

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

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of  
the Securities Exchange Act of 1934

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement  
 **Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**  
 Definitive Proxy Statement  
 Definitive Additional Materials  
 Soliciting Material Pursuant to §240.14a-12

**Mercury Computer Systems, Inc.**

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.  
 Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

Fee paid previously with preliminary materials.

Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount Previously Paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:

On July 26, 2006, James R. Bertelli, President and Chief Executive Officer of Mercury Computer Systems, Inc. (the "Company"), transmitted the following email to certain employees of the Company regarding the special meeting of shareholders to be held on August 7, 2006.

Date: July 26, 2006  
From: Jay Bertelli  
Subject: Shareholder Meeting

As you know, our Board of Directors has called a special meeting of shareholders that will be held on August 7, 2006. Shareholders are being asked to approve a proposed exchange of outstanding stock options having exercise prices greater than \$23 per share for a lesser number of shares of restricted stock in accordance with a 4-to-1 exchange ratio and a related amendment to our 2005 Stock Incentive Plan to allow this exchange. Members of our Board of Directors and our five most highly compensated executive officers (including myself) will not be eligible to participate in the exchange program.

We believe that the exchange program, if approved by shareholders, will provide us with an opportunity to restore for eligible associates an incentive to remain with us and contribute to the future growth and success of our business, while at the same time reducing the significant equity award "overhang" represented by outstanding options that have high exercise prices and are no longer effective as performance and retention incentives.

Our Board of Directors believes the proposed exchange program is favorable to the interests of our shareholders and has unanimously recommended a vote "FOR" approval of the exchange program and related amendment to the 2005 Plan.

We have not commenced the exchange program and will not do so unless our shareholders approve the proposal. Your vote is important. If you have not already voted, you are encouraged to complete and return the proxy card that was mailed to you with the proxy materials relating to the special meeting of shareholders. If you did not receive the proxy materials, or need another copy, please contact Maria Sirigos for assistance.

If you are both a shareholder and an eligible associate holding eligible options, please note that voting to approve the exchange program and related amendment to the 2005 Plan does not constitute an election to participate in the exchange program.

#### **Additional Information and Where to Find It**

We have not commenced the exchange program referred to above. If the exchange program is approved by shareholders, we will provide eligible associates with written materials explaining the full terms and conditions of the program, and will also file these materials with the Securities and Exchange Commission. **WHEN THESE MATERIALS BECOME AVAILABLE, EMPLOYEES ELIGIBLE FOR THE EXCHANGE PROGRAM SHOULD READ THEM CAREFULLY, AS WELL AS ANY AMENDMENTS OR SUPPLEMENTS TO THOSE DOCUMENTS, BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT THE PROPOSED OPTION EXCHANGE PROGRAM.**

Once the materials are filed with the Securities and Exchange Commission, they will be available free of charge at [www.sec.gov](http://www.sec.gov) and on our website at [www.mc.com](http://www.mc.com) and by contacting the Investor Relations department at 199 Riverneck Road, Chelmsford, MA 01824, telephone (978) 256-1300.

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