

06-23-1999

U.S. Department of Commerce
Patent and Trademark Office

101072648

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

1. Name of Conveying Party:

1. Boon-Khim LIEW
2. Jing-Meng LIU

2. Name and Address of Receiving Party(ies):

Name: Taiwan Semiconductor Manufacturing Co., LTD.

Street Address: No. 9, Creation Rd. 1, Science-Based Industrial Park

☐ Additional names of conveying parties attached.

3. Nature of Conveyance

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other:

Execution Date: 1. **March 30, 1999**
 2. **April 9, 1999**

City, State, Zip: Hsinchu, Taiwan R.O.C.

☐ Additional name(s) and address(es) attached.

4. (A) Patent Application Number(s):

09/332,127

4. (B) Patent Number(s):

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

1. March 30, 1999
2. April 9, 1999

☐ Additional Numbers Attached.

5. Name and Address of Party to whom Correspondence Concerning this Document Should be Mailed:

Name: Harold L. Novick
 Address: **NATH & ASSOCIATES**
 1030 Fifteenth Street, N.W., Sixth Floor
 Washington, D.C. 20005

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:

14-0112

ATTACH DUPLICATE COPY OF THIS PAGE IF PAYING BY DEPOSIT ACCOUNT

06/22/1999 NTHAI1 00000056 09332127

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01 FC:581 9. Statement and Signature \$0.00 OP

To the best of my knowledge and belief, the foregoing is true and correct and any attached copy is a true copy of the original document.

Name of Person Signing

Harold L. Novick Reg. No. 26,011

Date

Attorney Docket No.: 82187

Total number of pages comprising cover sheet: 1

PATENT
REEL: 010036 FRAME: 0131

Docket No. 82187

ASSIGNMENT

This assignment agreement is applicable to an invention entitled (Invention Title) NOVEL PLACE AND ROUTE METHOD FOR INTEGRATED CIRCUIT DESIGN

The PATENT RIGHTS referred to in this agreement are:

(check one) ☒ a patent application for this invention, executed by the ASSIGNOR(S) concurrently with this assignment.

☐ U.S. patent application Serial No. _____, filed _____

☐ a U.S. patent application based on PCT International Application No. _____ filed on (date) _____ (U.S. patent application Serial No. _____, if known).

☐ U.S. patent No. _____, issued _____

The PATENT RIGHTS also include all divisions reissues, continuations and extensions of the patents and patent applications identified above.

The PATENT RIGHTS assigned under this agreement are:

(check one) ☒ U.S. patent rights only.

☐ Worldwide patent rights. In this case, the assignee shall have the right to claim the benefit of the filing date of any U.S. or foreign patent application for this invention.

The ASSIGNOR(S) referred to in this agreement is (or are) the inventor(s) whose signatures appear on page 2 of this Assignment and any Supplemental Sheet(s).

The ASSIGNEE referred to in this agreement is:

(Name of Assignee) TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.

(Address) NO. 9, CREATION RD. 1, SCIENCE-BASED INDUSTRIAL PARK, HSTNCHU, TAIWAN, R.O.C.

The ASSIGNEE is:

(check one) ☐ An individual.

☐ A Partnership.

☒ A Corporation of TAIWAN, R.O.C. (specify state or country)

☐ (other) _____

The ASSIGNOR(S), in consideration of \$10.00 paid by the ASSIGNEE, and other good and valuable consideration, receipt of which is acknowledged, hereby assign(s) the following rights to the ASSIGNEE, its successors and assigns:

the full and exclusive right to the invention;

the entire right, title and interest in and to the PATENT RIGHTS;

the right to sue and recover for any past infringement; and

PATENT
REEL: 010036 FRAME: 0132

THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO

ASSIGNEE: TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.INVENTION TITLE: NOVEL PLACE AND ROUTE MEHTOD FOR INTEGRATED
CIRCUIT DESIGN

As to all U.S. patent applications assigned under this agreement, the ASSIGNOR(S) hereby authorize(s) and request(s) the Commissioner of Patents and Trademark to issue all Letters Patent to the ASSIGNEE as the assignee of the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE, its successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE, or its representatives, any fact known to the ASSIGNOR(S) with respect to said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause and all Letter Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNOR(S) authorize(s) the attorneys and agents who have the power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been excuted.

<u>Boon-Khim LIEW</u>	<u><i>Boon-Khim Liew</i></u>	<u>3/30/99</u>
Name of sole or first inventor	Signature	Date
<u>Jing-Meng LIU</u>	<u>J.M. Liu</u>	<u>4/9/99</u>
Name of second inventor, if any	Signature	Date
<u></u>	<u></u>	<u></u>
Name of third inventor, if any	Signature	Date
<u></u>	<u></u>	<u></u>
Name of fourth inventor, if any	Signature	Date
<u></u>	<u></u>	<u></u>
Name of fifth inventor, if any	Signature	Date
<u></u>	<u></u>	<u></u>
Name of sixth inventor, if any	Signature	Date
<u></u>	<u></u>	<u></u>
Name of seventh inventor, if any	Signature	Date