

05-15-2003



102448078

PATENTS ONLY

COVER SHEET

U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office  
Docket No. 100-21200 (P05432)

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

1. Name of conveying party(ies):  
**WAI CHEONG CHAN  
JAMES THOMAS DOYLE  
PAVEL POPEVINE  
MURALI KRISHNA VARADARAJULA  
HSING-CHIEN ROY LIU  
GORDON MORTENSEN**

5-13-03

- Individual(s)
- General Partnership
- Corporation-State
- Association
- Limited Partnership
- Other

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

2. Name and address of receiving party(ies):  
Name: **NATIONAL SEMICONDUCTOR CORPORATION**  
Address: 2900 Semiconductor Drive, M/S D3-579  
City: Santa Clara State: CA  
Zip Code: 95051-8090

3. Nature of conveyance:  
 Assignment  
 Security Agreement  
 Other:  
 Merger  
 Change of Name

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

Execution Date: March 14, 2003, May 5, 2003, March 17, 2003, March 17, 2003, March 17, 2003 and March 17, 2003

4. Application number(s) or patent number(s): 10/351,061

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

A. Patent Application No.(s): 10/351,061

B. Patent No.(s):

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:  
**Mark C. Pickering, Esq.  
Law Offices of Mark C. Pickering  
P.O. Box 300  
Petaluma, CA 94953-0300  
Customer No. 33402**

6. Total number of applications and patents involved:

7. Total fee (37 C.F.R. § 3.41): \$40.00

- Enclosed
- Authorized to be charged to deposit account, referencing Attorney Docket No.

8. Deposit account number:

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §1.21 that may be required by this paper, or to credit any overpayment to Deposit Account No. 502305

**DO NOT USE THIS SPACE**

9. Statement and signature.

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

Name: Mark C. Pickering  
Registration No. 36,239

*Mark C. Pickering*  
Signature Date: 5-9-03

Total number of pages comprising cover sheet, attachments and document: 12

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

Mail Stop Assignment Recordation Services  
Director of the U.S. Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

05/14/2003 DBYRNE 00000030 10351061

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FINANCE SECTION  
MAY 13 PM 2:52

ASSIGNMENT

WHEREAS, WE, WAI CHEONG CHAN, JAMES THOMAS DOYLE, PAVEL POPLEVINE, MURALI KRISHNA VARADARAJULA, HSING-CHIEN ROY LIU and GORDON MORTENSEN, hereinafter referred to as "ASSIGNORS", have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: Closed-Loop, Supply-Adjusted ROM Memory Circuit  
Application Execution Date: January 24, 2003, February 4, 2003, January 24, 2003, January 24, 2003, January 24, 2003 and January 24, 2003  
Filing Date: January 24, 2003 Appln. No.: 10/351,061

WHEREAS, NATIONAL SEMICONDUCTOR CORPORATION, a corporation of the State of Delaware, 2900 Semiconductor Drive, M/S D3-579, Santa Clara, California 95051-8090, hereinafter referred to as "ASSIGNEE", is desirous of acquiring the entire right, title and interest in the said invention and application and in any Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to Assignors by Assignee, receipt of which is hereby acknowledged, Assignors has sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Assignee, and Assignee's successors and assigns, all right, title and interest in and to the said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions, reissues, prolongations or extensions thereof, 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 Assignors had this assignment and transfer not been made, to the full end and term of any Letters Patent.

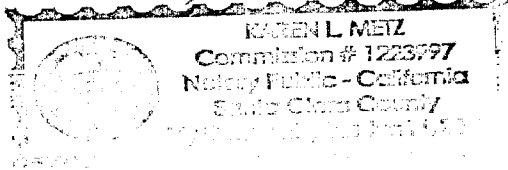
Assignors further agree that they will, without charge to said Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the 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 in any and all countries, and to vest title thereto in said Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: 3/14/2003 Chan Wai Cheong  
WAI CHEONG CHAN

State of California  
County of Santa Clara

On 3/14/03 before me, Karen L. Metz, personally appeared Wai Cheong Chan, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.  
Karen L Metz  
Signature of Notary

SEAL

Asmt2

IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: \_\_\_\_\_

JAMES THOMAS DOYLE

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_ personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary

SEAL

IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: 05/17/03

*Pavel Poplevine*  
PAVEL POPLIVINE

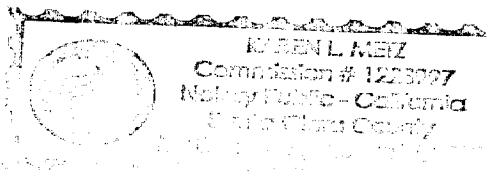
State of California

County of Santa Clara

On 3/17/03 before me, Karen L. Metz personally appeared Pavel Poplevine, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

*Karen L. Metz*  
Signature of Notary



SEAL

IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: 3/17/03

V. Murali Krishna

MURALI KRISHNA VARADARAJULA

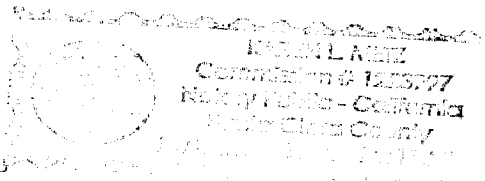
State of California

County of Santa Clara

On 3/17/03 before me, Karen L. Metz  
personally appeared Murali Krishna Varadarajula personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Karen L. Metz  
Signature of Notary



SEAL

IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: 3/17/03

Hsing-Chien Roy Liu

HSING-CHIEN ROY LIU

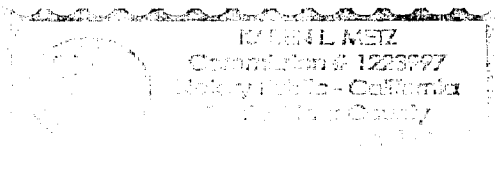
State of California

County of Santa Clara

On 3/17/03 before me, Karen L. Metz  
personally appeared Hsing-Chien Roy Liu personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Karen L. Metz  
Signature of Notary



SEAL

IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: 3/17/03

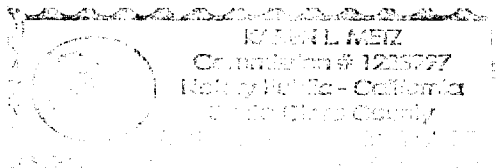
  
GORDON MORTENSEN

State of California

County of Santa Clara

On 3/17/03 before me, Karen L. Metz  
personally appeared Gordon Mortensen, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that ~~he/she/they~~ executed the same in ~~his/her/their~~ authorized capacity(ies), and that by ~~his/her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Karen L. Metz  
Signature of Notary

SEAL

ASSIGNMENT

WHEREAS, WE, WALCHEONG CHAN, JAMES THOMAS DOYLE, PAVEL POPLIVINE, MURALI KRISHNA VARADARAJULA, HSING-CHIEN ROY LIU and GORDON MORTENSEN, hereinafter referred to as "ASSIGNORS", have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: Closed-Loop, Supply-Adjusted ROM Memory Circuit  
Application Execution Date: January 24, 2003, February 4, 2003, January 24, 2003, January 24, 2003, January 24, 2003 and January 24, 2003  
Filing Date: January 24, 2003 Appln. No.: 10/351,061

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NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to Assignors by Assignee, receipt of which is hereby acknowledged, Assignors has sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Assignee, and Assignee's successors and assigns, all right, title and interest in and to the said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions, reissues, prolongations or extensions thereof, 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 Assignors had this assignment and transfer not been made, to the full end and term of any Letters Patent.

Assignors further agree that 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 in any and all countries, and to vest title thereto in said Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: \_\_\_\_\_  
WAI CHEONG CHAN

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_, personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
Signature of Notary

SEAL

IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: May 5, 2003

James Thomas Doyle  
JAMES THOMAS DOYLE

State of Colorado

County of Boulder

On 5/5/2003 before me, ~~James Thomas Doyle~~ MEREDITH A. JODZIO, personally appeared ~~James Thomas Doyle~~, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

MAJ  
JP

WITNESS my hand and official seal.

Meredith A. Jodzio  
Signature of Notary

**My Commission Expires 02-20-2005**

SEAL

IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: \_\_\_\_\_

\_\_\_\_\_  
PAVEL POPLEVINE

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_, personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
Signature of Notary

SEAL

IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: \_\_\_\_\_

\_\_\_\_\_  
MURALI KRISHNA VARADARAJULA

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_, personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
Signature of Notary

SEAL

IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: \_\_\_\_\_

\_\_\_\_\_  
HSING-CHIEN ROY LIU

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_, personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
Signature of Notary

SEAL



IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates indicated below.

Dated: \_\_\_\_\_  
GORDON MORTENSEN

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_, personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
Signature of Notary

SEAL