
**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): October 22, 2010 (October 21, 2010)

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.)

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

01824
(Zip Code)

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

Not Applicable

(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))
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Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

At the Annual Meeting of Shareholders held on October 21, 2010 (the “Annual Meeting”), the shareholders of Mercury Computer Systems, Inc. (the “Company”) elected each of the Company’s nominees for Class I Director, approved an amendment and restatement of the Company’s 2005 Stock Incentive Plan (the “2005 Plan”), and ratified the appointment of KMPG LLP as the Company’s independent registered accounting firm for the fiscal year 2011. The proposals below are described in detail in the Company’s definitive proxy statement dated September 20, 2010.

Election of Class I Directors

At the Annual Meeting, Messrs. James K. Bass, Michael A. Daniels, and Lee C. Steele were elected as Class I Directors for a three-year term ending in 2013.

Equity Plan Amendment

At the Annual Meeting, shareholders approved an amendment and restatement of the 2005 Plan. The amended and restated 2005 Plan contains the following changes:

- the aggregate number of shares authorized for issuance is increased by 1,000,000 shares; and
- the grant of any award other than a stock option or a stock appreciation right will reduce the number of shares of common stock available for issuance under the plan by 1.77 shares of common stock for each share actually subject to the award, instead of the 1.36 shares of common stock as previously provided in the plan.

A summary of the material terms and conditions of the amended and restated 2005 Plan is set forth in the Company’s Definitive Proxy Statement dated September 20, 2010 (the “Proxy Statement”), under the caption “Proposal 2: Approval of Amendment and Restatement of Mercury Computer Systems, Inc. 2005 Stock Incentive Plan – Summary of the Amended and Restated 2005 Plan.” Such description is incorporated herein by reference and is qualified in its entirety by reference to the full text of the amended and restated 2005 Plan, which is filed as Exhibit 10.1 to this Current Report on Form 8-K.

Item 5.07 Submission of Matters to a Vote of Security Holders.

On October 21, 2010, the Company held its Annual Meeting. The final voting results for the Annual Meeting are as follows:

1. Election of Class I Directors:

Mr. James K. Bass	
For:	20,398,423
Withheld:	323,878
Broker Non-Votes:	1,918,085
Mr. Michael A. Daniels	
For:	20,398,423
Withheld:	323,878
Broker Non-Votes:	1,918,085
Mr. Lee C. Steele	
For:	20,300,282
Withheld:	422,019
Broker Non-Votes:	1,918,085

2. Amendment and restatement of the 2005 Stock Incentive Plan:

For:	12,784,163
Against:	7,926,961
Abstain:	11,177
Broker Non-Votes:	1,918,085

3. Ratification of KPMG LLP as independent registered public accounting firm for the fiscal year ending June 30, 2011:

For:	22,553,071
Against:	76,762
Abstain:	10,553
Broker Non-Votes:	0

Item 8.01 Other Events.

The terms of the following directors continued after the Annual Meeting: Mark Aslett, George W. Chamillard, George K. Muellner, William K. O'Brien, and Lee C. Steele.

The Company's Board of Directors held a meeting at which it elected Vincent Vitto as Chairman of the Board and determined the composition of the Board committees for the upcoming year. The three standing committees of the Board will be constituted as follows:

Audit Committee: Lee C. Steele (Chairman), James K. Bass, and William K. O'Brien.

Compensation Committee: George W. Chamillard (Chairman), Michael A. Daniels, and George K. Muellner.

Nominating and Governance Committee: William K. O'Brien (Chairman), Lee C. Steele, and Vincent Vitto.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
10.1	Mercury Computer Systems, Inc. Amended and Restated 2005 Stock Incentive Plan (incorporated herein by reference to Appendix A to Mercury Computer Systems, Inc.'s Definitive Proxy Statement filed with the Securities and Exchange Commission on September 20, 2010)

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.

Dated: October 22, 2010

MERCURY COMPUTER SYSTEMS, INC.

By: /s/ Gerald M. Haines II

Gerald M. Haines II

Senior Vice President, Corporate Development

EXHIBIT INDEX

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