

MERCURY COMPUTER SYSTEMS INC  
Form SC 13G  
February 13, 2008

OMB APPROVAL  
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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934  
(Amendment No. )\*

Mercury Computer Systems, Inc.  
(Name of Issuer)

Common Stock  
(Title of Class of Securities)

589378108  
(CUSIP Number)

December 31, 2007  
(Date of Event Which Requires Filing of this Statement)

Check appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP No. 589378108

1. NAMES OF REPORTING PERSONS

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (entities only)

Barrow, Hanley, Mewhinney & Strauss, Inc.

752403190

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) ..

(b) ..

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

A Nevada corporation

NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY  
EACH  
REPORTING  
PERSON  
WITH

5. SOLE VOTING POWER

781,900 shares

6. SHARED VOTING POWER

1,050,433 shares

7. SOLE DISPOSITIVE POWER

1,832,333 shares

8. SHARED DISPOSITIVE POWER

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,832,333 shares

10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (See Instructions)

..

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

8.08%

12. TYPE OF REPORTING PERSON (See Instructions)

IA

SCHEDULE 13G

Item

1(a) Name of Issuer: Mercury Computer Systems, Inc.

1(b) Address of Issuer's Principal Executive Offices:

199 Riverneck Road  
Chelmsford, MA 01824-2820

Item

2(a) Name of Person Filing:

Barrow, Hanley, Mewhinney & Strauss, Inc.

2(b) Address of Principal Business Office or, if none, Residence:

2200 Ross Avenue, 31st Floor  
Dallas, TX 75201-2761

2(c) Citizenship:

A Nevada corporation

2(d) Title of Class of Securities

Common Stock

2(e) CUSIP Number: 589378108

Item 3 If this statement is filed pursuant to §§240.13d-1(b), or 240.13d-2(b) or (c), check whether the person filing is a:

- |     |    |  |
|-----|----|--|
| (a) | .. | Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).                               |
| (b) | .. | Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).   |
| (c) | .. | Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).                           |
| (d) | .. | Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8). |
| (e) | þ  | An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);                                      |

- (f)            "            An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
- (g)            "            A parent holding company or control person in accordance with §240.13d-1(b)(ii)(G);
- (h)            "            A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i)            "            A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j)            "            Group, in a accordance with §240.13d-1(b)(1)(ii)(J).



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After reasonable inquiry and to the best of my knowledge and belief, the undersigned certifies that the information set forth in this statement is true, complete and correct.

BARROW, HANLEY, MEWHINNEY & STRAUSS, INC.

By: /s/ James P. Barrow  
Name: James P. Barrow  
Title: President

February 11, 2008

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