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
   Bertelli, James R.
   (Last)               (First)                 (Middle)
   51 Green Heron Lane
   (Street)
   Nashua, NH   03062
   (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
   [ ] 10% Owner
   [ X ] Officer (give title below)
   [ ] Other (specify below)
   President

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

Table I -- Non-Derivative Securities Beneficially Owned

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

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OMB APPROVAL
OMB Number 3235-0104
Expires: April 30, 1997
Estimated average burden
hours per response ....... 0.5
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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></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock Option</td>
<td>7/30/06</td>
<td>Common</td>
<td>4.00</td>
<td>D</td>
</tr>
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<td>Common</td>
<td>4.00</td>
<td>D</td>
</tr>
<tr>
<td>Stock Option</td>
<td>12/2/06</td>
<td>Common</td>
<td>4.00</td>
<td>D</td>
</tr>
<tr>
<td>Stock Option</td>
<td>9/8/07</td>
<td>Common</td>
<td>4.00</td>
<td>D</td>
</tr>
<tr>
<td>Stock Option</td>
<td>10/20/08</td>
<td>Common</td>
<td>8.00</td>
<td>D</td>
</tr>
</tbody>
</table>

Explanation of Responses:
(1) The option to purchase 6,000 shares is exercisable. The remainder will vest in equal increments on July 30 of each of 1998, 1999.
(2) 50% of the option is exercisable; 50% will vest on July 31, 1998.
(3) 50% of the option is exercisable; 50% will vest on December 2, 1998.
(4) The option to purchase 4,301 shares will vest on September 8, 1998.
(5) The option to purchase 11,250 shares will vest on October 20, 1998.
The remaining options will vest in equal increments on October 20 of each of 1999, 2000 and 2001.

/s/James R. Bertelli 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.