

Total number of pages including cover sheet, attachments, and documents: 3 ☐

01 FC:8021

40.00 DA

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

PATENT  
REEL: 016730 FRAME: 0825

112959 U.S. PTO  
11/026354

123004

## ASSIGNMENT AND AGREEMENT

For value received, I/we, **Chien-Hua Huang** hereby sell, assign and transfer to **Taiwan Semiconductor Manufacturing Co., Ltd.**, with its principal place of business located at No. 8, Li-Hsin Road 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, Republic of China, and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to **METHOD AND SYSTEM FOR CORRECTING SOFT ERRORS IN MEMORY CIRCUIT** described in an application for Letters Patent of the United States filed on December 30, 2004 and assigned U.S. Application Number \_\_\_\_\_ and all the rights and privileges in said application and under any and all Letters Patent and any divisions, continuations, continuations-in-part, reexamination certificates, reissues, and extensions thereof that may be granted in the United States for said inventions; and I/we also concurrently hereby sell, assign and transfer to Taiwan Semiconductor Manufacturing Co., Ltd. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

I/We authorize Taiwan Semiconductor Manufacturing Co., Ltd. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from me/us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

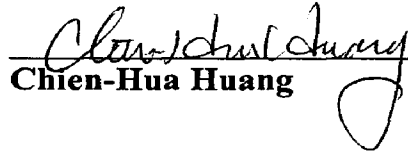
I/We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of Taiwan Semiconductor Manufacturing Co., Ltd. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

I/We request that any and all patents for said inventions be issued to Taiwan Semiconductor Manufacturing Co., Ltd. in the United States and in all countries foreign to the United States, or to such nominees as Taiwan Semiconductor Manufacturing Co., Ltd. may designate.

I/We agree that; when requested, I/we shall, without charge to Taiwan Semiconductor Manufacturing Co., Ltd. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

**Inventor No. 1:**

Dated: Dec. 23, 2004

  
Chien-Hua Huang

Residence:

3F., No.2, Decheng St., Hsinchu City 300, Taiwan (R.O.C.)

Citizenship: Taiwan