

10-13-2000

PATENT DOCKET NO: M-5789 US

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To the Honorable Director of the United States Patent and Trademark Office. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

- (a) Thulasinath Manickam
- (b) Sreen Raghavan
- (c) Peter J. Sallaway

Additional name(s) of conveying party(ies) attached?

Yes No

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

Name: National Semiconductor Corporation

Street Address: 2900 Semiconductor Drive

City: Santa Clara State: CA Zip: 95051

Country: USA

3. Nature of Conveyance:

- Assignment Merger
- Security Agreement Change of Name
- Other _____

Execution Date: _____

Name and address of receiving party(ies):

Name: _____
 Street Address: _____
 City: _____ State: _____ Zip: _____
 Country: _____

4. Application number(s) or patent number(s): Application No. 09/561,086

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

A. Patent Application No.(s) - n/a

Title: Optimal Signal Processing For Twisted Pair Transceivers

B. Patent No.(s) n/a

Additional numbers attached? Yes No

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

Name: GARY J. EDWARDS
 Internal Address: SKJERVEN MORRILL MacPHERSON LLP
 Street Address: 25 METRO DRIVE, SUITE 700
 City SAN JOSE State CA ZIP 95110

6. Total number of applications and patents involved: 1

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

- Authorized to be charged to Deposit Account 19-2386
- Charge Deposit Account 19-2386 for any additional fees required for this conveyance and credit deposit account 19-2386 any amounts overpaid

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8. 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.

Gary J. Edwards 41,008
Name of Person Signing

Gary J. Edwards
Signature

8/1/00
Date

Total number of pages comprising cover sheet: 3

ASSIGNMENT

For good and valuable consideration, receipt of which is hereby acknowledged, we Tulsi Manickam, Sreen Raghavan, and Peter J. Sallaway hereby sell, assign and transfer to National Semiconductor Corporation, a Delaware corporation, having a place of business at 2900 Semiconductor Drive, Santa Clara, California, its successors and assigns, the entire right, title and interest throughout the world in our invention in

Optimal Signal Processing For Twisted Pair Transceivers

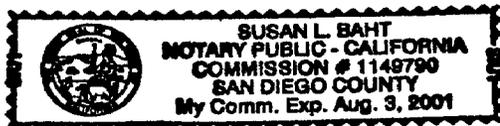
for which we filed a United States Patent Application on 04/28/2000, and now has Serial No. 09/561,086, and all patent applications and patents of every country for said invention, including divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said applications; we authorize the above-named assignee to apply for patents of foreign countries for said invention, and to claim all rights of priority without further authorization from us; we agree to execute all papers useful in connection with said United States and foreign applications, and generally to do everything possible to aid said assignee, their successors, assigns and nominees, at their request and expense, in obtaining and enforcing patents for said invention in all countries; and we request the Commissioner of Patents and Trademarks to issue all patents granted for said invention to the above-named assignee, its successors and assigns.

Executed this 27 day of JULY, 2000.

M. L. Tu
Tulsi Manickam
Thulasinath
SB. Mea

State of CALIF.)
County of SAN DIEGO) ss.

On JULY 27, 2000 before me, SUSAN L. BAHT personally appeared THULASINATH MANICKAM 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.
Susan L. Baht
SIGNATURE OF NOTARY

Executed this 27 day of JULY, 2000.

[Signature]
Sreen Raghavan

State of CALIFORNIA
County of SAN DIEGO) ss.

On JULY 27, 2000 before me, SUSAN L. BAHT personally appeared SREEN RAGHAVAN 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]
SIGNATURE OF NOTARY

Executed this 27 day of JULY, 2000.

[Signature]
Peter J. Sallaway

State of CALIFORNIA
County of SAN DIEGO) ss.

On JULY 27, 2000 before me, SUSAN L. BAHT personally appeared PETER J. SALLAWAY 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]
SIGNATURE OF NOTARY