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

Memorial Drive Trust

(Last)               (First)                 (Middle)
c/o MDT Advisers, 125 CambridgePark Drive

(Street)

Cambridge, MA   02140

(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)

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

Director of the Medical Business Group

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

Table I -- Non-Derivative Securities Beneficially Owned

<table>
<thead>
<tr>
<th>1. Title of Security</th>
<th>2. Amount of Securities Direct (D) or Indirect (I)</th>
<th>3. Ownership Form: Beneficially Owned (Instr. 4)</th>
<th>4. Nature of Indirect Beneficial Ownership (Instr. 5)</th>
</tr>
</thead>
</table>

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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>1. Title of Security (Instr. 4)</th>
<th>2. Date Exercisable (Month/Day/Year)</th>
<th>3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)</th>
<th>4. Conversion or Exercisability of Derivative Security</th>
<th>5. Ownership ship Form of Derivative Security: Direct (D) or Indirect (I)</th>
<th>6. Nature of Beneficial Ownership (Instr. 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Explanation of Responses:

Memorial Drive Trust

By: 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.