
**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 17, 2008

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 a special meeting in lieu of the 2008 annual meeting of shareholders held on November 17, 2008 (the “Annual Meeting”), the shareholders of Mercury Computer Systems, Inc. (the “Company”) approved an amendment and restatement of the Company’s 2005 Stock Incentive Plan (the “2005 Plan”).

The amended and restated 2005 Plan contains the following changes:

- The aggregate number of shares authorized for issuance is increased by 650,000 shares.
- The maximum term for a stock option or stock appreciation right is now limited to seven years.
- The maximum award of stock options or stock appreciation rights that can be granted to any one individual in a calendar year has been increased from 200,000 shares to 500,000 shares of common stock (subject to adjustments for stock splits or similar events).
- The performance criteria used for performance awards intended to qualify as “performance-based compensation” under Section 162(m) of the Internal Revenue Code have been expanded. The performance criteria used in performance goals governing performance-based awards granted to covered employees may include any or all of the following criteria at the parent, subsidiary, business unit or business segment level as appropriate: (1) the Company’s return on equity, assets, capital or investment; (2) pre-tax or after-tax profit levels; (3) bookings or revenue growth; (4) bookings or revenues; (5) operating income as a percentage of sales; (6) total shareholder return; (7) changes in the market price of the stock; (8) sales or market share; (9) earnings per share; (10) improvements in operating margins; (11) operating cash flow or free cash flow; (12) working capital improvements; and (13) design wins or entering into contracts with key customers.
- The grant of any award other than an option or stock appreciation right will reduce the number of shares of common stock available for issuance under the 2005 Plan by 1.36 shares of common stock for each share actually subject to the award, instead of 1.75 shares of common stock as previously provided in the 2005 Plan.
- The maximum number of shares that may be granted under the 2005 Plan in the form of incentive stock options has been increased from 1,960,304 shares to 2,610,304 shares of common stock.
- The term of the 2005 Plan has been extended to November 17, 2018, ten years from the date of the 2008 shareholder meeting.

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 October 17, 2008, filed with the Securities and Exchange Commission on October 17, 2008, 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 8.01 Other Events.

At the Annual Meeting, Mark Aslett, George W. Chamillard, and William K. O’Brien were elected as Class II Directors of the Company. Immediately following the Annual Meeting, the Board held a meeting 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), Albert P. Belle Isle, and William K. O’Brien.

Compensation Committee: George W. Chamillard (Chairman), Vincent Vitto, and Richard P. Wishner.

Nominating and Governance Committee: Albert P. Belle Isle (Chairman), Russell K. Johnsen, Lee C. Steele, and Richard P. Wishner.

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 October 17, 2008)

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: November 20, 2008

MERCURY COMPUTER SYSTEMS, INC.

By: /s/ Alex A. Van Adzin
Alex A. Van Adzin
Vice President, General Counsel,
and Corporation Secretary