



05-13-2003



FORM PTO-595

TI-34247

RE

102446172

U.S. Department of Commerce  
Patent and Trademark Office

To the Ass't Commissioner for Patents. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

- 5-6-03
- ( ) Texas Instruments - Japan (4/21/03)
  - ( ) Yuji Itoh (4/16/03)
  - ( ) Ho-Cheon Wey (4/16/03)
  - ( ) Ngai-Man Cheung (4/20/03)

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

Name: TEXAS INSTRUMENTS INCORPORATED  
Address: P.O. Box 655474, MS 3999  
City: Dallas  
State: TX Zip: 75265

Additional name(s) &amp; address(es) attached? \_\_\_ Yes \_\_\_X\_\_\_ No

3. Nature of Conveyance:

\_\_\_X\_\_\_ Assignment      \_\_\_ Merger  
\_\_\_ Security Agreement      \_\_\_ Change of Name  
\_\_\_ Other \_\_\_\_\_

Execution Date: April 16, 20 and 21, 2003

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

\_\_\_ This document is being filed together with a new application.

Execution date of the application: April 16 and 20, 2003

Title Motion Estimation Using Early Decision for Goodness of Estimation With Quick Convergence Feedback

Docket No: TI-34247

A. Patent Application No.(s)

S.N. 10/364,094

B. Patent No.(s)

X,XXX,XXX

Additional numbers attached? \_\_\_ Yes \_\_\_X\_\_\_ No

Additional numbers attached? \_\_\_ Yes \_\_\_X\_\_\_ No

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

Name: Robert D. Marshall, Jr.  
Texas Instruments Incorporated  
Address: P.O. Box 655474, MS 3999  
City: Dallas  
State: TX Zip: 75265

6. Number of applications and patents involved: \_\_\_(1)\_\_\_

7. Amount of fee enclosed or authorized to be charged: \$40

8. Deposit Account No: 20-0668 (No duplicate copy is needed).

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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.*

April 30, 2003  
Date

Robert D. Marshall, Jr., #28,527

Total Number of Pages Including Cover Sheet, Attachments and Document: \_\_\_5\_\_\_

05/12/2003 6TON11 00000134 200668 10364094

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PATENT  
REEL: 014047 FRAME: 0782

## ASSIGNMENT

**WHEREAS, TEXAS INSTRUMENTS JAPAN, LTD.** (hereinafter **TIJ**), a Japanese company having its headquarters at 24-1 Nishi-Shinjuku 6-chome, Shinjuku-ku, Tokyo, Japan, under the laws of Japan made application, in its own name, for Letters Patent in Japan in respect of an invention as set forth below;

**WHEREAS**, the or each below named inventor (hereinafter **INVENTOR**) is the or an inventor of the said invention;

**WHEREAS, TEXAS INSTRUMENTS INCORPORATED**, a corporation organized and existing under the laws of the State of Delaware, having a place of business at 7839 Churchill Way, Mail Station 3999, Dallas, Texas 75251, USA, is desirous of acquiring the entire right, title and interest in and to the said invention outside of Japan, and in and to the U.S. patent application as identified hereinafter and any Letters Patent that may issue thereon;

**NOW, THEREFORE**, for good and valuable consideration, the receipt of which is hereby acknowledged, by this Assignment, **TIJ** and **INVENTOR** sell and assign to the said **TEXAS INSTRUMENTS INCORPORATED**, its successors and assigns the entire right, title and interest in and to the said invention in the U.S.A. and all other countries outside Japan; in and to the U.S. patent application as identified below and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and the right to file applications and obtain patents in its own name in any said other country or group of countries, and to claim priority under the terms of the International Convention for the Protection of Industrial Property or any other relevant convention;

**TIJ** and **INVENTOR** hereby authorize and request the Commissioner of Patents to issue U.S. patents for said invention, or U.S. patents resulting therefrom, insofar as the interest of **TIJ** and **INVENTOR** is concerned to the said **TEXAS INSTRUMENTS INCORPORATED**, as assignee of the entire right, title and interest.

**TIJ** and **INVENTOR** further agree to communicate to **TEXAS INSTRUMENTS INCORPORATED** or to its successors, assigns and legal representatives, any facts known to **TIJ** and **INVENTOR** respecting the said invention, and at the expense of **TEXAS INSTRUMENTS INCORPORATED**, sign any and all patent applications, assignments, affidavits and other lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, testify in any legal or quasi-legal proceedings 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 outside of Japan.

**PATENT**  
**REEL: 014047 FRAME: 0784**

## ASSIGNMENT

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**WHEREAS**, the or each below named inventor (hereinafter **INVENTOR**) is the or an inventor of the said invention;

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**TIJ** and **INVENTOR** hereby authorize and request the Commissioner of Patents to issue U.S. patents for said invention, or U.S. patents resulting therefrom, insofar as the interest of **TIJ** and **INVENTOR** is concerned to the said **TEXAS INSTRUMENTS INCORPORATED**, as assignee of the entire right, title and interest.

**TIJ** and **INVENTOR** further agree to communicate to **TEXAS INSTRUMENTS INCORPORATED** or to its successors, assigns and legal representatives, any facts known to **TIJ** and **INVENTOR** respecting the said invention, and at the expense of **TEXAS INSTRUMENTS INCORPORATED**, sign any and all patent applications, assignments, affidavits and other lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, testify in any legal or quasi-legal proceedings 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 outside of Japan.

**TITLE: Motion Estimation Using Early Decision for Goodness of Estimation With Quick Convergence Feedback**

**Japanese Serial No.:**

**Filed:**

**U.S. Application Serial No.:** n/a

**Filed:** n/a

**U.S. Application Serial No.:** 10/364,094

**Filed:** February 11, 2003

**IN WITNESS WHEREOF**, this Agreement has been executed as set forth below;

Signed at \_\_\_\_\_ on \_\_\_\_\_.

by **Texas Instruments Japan, Ltd.**

Name \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

and by the **INVENTORS:**

\_\_\_\_\_  
Yuji Itoh

\_\_\_\_\_  
Date

\_\_\_\_\_  
Ho-Cheon Wey

\_\_\_\_\_  
Date

X Ngai - Man  
\_\_\_\_\_  
Ngai-Man Cheung

X 4/20/03  
\_\_\_\_\_  
Date