To the Director of the U.S. Patent and Trademark Office: Please record the attached original document or copy thereof.

1. A. Name of conveying parties:
   1) Masahiro KANAI
   2) Terahiko KAMEI

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

2. A. Name and address of receiving party:
   SEIKO EPSON CORPORATION  
   4-1, NISHI-SHINJUKU 2-CHOME,  
   SHINJUKU-KU, TOKYO, JAPAN

   HALO LSI DESIGN & DEVICE TECHNOLOGY, INC.  
   140 OLD HOPEWELL RD., WAPPINGERS FALLS,  
   NY 12590 U.S.A.

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

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

   B. Execution Date: 1) November 20, 2001 2) October 28, 2001

4. A. If this document is being filed together with a new application, the execution date of the application is: ____________________

   B. Patent Application No(s) 09/955,158

   C. Patent No(s) ____________________

   Additional numbers attached?  □ Yes □ No

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

   Name: James A. Olliff

   Address: OLLIFF & BERRIDGE, PLC
   P.O. Box 19298
   Alexandria, VA 22320

6. Total number of applications and patents involved: 3

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

   B. Enclosed (Check No. 125729 ___)

8. Credit any overpayment or charge any underpayment to deposit account number 15-0461.

   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.

   Date: December 10, 2001

   James A. Olliff Registration No. 27,075
   Thomas J. Pardini Registration No. 30,411

   Total number of pages including cover sheet, attachments, and document: 3
Assignment

For good and valuable consideration, the receipt of which is hereby acknowledged, I/W, the undersigned,
Masahiro KANAI, Teruhiko KAME,
who have created a certain invention for which an application for United States Letters Patent
executed by ME/US on even date herewith.
executed by ME/US or _____ (respectively),
filed on September 19, 2001 and assigned Serial No. 09/955,158.
filed as International Application No. _____ filed on
and entitled:

PROGRAMMING METHOD FOR NON-VOLATILE SEMICONDUCTOR MEMORY DEVICE

Do hereby sell, assign and transfer to Seiko Epson Corporation, a corporation of Japan, having a place of business at 4-1, Nishi-shinjuku 2-chome, Shinjuku-ku, Tokyo, Japan, and Halo LSI Design & Device Technology, Inc., a corporation of U.S.A., having a place of business at 140 Old Hopewell Road, Wappingers Falls, NY 12590 U.S.A., their respective successors, assigns, and legal representatives, the full and exclusive right to said invention and said application and to any and all inventions described in said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties:

Agree that Seiko Epson Corporation and Halo LSI Design & Device Technology, Inc. hereinafter referred to as Assignees, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in their own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignees, their successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi-legal proceedings; communicate to said Assignees, their successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignees, their respective successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignees, their successors, assigns, or legal representatives; and
Covenant with said Assignees, their respective successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

I/WE, the undersigned do further agree that this Assignment is to be construed solely according to the terms of the English language portions thereof.

IN TESTIMONY WHEREOF I/WE have hereunto set MY/OUR signature seal on the date indicated below.

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<th>唯一または第一発明者名</th>
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<tr>
<td>金井正博</td>
<td>Masahiro KANAI</td>
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<tr>
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<td>金井正博</td>
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<td>亀井輝彦</td>
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<tr>
<td>発明者の署名</td>
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<td>亀井輝彦</td>
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RECORDED: 12/10/2001  
PATENT  
REEL: 012353 FRAME: 0960