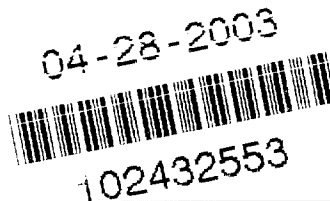




A41350.1A

FORM PTO-1595

U.S. Department of
Commerce
Patent and Trademark Office

To the Assistant Commissioner For Patents. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies)

John W. Orcutt
Andrew S. Dewa
Herzel Laor
David I. Forehand (see Petition under 37 CFR 1.147)
James A. Sisco

4-9-03

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

Name: **Texas Instruments Incorporated**Address: **P.O. Box 655474, MS 3999**City: **Dallas**State: **Texas** Zip: **75265**Additional name(s) & address(es) attached? ___ Yes X NoAdditional name(s) & address(es) attached? ___ Yes X No

3. Nature of Conveyance:

X Assignment ___ Merger
___ Security Agreement ___ Change of Name
___ Other _____

Execution Date: 02/18/2003; 02/18/2003; 02/14/2003; (Forehand-unsigned); 03/05/2003; respectively

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

___ This document is being filed together with a new application
Execution date of the application:

Title:

Docket No.:

A. Patent Application No.(s): **10/290,691**

B. Patent No.(s)

Additional numbers attached? ___ Yes X No

Additional numbers attached ___ Yes ___ No

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

Name: **Charles A. Brill, Patent Attorney**
Texas Instruments IncorporatedAddress: **P.O. Box 655474, MS 3999**City: **Dallas**State: **Texas** Zip: **75265**6. Number of applications and patents involved: 17. Amount of fee enclosed or authorized to be charged : **\$40**8. Deposit account number **20-0668**.
(Triplicate copies are not necessary)

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.

Signature

Charles A. Brill, Reg. No. 37,786

Name of Person Signing

4-3-2003

Date

Total number of pages including cover sheet, attachments, and document: 7

04/11/2003 BLUANG1 00000033 200668 10290691

03 FC:8021

40.00 CH

OFFICE OF PETITIONS

PATENT
REEL: 013989 FRAME: 0579

ASSIGNMENT

WHEREAS, I, the undersigned inventor (or each of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

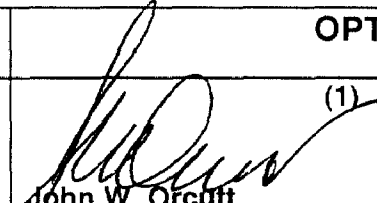
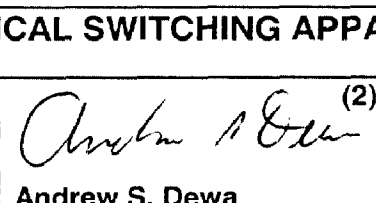
WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the State of Delaware, with a place of business at 7839 Churchill Way, MS 3999, Dallas, Texas 75251, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my entire right, title and interest in and to the said invention and in and to the said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said TEXAS INSTRUMENTS INCORPORATED, as assignee of my entire right, title and interest.

I also hereby sell and assign to TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said TEXAS INSTRUMENTS INCORPORATED, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said TEXAS INSTRUMENTS INCORPORATED, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set hand and seal this day and year;

| | | | |
|--------------------------------|--|---|------------------------|
| TITLE OF INVENTION | OPTICAL SWITCHING APPARATUS | | |
| SIGNATURE OF INVENTOR AND NAME | (1)  John W. Orcutt | (2)  Andrew S. Dewa | (3) Herzel Laor |
| DATE | FEB 18 '03 | 18 Feb. 2003 | |
| RESIDENCE (City, State) | Richardson, Texas | Plano, Texas | Boulder, Colorado |
| DATE APPLICATION EXECUTED | FEB 18 '03 | 18 Feb. 2003 | |

After recording, return Assignment to:

Charles A. Brill
Texas Instruments Incorporated
P.O. Box 655474, MS 3999
Dallas, Texas 75265

| | | | |
|---|------------------------------------|------------------------------|-------------------|
| TITLE OF INVENTION | OPTICAL SWITCHING APPARATUS | | |
| SIGNATURE OF INVENTOR AND NAME | (4) David I. Forehand | (5) James A. Sisco | (6) N/A |
| DATE | | | |
| RESIDENCE (City, State) | Plano, Texas | Esmond, Rhode Island | |
| DATE APPLICATION EXECUTED | | | |

After recording, return Assignment to:

Charles A. Brill
Texas Instruments Incorporated
P.O. Box 655474, MS 3999
Dallas, Texas 75265

ASSIGNMENT

WHEREAS, I, the undersigned inventor (or each of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

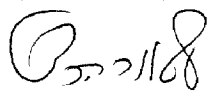
WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the State of Delaware, with a place of business at 7839 Churchill Way, MS 3999, Dallas, Texas 75251, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my entire right, title and interest in and to the said invention and in and to the said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said TEXAS INSTRUMENTS INCORPORATED, as assignee of my entire right, title and interest.

I also hereby sell and assign to TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said TEXAS INSTRUMENTS INCORPORATED, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said TEXAS INSTRUMENTS INCORPORATED, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set hand and seal this day and year;

| TITLE OF INVENTION | OPTICAL SWITCHING APPARATUS | | |
|---|-----------------------------|---------------------------|---|
| SIGNATURE OF INVENTOR AND NAME | (1) John W. Orcutt | (2) Andrew S. Dewa | (3)  Herzel Laor |
| DATE | | | Feb. 14, 2003 |
| RESIDENCE (City, State) | Richardson, Texas | Plano, Texas | Boulder, Colorado |
| DATE APPLICATION EXECUTED | | | Feb 14, 2003 |

After recording, return Assignment to:

Charles A. Brill
Texas Instruments Incorporated
P.O. Box 655474, MS 3999
Dallas, Texas 75265

| | | | |
|---|------------------------------------|------------------------------|-------------------|
| TITLE OF INVENTION | OPTICAL SWITCHING APPARATUS | | |
| SIGNATURE OF INVENTOR AND NAME | (4) David I. Forehand | (5) James A. Sisco | (6) N/A |
| DATE | | | |
| RESIDENCE (City, State) | Plano, Texas | Esmond, Rhode Island | |
| DATE APPLICATION EXECUTED | | | |

After recording, return Assignment to:

Charles A. Brill
Texas Instruments Incorporated
P.O. Box 655474, MS 3999
Dallas, Texas 75265

ASSIGNMENT

WHEREAS, I, the undersigned inventor (or each of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the State of Delaware, with a place of business at 7839 Churchill Way, MS 3999, Dallas, Texas 75251, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my entire right, title and interest in and to the said invention and in and to the said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said TEXAS INSTRUMENTS INCORPORATED, as assignee of my entire right, title and interest.

I also hereby sell and assign to TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.


I hereby further agree that I will communicate to said TEXAS INSTRUMENTS INCORPORATED, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said TEXAS INSTRUMENTS INCORPORATED, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set hand and seal this day and year;

| TITLE OF INVENTION | OPTICAL SWITCHING APPARATUS | | |
|---|-----------------------------|----------------|-------------------|
| SIGNATURE OF INVENTOR AND NAME | (1) | (2) | (3) |
| | John W. Orcutt | Andrew S. Dewa | Herzel Laor |
| DATE | | | |
| RESIDENCE (City, State) | Richardson, Texas | Plano, Texas | Boulder, Colorado |
| DATE APPLICATION EXECUTED | | | |

After recording, return Assignment to:

Charles A. Brill
 Texas Instruments Incorporated
 P.O. Box 655474, MS 3999
 Dallas, Texas 75265

| | | | |
|---|------------------------------------|--|-------------------|
| TITLE OF INVENTION | OPTICAL SWITCHING APPARATUS | | |
| SIGNATURE OF INVENTOR AND NAME | (4) David I. Forehand | (5)  James A. Sisco | (6) N/A |
| DATE | | 3-5-03 | |
| RESIDENCE (City, State) | Plano, Texas | Esmond, Rhode Island | |
| DATE APPLICATION EXECUTED | | 3-5-03 | |

After recording, return Assignment to:

Charles A. Brill
Texas Instruments Incorporated
P.O. Box 655474, MS 3999
Dallas, Texas 75265