

**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) July 28, 2005

Mercury Computer Systems, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Massachusetts
(State or Other Jurisdiction
of Incorporation)

000-23599
(Commission File Number)

04-2741391
(IRS Employer
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)

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.

Set forth below is the text of a release issued by Reuters News on July 28, 2005. This Form 8-K is being furnished solely to satisfy the requirements of Regulation FD.

“SAN FRANCISCO, July 28 (Reuters) - Mercury Computer Systems Inc. <MRCY.O>, a contract maker of computers and imaging equipment for government and health-care customers, on Thursday reported higher quarterly profit, beating its own forecast, but predicted slower growth for next year.

Net income for the fiscal fourth quarter ended June 30 at the Chelmsford, Massachusetts, company was \$10.1 million, or 41 cents per share, compared with a year-earlier profit of \$9.6 million, or 44 cents per share.

Revenue was \$71.5 million, topping analysts' estimates as compiled by Reuters Estimates.

In its previous quarterly report in April, Mercury had said it expected revenue for the June quarter of about \$66.0 million, which would result in earnings per share of 37 cents.

Fiscal 2005 revenue was up 35 percent to \$250.2 million.

Jay Bertelli, Mercury Computer president and chief executive, said in an interview that record results for the 2005 fiscal year ended in June would be followed by a period of digestion of recent acquisitions and some weakness in its semiconductor business.

“Defense is clearly the leader for us, not only in revenue generation but also in profit generation,” Bertelli said in a phone interview with Reuters.

“Next year we see the defense business to be very strong again for us,” he said of its year ending in June 2006.

Mercury makes custom computer systems used in signal intelligence by U.S. military and intelligence organizations to trace enemy communications, including cellphone calls. It also designs imaging equipment used in various life science fields.

SLOWER FISCAL 2006 GROWTH SEEN

Looking at its fiscal year ending in June, 2006, Mercury Computer made its first forecast for the year, projecting revenue in the range of \$295 million to \$305 million, reflecting recent and pending acquisitions.

That would represent growth of around 20 percent, a deceleration from the acquisition-fueled growth of 35 percent for fiscal 2005.

Bertelli reaffirmed that the company's long-range goal remains to grow 25 percent on a compounded basis annually. Based on contracts expected in 2007, Mercury could grow in excess of that target, balancing out the slower pace in fiscal 2006, he said.

"That 20 percent rate would be closer to 25 to 30 percent in fiscal 2007," Bertelli said.

Mercury Computer has three main businesses. Defense Electronics generated two-thirds of revenue in the June quarter. Imaging and visualization was 17 percent of sales.

Its semiconductor-related business, which grew dramatically, earlier in fiscal 2005, to 19 percent of overall revenue, fell back in the fourth quarter to represent only 14 percent of revenue as industry growth hit a trough.

"In the next several months, we are being somewhat conservative about how that business is going to be," he said.

More than two-thirds of 2005 year growth was from internal operations, with the rest from acquisitions, which included 3D imaging and hospital picture archiving businesses, he said.

For the current first fiscal quarter of 2006, ending in September, the company said it expects net earnings per share of 11 cents to 13 cents, after about 7 cents per share of employee stock option costs. Excluding those costs, first-quarter profits would be 18 cents to 20 cents per share.

Mercury said it sees full fiscal 2006 year earnings per share of 97 cents to \$1.02, including stock option expenses. Excluding those costs, earnings are expected to range from \$1.35 to \$1.40 per share.

In the year to date, Mercury Computer shares had traded down as much as 24 percent by April, only to recover since then, trading back to a level essentially unchanged from the start of the year. The stock closed up 1 percent at \$29.67 on Wednesday, ahead of the report."

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 thereunto duly authorized.

MERCURY COMPUTER SYSTEMS, INC.

Dated: July 28, 2005

By: /s/ Joseph M. Hartnett

Joseph M. Hartnett
Vice President, Controller and
Chief Accounting Officer