

**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): April 4, 2006

Mercury Computer Systems, Inc.

(Exact Name of Registrant as Specified in 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 2.02. Results of Operations and Financial Condition.

On April 4, 2006, Mercury Computer Systems, Inc. (the “Company”) issued a press release announcing preliminary revenues for the quarter ended March 31, 2006. The Company’s press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and incorporated by reference herein.

Information in this Current Report on Form 8-K and the Exhibit attached hereto shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 (the “Exchange Act”) or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, regardless of any general incorporation language in such filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press Release, dated April 4, 2006, of Mercury Computer Systems, Inc.

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.

MERCURY COMPUTER SYSTEMS, INC.
(Registrant)

Date: April 4, 2006

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

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press Release, dated April 4, 2006, of Mercury Computer Systems, Inc.



FOR IMMEDIATE RELEASE

**Mercury Computer Systems Announces
Preliminary Revenues for the Third Quarter of Fiscal 2006**

CHELMSFORD, Mass.—April 4, 2006—Mercury Computer Systems, Inc. (NASDAQ: MRCY) today announced preliminary revenues for its third fiscal quarter ended March 31, 2006.

Based upon preliminary financial data, the Company anticipates that revenues for the third quarter will be in the range of approximately \$43 million to \$44 million. In its financial results press release on January 26, 2006, the Company provided third quarter 2006 guidance for revenues in a range of \$55 million to \$58 million.

“The revenue shortfall can be mostly attributed to our defense business, where technical problems associated with third-party products occurred, and a multimillion-dollar system failed acceptance testing of newly introduced functionality,” said Jay Bertelli, president and chief executive officer of Mercury Computer Systems, Inc. “The majority of the system shipped to the customer so that they could maintain their schedule; however, revenue recognition rules prevent us from recording revenue until the complete system passes the acceptance tests. We anticipate that all of the technical issues will be resolved soon, and that the revenue will be recorded in Q4 FY06.”

Mr. Bertelli continued: “We had a strong bookings quarter, with a book-to-bill ratio of approximately 1.5 and an ending backlog of approximately \$85 million, not counting deferred revenue in excess of \$10 million.”

Mercury will host a conference call on Wednesday, April 5, at 5:00 p.m. ET to discuss its preliminary third quarter revenues. To listen to the conference call, dial (877) 502-9276 in the

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978-256-1300 • Fax 978-256-0852 • www.mc.com

USA and Canada, and for international, dial (913) 981-5591. The conference code number is 1585648. Please call five to ten minutes prior to the scheduled start time. This call will also be broadcast live over the web at www.mc.com/investor under Financial Events. A replay of the call by telephone will be available from approximately 8:00 p.m. ET on April 5 through midnight ET on Tuesday, April 11. To access the replay, dial (888) 203-1112 in the USA and Canada, and for international, dial (719) 457-0820. Enter access code 1585648. A replay of the webcast of the call will be available for an extended period of time on the Financial Events page of the Company's website at www.mc.com/investor.

In light of this call, Mercury has cancelled its appearance at the Sidoti & Company, LLC 10th Annual Emerging Growth Investor Forum, scheduled to be held on April 4-5, 2006.

Mercury expects to report its full third quarter 2006 financial results on April 27, 2006.

About Mercury Computer Systems, Inc.

Mercury Computer Systems, Inc. (NASDAQ: MRCY) is the leading provider of high-performance embedded, real-time digital signal and image processing solutions. Mercury's solutions play a critical role in a wide range of applications, transforming sensor data to information for analysis and interpretation. In military reconnaissance and surveillance platforms the Company's systems process real-time radar, sonar, and signals intelligence data. Mercury's systems are also used in state-of-the-art medical diagnostic imaging devices including MRI, PET, and digital X-ray, and in semiconductor imaging applications including photomask generation and wafer inspection. Mercury provides advanced 3D image processing and visualization software and optimized systems to diverse end markets including life sciences, geosciences, and simulation. The Company also provides radio frequency (RF) products for enhanced communications capabilities in military and commercial applications.

Based in Chelmsford, Massachusetts, Mercury serves customers in North America, Europe and Asia through its direct sales force and a network of subsidiaries and distributors. Visit Mercury on the web at www.mc.com.

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Forward-Looking Safe Harbor Statement

This press release contains certain forward-looking statements, as that term is defined in the Private Securities Litigation Reform Act of 1995, including those relating to the preliminary revenues stated for the third quarter of fiscal year 2006. You can identify these statements by our use of the words “may,” “will,” “should,” “plans,” “expects,” “anticipates,” “continue,” “estimate,” “project,” “intend,” and similar expressions. These forward- looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected or anticipated. Such risks and uncertainties include, but are not limited to, general economic and business conditions, including unforeseen weakness in the Company’s markets, effects of continued geo-political unrest and regional conflicts, competition, changes in technology, and methods of marketing, delays in completing engineering and manufacturing programs, changes in customer order patterns, changes in product mix, continued success in technological advances and delivering technological innovations, continued funding of defense programs, the timing of such funding, changes in the U.S. Government’s interpretation of federal procurement rules and regulations, market acceptance of the Company’s products, shortages in components, production delays due to performance quality issues with outsourced components, and inability to fully realize the expected benefits from acquisitions or delays in realizing such benefits, challenges in integrating acquired businesses, and achieving anticipated synergies, and difficulties in retaining key customers. These risks and uncertainties also include such additional risk factors as are discussed in the Company’s recent filings with the U.S. Securities and Exchange Commission, including its Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2005. The Company cautions readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. The Company undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made.

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Contact:

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