

## INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

OMB APPROVAL

OMB Number: 3235-0104  
Estimated average burden  
hours per response: 0.5Filed 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>Basile Diane J</u>	2. Date of Event Requiring Statement (Month/Day/Year) <u>06/20/2005</u>	3. Issuer Name and Ticker or Trading Symbol <u>MERCURY COMPUTER SYSTEMS INC [ MRCY ]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director _____ 10% Owner _____ <input checked="" type="checkbox"/> Officer (give title below) _____ Other (specify below) _____ <u>VP, Treasurer</u>	5. If Amendment, Date of Original Filed (Month/Day/Year)
(Last) (First) (Middle) <u>MERCURY COMPUTER SYSTEMS, INC.</u> <u>199 RIVERNECK ROAD</u>			6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person
(Street) <u>CHELMSFORD MA</u> <u>01824</u>			
(City) (State) (Zip)			

## Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
<u>Common Stock</u>	<u>1,604<sup>(1)</sup></u>	<u>D</u>	

## Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
<u>Employee Stock Option (right to buy)</u>	<u>(2)</u>	<u>06/18/2013</u>	<u>Common Stock</u>	<u>11,250</u>	<u>18.24</u>	<u>D</u>	
<u>Employee Stock Option (right to buy)</u>	<u>(3)</u>	<u>07/28/2014</u>	<u>Common Stock</u>	<u>10,000</u>	<u>23.46</u>	<u>D</u>	

## Explanation of Responses:

- Includes 1,604 shares purchased through the company's Employee Stock Purchase Plan.
- This option vests in four equal installments beginning June 18, 2004.
- This option vests in four equal installments beginning July 28, 2005.

Diane J. Basile06/29/2005

\*\* 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 5 (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.