



102718175

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

1. Name of conveying party(ies):
Haiyun Tang, Karim Nassiri-Toussi, Ahmad Bahai

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

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

Execution Date: March 29, 2004

2. Name and address of receiving party(ies)
Name: National Semiconductor Corporation

Internal Address: _____

Street Address: 2900 Semiconductor Drive

M/S D3-579

City: Santa Clara State: CA Zip: 95051

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

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

10818061

If this document is being filed together with a new application, the execution date of the application is: 03/29/04

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: Mark A. Dalla Valle

Internal Address: Vedder, Price, Kaufman & Kammholz, P.C.

Street Address: 222 N. LaSalle St.

City: Chicago State: IL Zip: 60601

6. Total number of applications and patents involved:

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

Enclosed

Authorized to be charged to deposit account

8. Deposit account number:

22-0259

(Attach duplicate copy of this page if paying by deposit account)

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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.

Mark A. Dalla Valle

Name of Person Signing

[Signature]
Signature

April 5, 2004
Date

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

04/08/2004 MGETACHE 00000137 220259
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Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

2387 U.S. PTO
10/818061

040504

ASSIGNMENT

WHEREAS, WE, Haiyun Tang, Karim Nassiri-Toussi, and Ahmad Bahai, 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: APPARATUS FOR PRE-SCALING DATA PACKETS WITH MULTIPLE SIGNAL GAIN COEFFICIENTS IN A SIMO/MISO TRANSCEIVER FOR COMMUNICATION WITH A SISO TRANSCEIVER

Application Execution Date:

Filing Date: Appln. No.:

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.

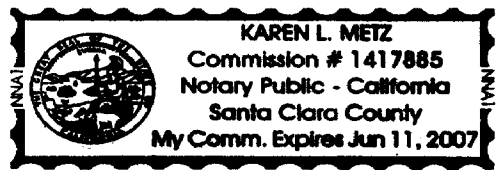
Dated: 03/29/04

[Signature of Haiyun Tang]
HAIYUN TANG

State of California
County of Santa Clara

On March 29, 2004 before me, Karen L. Metz

personally appeared HAIYUN TANG, 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 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: 29th of March 2004

KARIM TOUSSI
KARIM TOUSSI

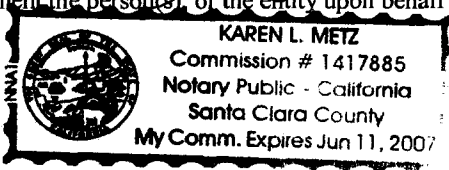
State of _____

County of _____



On March 29, 2004 before me, Karen L. Metz

personally appeared KARIM NASSIRI-TOUSSI, 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: 3/29/04

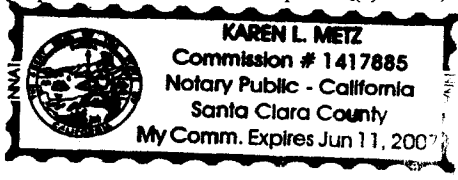
AHMAD BAHAI
AHMAD BAHAI

State of California

County of Santa Clara

On March 29, 2004 before me, Karen L. Metz

personally appeared AHMAD BAHAI, 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

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