## **UNITED STATES**

# SECURITIES AND EXCHANGE COMMISSION

**WASHINGTON, DC 20549** 

FORM 8-K

**CURRENT REPORT** 

Pursuant to Section 13 or 15(d) of the

Securities Exchange Act of 1934

Date of report (Date of earliest event reported): November 13, 2007

# Mercury Computer Systems, Inc.

(Exact Name of Registrant as Specified in Charter)

Massachusetts (State or Other Jurisdiction 000-23599 (Commission File Number) 04-2741391 (IRS Employer

of Incorporation)

**Identification No.**)

199 Riverneck Road, Chelmsford, Massachusetts (Address of Principal Executive Offices)

01824 (Zip Code)

Registrant s telephone number, including area code: (978) 256-1300

N/A

(Former Name or Former Address, if Changed Since Last Report)

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Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

- " Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- " Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- " Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- " Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

#### Item 7.01. Regulation FD Disclosure.

The management of Mercury Computer Systems, Inc. (Mercury) will present an overview of Mercury s business on Tuesday, November 13, 2007 at its eighth annual investor conference. Attached as Exhibit 99.1 to this Current Report on Form 8-K (the Report) is a copy of the slide presentation to be made by Mercury at the conference.

This information is being furnished pursuant to Item 7.01 of this Report and shall not be deemed to be filed for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section and will not be incorporated by reference into any registration statement filed by Mercury under the Securities Act of 1933, as amended, unless specifically identified as being incorporated therein by reference. This Report will not be deemed an admission as to the materiality of any information in this Report that is being disclosed pursuant to Regulation FD.

Please refer to page 2 of Exhibit 99.1 for a discussion of certain forward-looking statements included therein and the risks and uncertainties related thereto, as well as the use of non-GAAP financial measures included therein.

#### Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

#### Exhibit No. Description

99.1 Presentation materials dated November 13, 2007.

#### **SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: November 13, 2007

MERCURY COMPUTER SYSTEMS, INC. (Registrant)

By: /s/ Alex N. Braverman Alex N. Braverman Vice President, Controller and

Chief Accounting Officer

#### **EXHIBIT INDEX**

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