

FORM 5

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL	
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ANNUAL STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

- Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).
- Form 3 Holdings Reported.
- Form 4 Transactions Reported.

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>BATY GORDON</u> (Last) (First) (Middle) <u>11 CASTLE ROAD</u> (Street) <u>LEXINGTON MA 02420</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>MERCURY COMPUTER SYSTEMS INC</u> [<u>MRCY</u>]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below)
	3. Statement for Issuer's Fiscal Year Ended (Month/Day/Year) <u>06/30/2006</u>	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	

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 at end of Issuer's Fiscal Year (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
				Amount	(A) or (D)	Price			
Common Stock	05/01/2000		G ⁽¹⁾	25,000	D	\$0.00	0 ⁽²⁾	D ⁽¹⁾	
Common Stock	05/01/2000		G ⁽³⁾	25,000	D	\$0.00	0 ⁽²⁾	D	
Common Stock	04/06/2001		S	22,000	D	\$32.688	0 ⁽²⁾	D	
Common Stock	04/27/2001		S	3,000	D	\$50.16	0 ⁽²⁾	I	By Spouse
Common Stock	06/08/2001		G ⁽³⁾	5,000	D	\$0.00	0 ⁽²⁾	D	
Common Stock	07/21/2004		G ⁽³⁾	10,000	D	\$0.00	0 ⁽²⁾	D	
Common Stock	10/28/2005		G	32,000	D	\$0.00	56,864 ⁽⁴⁾	D	
Common Stock							17,000 ⁽⁵⁾	I	By Spouse

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

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 Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
					(A)	(D)	Date Exercisable	Expiration Date					

Explanation of Responses:

- Gift to Dr. Baty's wife resulting in a change in form of ownership from direct to indirect.
- Field N/A to this transaction but was completed to allow for electronic filing only.
- Gift to the Baty Family Foundation Trust; thereafter, Dr. Baty had no pecuniary interest in such shares.
- Total direct ownership of Dr. Baty at June 30, 2006 includes adjustments for: (a) distribution of 2,507 shares from First Stage Limited Partnership in September 1998, resulting in a change in form of ownership from indirect to direct (First Stage subsequently disposed of all other shares of Common Stock formerly reported as indirectly owned by Dr. Baty); (b) 2-for-1 stock split with respect to the Common Stock in December 1999, resulting in the acquisition of 110,932 shares by Dr. Baty; (c) transfers by the Baty Family Foundation Trust in October 2000 (5,000 shares), October 2002 (10,000 shares) and August 2004 (10,000 shares), which were erroneously attributed to shares directly owned by Dr. Baty; and (d) the adjustments described in footnote (5).
- Total indirect ownership of Dr. Baty at June 30, 2006 includes adjustments for sales in October 2000 (2,000 shares) and January 2001 (3,000 shares) by Dr. Baty's wife, which were erroneously attributed to shares directly owned by Dr. Baty.

Craig Barrows, Attorney-in-fact 08/10/2006

** Signature of Reporting Person Date

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

* 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).

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

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