

MERCURY COMPUTER SYSTEMS INC  
 Form 4  
 September 12, 2006

**FORM 4** UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
 Washington, D.C. 20549

OMB APPROVAL

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

**STATEMENT OF CHANGES IN 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(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person \*  
**FLOOD DOUGLAS**

2. Issuer Name and Ticker or Trading Symbol  
**MERCURY COMPUTER SYSTEMS INC [MRCY]**

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)

3. Date of Earliest Transaction (Month/Day/Year)  
**09/11/2006**

\_\_\_\_ Director \_\_\_\_\_ 10% Owner  
 Officer (give title below) \_\_\_\_\_ Other (specify below)

VP, Corporate Development

**4 CONSTITUTION DRIVE**

(Street)

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)  
 Form filed by One Reporting Person  
 Form filed by More than One Reporting Person

**SOUTHBOROUGH, MA 01772**

(City) (State) (Zip)

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|-----------------------------------|
|                                 |                                      |  | Code                           | V Amount (D) Price  |   |  |                                   |
| Common Stock                    | 09/11/2006                           |  | A                              | 11,703 A \$0 (1)  | 21,379  | D  |                                   |

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

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SEC 1474 (9-02)

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

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| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | 6. Date Exercisable and Expiration Date (Month/Day/Year) | 7. Title and Amount of Underlying Security (Instr. 3 and 4) | Amount or Number of Shares |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|----------------------------|
| Employee Stock Option (right to buy)       | \$ 23.438  | 09/11/2006                           |  | D                              | 13,500  | 11/02/2000 <sup>(2)</sup> 11/02/2009                     | Common  | 13,500                     |
| Employee Stock Option (right to buy)       | \$ 30.063  | 09/11/2006                           |  | D                              | 10,500  | 10/10/2001 <sup>(4)</sup> 10/10/2010                     | Common  | 10,500                     |
| Employee Stock Option (right to buy)       | \$ 25.55   | 09/11/2006                           |  | D                              | 2,810   | 09/10/2002 <sup>(5)</sup> 09/10/2011                     | Common  | 2,810                      |
| Employee Stock Option (right to buy)       | \$ 37.15   | 09/11/2006                           |  | D                              | 10,000  | 10/15/2002 <sup>(6)</sup> 10/15/2011                     | Common  | 10,000                     |
| Employee Stock Option (right to buy)       | \$ 23.46   | 09/11/2006                           |  | D                              | 10,000  | 07/28/2005 <sup>(7)</sup> 07/28/2014                     | Common  | 10,000                     |

## Reporting Owners

| Reporting Owner Name / Address                                  | Relationships |           |                           |       |
|---|---------------|-----------|---------------------------|-------|
|   | Director      | 10% Owner | Officer                   | Other |
| FLOOD DOUGLAS<br>4 CONSTITUTION DRIVE<br>SOUTHBOROUGH, MA 01772 |               |           | VP, Corporate Development |       |

## Signatures

Craig Barrows,  
Attorney-in-fact

09/12/2006

\_\_Signature of Reporting Person

Date

## Explanation of Responses:

- \* If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).  

On September 11, 2006, Mercury Computer Systems, Inc. cancelled, pursuant to its option exchange program, options granted to the reporting person on November 2, 1999, October 10, 2000, September 10, 2001, October 15, 2001 and July 28, 2004. In exchange the reporting person received a restricted stock award covering 11,703 shares which vests as to two-thirds of the covered shares on September 11, 2008 and one-third of the covered shares on September 11, 2009.
- (1) The cancelled option provided for vesting in four equal installments commencing on November 2, 2000.
- (2) Field N/A to this transaction but was completed to allow for electronic filing only.
- (3) The cancelled option provided for vesting in four equal installments commencing on October 10, 2001. On June 20, 2005 the Company fully accelerated the vesting of this option.
- (4) The cancelled option provided for vesting in four equal installments commencing on September 10, 2002.
- (5) The cancelled option provided for vesting in four equal installments commencing on October 15, 2002. On June 20, 2005 the Company fully accelerated the vesting of this option.
- (6) The cancelled option provided for vesting in four equal installments commencing on July 28, 2005.
- (7)

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

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