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| Name of conveying party(ies): | Name and address of receiving party(ies) | | | |
| Shine Chung Additional name(s) of conveying party(ies) attached? ☐ Yes ☒No | Name: Taiwan Semiconductor Manufacturing Co., Ltd. Internal Address: | | | |
| 3. Nature of conveyance: ☐ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name ☐ Other Execution Date: June 26, 2006 | Street Address: No. 8, Li-Hsin Road 6 Science Based Industrial Park City: Hsin-Chu State: Taiwan Zip: 300-77 Additional name(s) & address(es) attached? Yes X No | | | |
| 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: June 29, 2006 | | | | |
| A. Patent Application No.(s) B. Patent No.(s) | | | | |
| Additional numbers attached? ☐ Yes ☒ No | | | | |
| Name and address of party to whom correspondence concerning document should be mailed: | Total number of applications and patents involved: 1 | | | |

| 5. | Name and address of party to whom correspondence concerning document should be mailed: | | | |
|----|--|--|--|--|
| | Name: Howard Chen, Esq. | | | |
| | Internal Address: | | | |
| | | | | |
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| | Street Address: Preston Gates & Ellis LLP | | | |
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| | | | | |
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| '. Total fee (37 CFR 3.41)\$ 40.00 | | |
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07/03/2006 MGEBREM1 00000034 11477,311 40.00 OP 04 FC:8021

PATENT

REEL: 018025 FRAME: 0940

Express Mail Label No. EV 697834559 US Attorney Reference: 52604-00130

ASSIGNMENT AND AGREEMENT

For value received, I/we Shine Chung, 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 FOR TESTING MEMORY UNDER WORSE-THAN-NORMAL CONDITIONS described in an application for Letters Patent of the United States filed on June 29 2006 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.

Assignment and Agreement - Page - 1 -

PATENT REEL: 018025 FRAME: 0941 Express Mail Label No. EV 697834559 US Attorney Reference: 52604-00130

PATENT ATTY DOCKET NO.: TSMC2005-0425

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: | 126/06 | coelly |
|------------------------|--------------------------------------|-----------------|
| | Shine Ci nce: No. 19, Alley &, Fu | hung -De A) Rd. |
| | Sandlong, Taipei Hel | |
| Citizenship: | USA | |

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