STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

[ ] Check this box if no longer subject of Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

1. Name and Address of Reporting Person

Bertelli, James

(Last)               (First)                 (Middle)

34 Powers Road

(Street)

Hollis, NH   03049

(City)               (State)                 (Zip)

2. Issuer Name and Ticker or Trading Symbol

Mercury Computer Systems, Inc. ("MRCY")

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

4. Statement for Month/Year

December 2000

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

6. Relationship of Reporting Person to Issuer (Check all applicable)

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

President and Chief Executive Officer

7. Individual or Joint/Group Filing (Check Applicable Line)

[ X ] Form filed by One Reporting Person

[ ] Form filed by More than One Reporting Person
Table I -- Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

<table>
<thead>
<tr>
<th>Title of Security</th>
<th>Transaction Code</th>
<th>Date (mm/dd/yy)</th>
<th>Transaction Code (Instr. 8)</th>
<th>Amount (Instr. 3, 4 and 5)</th>
<th>Price (Instr. 4)</th>
<th>Ownership Form: Direct or Indirect Beneficial Ownership (Instr. 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Stock</td>
<td>G V</td>
<td>12/28/00</td>
<td></td>
<td>200 D</td>
<td>863,620(1) D</td>
<td></td>
</tr>
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</tr>
</tbody>
</table>

**Reminder:** Report on a separate line for each class of securities beneficially owned directly or indirectly.

FORM 4 (continued)

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

<table>
<thead>
<tr>
<th>Title of Derivative Security (Instr. 3)</th>
<th>Expiration Date (Month/Day/Year)</th>
<th>Derivative Code of (Instr. 3)</th>
<th>Transaction Code (Instr. 3, 4 and 5)</th>
<th>Amount (Instr. 3, 4 and 5) of Underlying Securities</th>
<th>Price (Instr. 4)</th>
<th>Nature of Derivative (D) or Beneficial Ownership (Instr. 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Stock</td>
<td>12/28/00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Explanation of Responses:**

/s/James R. Bertelli

**Signature of Reporting Person**

January 8, 2001

**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 procedures.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.