U.S. SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 3

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(f) of the Investment Company Act of 1940

1. Name and Address of Reporting Person

Sallen, Melvin J.

(Last)               (First)                 (Middle)

790 Boylston Street, Apt. 21H

(Street)

Boston, MA   02199

(City)               (State)                 (Zip)


2. Date of Event Requiring Statement (Month/Day/Year)

1/29/98


3. IRS or Social Security Number of Reporting Person (Voluntary)


4. Issuer Name and Ticker or Trading Symbol

Mercury Computer Systems, Inc.   MRCY


5 Relationship of Reporting Person to Issuer

(Check all applicable)

[ X ]   Director                             [ ]   10% Owner
[ ]   Officer (give title below)           [ ]   Other (specify below)


6. If Amendment, Date of Original (Month/Year)


--- Table I -- Non-Derivative Securities Beneficially Owned ---

3. Ownership Form:

<table>
<thead>
<tr>
<th>1. Title of Security</th>
<th>2. Amount of Securities Direct (D) or Beneficially Owned (Instr. 4)</th>
<th>4. Nature of Indirect Beneficial Ownership (Instr. 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

(Print or Type Responses)

FORM 3 (continued)

Table II -- Derivative Securities Beneficially Owned
(e.g. puts, calls, warrants, options, convertible securities)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock Option (right to buy)</td>
<td>7/30/06</td>
<td>Common</td>
<td>1,812</td>
<td>4.00</td>
<td>D</td>
<td></td>
<td>Direct</td>
</tr>
<tr>
<td>Stock Option (right to buy)</td>
<td>9/30/06</td>
<td>Common</td>
<td>1,812</td>
<td>4.00</td>
<td>D</td>
<td></td>
<td>Indirect</td>
</tr>
<tr>
<td>Stock Option (right to buy)</td>
<td>10/20/07</td>
<td>Common</td>
<td>2,406</td>
<td>4.00</td>
<td>D</td>
<td></td>
<td>Beneficial</td>
</tr>
</tbody>
</table>

Explanation of Responses:
*fully exercisable

/s/Melvin J. Sallen 1/29/98

**Signature of Reporting Person Date

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations.


Note: File three copies of this Form, one of which must be manually signed. If space provided is insufficient. See Instruction 6 for procedure.