

**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): September 24, 2007

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 5.02. Departure of Directors or Principal Officers; Election of Directors; Appointment of Principal Officers; Compensatory Arrangements of Certain Officers.

(a) – (d) Not applicable.

(e)(i) On September 24, 2007, the Compensation Committee of the Board of Director of Mercury Computer Systems, Inc. (the “Company”) approved a form of Stock Option Agreement to be used in connection with the granting of performance stock options under the Company’s 2005 Stock Incentive Plan (the “2005 Plan”). Performance stock options vest upon the achievement of performance objectives determined by the Compensation Committee, and are generally subject to forfeiture if such objectives are not achieved within the time period determined by the Compensation Committee.

The form of Stock Option Agreement with respect to performance stock options provides that the stock option shall terminate and no portion will be exercisable on the earliest of the following:

- the expiration date;
- the date the grantee ceases to be an employee of the Company due to dismissal for cause or because the grantee is in breach of any employment agreement with the Company;
- 12 months following the date the grantee ceases to be an employee of the Company due to permanent disability;
- 12 months following the date of the grantee’s death;
- five years following the date the grantee ceases to be an employee of the Company due to retirement; and
- 90 days following the date the grantee ceases to be an employee of the Company for any reason other than as described above.

The stock option will be exercisable as described above after the grantee’s death or after the grantee otherwise ceases to be an employee of the Company only to the extent it was vested and exercisable immediately prior to the grantee’s death or cessation or termination of employment.

If the grantee, either on the date of grant of the stock option or subsequent thereto, is or becomes a director of the Company, and thereafter ceases to be an employee while remaining a non-employee director, such change in status does not constitute a termination of employment for purposes of the last two bulleted clauses set forth above until the grantee’s service as a director has ceased.

The form of Stock Option Agreement with respect to performance stock options under the 2005 Plan is filed herewith as Exhibit 10.1 and is incorporated herein by reference.

(e)(ii) On September 26, 2007, the Company entered into a First Amendment to Employment Agreement (the “First Amendment”) with Robert E. Hult, Senior Vice President, Chief Financial Officer and Treasurer of the Company. Pursuant to the First Amendment, Mr. Hult agreed to defer his previously-announced retirement date to February 1, 2008.

Upon Mr. Hult's retirement on or after February 1, 2008, the First Amendment provides that his bonus under the Company's annual executive bonus program for fiscal year 2008 will be pro-rated to reflect his period of service during the fiscal year through his retirement date, and that such pro-rated amount will be paid within 30 days following his retirement date. Pursuant to the terms of the First Amendment, Mr. Hult will be entitled to cash consulting fees and the continued vesting of certain restricted stock awards in accordance with their original vesting schedules so long as he continues to be available to provide consulting services to the Company through February 1, 2010. Except to the extent expressly amended by the First Amendment, the terms of Mr. Hult's Employment Agreement remain in full force and effect.

The foregoing summary is qualified in its entirety by reference to the First Amendment, a copy of which was filed as Exhibit 10.2 to this Current Report on Form 8-K and is incorporated herein by reference, and to Mr. Hult's original Employment Agreement, a copy of which was filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on March 13, 2007 and is incorporated herein by reference.

(f) Not applicable.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
10.1	Form of Stock Option Agreement for performance stock options under the Mercury Computer Systems, Inc. 2005 Stock Incentive Plan.
10.2	First Amendment to Employment Agreement dated September 26, 2007 between Mercury Computer Systems, Inc. and Robert E. Hult.

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: September 28, 2007

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

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
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**Notice of Grant of Stock Options
and Option Agreement**

Mercury Computer Systems, Inc.

ID: [_____]

199 Riverneck Road

Chelmsford, MA 01824

[Name]
[Address]

Option Number: [_____]

Plan: 2005 Stock Incentive Plan

ID: [_____]

Effective [_____], you have been granted a[n] [Incentive] Stock Option to buy [_____] shares of Mercury Computer Systems, Inc. (the "Company") common stock at [_____] per share.

The total option price of the option granted is [_____].

The option will vest in accordance with the provisions of Appendix A attached hereto.

By your signature and the Company's signature below, you and the Company agree that this option is granted under and governed by the terms and conditions of the Company's 2005 Stock Incentive Plan, as amended from time to time, and the Option Agreement and Appendix A, all of which are attached and made a part of this document.

Mercury Computer Systems, Inc.

Date

[Name]

Date

Stock Option Agreement - Employees

FORM OF OPTION AGREEMENT

Terms and Conditions

1. Term.

This Stock Option shall terminate and no portion will be exercisable on the earliest of the following: (i) the expiration date; (ii) 90 days after the Optionee ceases to be an employee of the Company or one of its subsidiaries for any reason other than as specified in clauses (iii) – (vi) below; (iii) the date the Optionee ceases to be an employee of the Company or one of its subsidiaries if such termination of employment is because of dismissal for cause or because the Optionee is in breach of any employment agreement; (iv) 12 months from the date the Optionee ceases to be an employee if such termination of employment is because the Optionee has become permanently disabled (within the meaning of Section 22(e)(3) of the Code); (v) 12 months from the date of death in the event of the death of the Optionee; or (vi) five years after the Optionee ceases to be an employee of the Company or one of its subsidiaries if such termination of employment is because of the Optionee's retirement on or after attaining the minimum age, completing the minimum number of years of service and satisfying all other conditions specified for retirement status under the Company's Retirement Policy Statement. This Stock Option shall be exercisable in accordance with the preceding sentence after the Optionee's death or after the Optionee otherwise ceases to be an employee of the Company or one of its subsidiaries only to the extent it was vested and exercisable immediately prior to the Optionee's death or cessation or termination of employment.

If the Optionee, either on the date of grant of this Stock Option or subsequent thereto, is or becomes a director, and thereafter ceases to be an employee while remaining a non-employee director, such change in status shall not be a termination of employment for purposes of clauses (ii) or (vi) of the preceding paragraph until the Optionee's service as a director shall have ceased.

2. Manner of Exercise.

(a) From time to time on or prior to the expiration of this Stock Option, the Optionee may give written notice to the Company of his election to purchase some or all of the shares of Mercury Computer Systems, Inc. ("Stock") purchasable at the time of such notice. This notice shall specify the number of shares of Stock to be purchased.

Payment of the purchase price for the shares may be made by one or more of the following methods: (i) in cash, by certified or bank check or other instrument acceptable to the Company; (ii) through the delivery of shares of Stock that have been purchased by the Optionee on the open market or that have been beneficially owned by the Optionee for at least six months; (iii) a combination of (i) and (ii); or (iv) by the Optionee delivering to the Company a properly executed exercise notice together with irrevocable instructions to a broker to promptly deliver to the Company cash or a check payable and acceptable to the Company to pay the option purchase price, provided that in the event the Optionee chooses to pay the option purchase price as so provided, the Optionee and the broker shall comply with such procedures and enter into such agreements of indemnity and other agreements as the Company shall prescribe as a condition of such payment procedure. Payment instruments will be received subject to collection.

(b) Certificates for shares of Stock purchased upon exercise of this Stock Option shall be issued and delivered to the Optionee upon compliance to the satisfaction of the Company with all requirements under applicable laws or regulations in connection with such issuance and with the requirements hereof and of the Plan. The determination of the Company as to such compliance shall

be final and binding on the Optionee. The Optionee shall not be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Stock subject to this Stock Option unless and until this Stock Option shall have been exercised pursuant to the terms hereof, the Company shall have issued and delivered the shares to the Optionee, and the Optionee's name shall have been entered as the shareholder of record on the books of the Company. Thereupon, the Optionee shall have full voting, dividend and other ownership rights with respect to such shares of Stock.

(c) The minimum number of shares of Stock with respect to which this Stock Option may be exercised at any one time shall be 50 shares, unless the number of shares with respect to which this Stock Option is being exercised is the total number of shares subject to exercise under this Stock Option at the time.

3. Restrictions. This Stock Option may be cancelled, rescinded, suspended, withheld or otherwise limited or restricted by the Administrator at any time, and any gain realized or payment received as a result of the exercise of this Stock Option may be subject to recapture by the Company if the Optionee engages in any Detrimental Activity prior to or during the six months following any exercise, payment or delivery pursuant to this Stock Option.

4. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Stock Option shall be subject to and governed by all the terms and conditions of the Plan. Capitalized terms in this Agreement shall have the meaning specified in the Plan, unless a different meaning is specified herein.

5. Transferability. This Agreement is personal to the Optionee, is non-assignable and is not transferable in any manner, by operation of law or otherwise, other than by will or the laws of descent and distribution. This Stock Option is exercisable only by the Optionee's legal representative or legatee. All references herein to the Optionee shall be read to include the Optionee's representative or legatee.

Stock Option Agreement - Employees

FIRST AMENDMENT

TO

EMPLOYMENT AGREEMENT

THIS FIRST AMENDMENT TO EMPLOYMENT AGREEMENT (this "First Amendment"), dated September 26, 2007, is made and entered into by and between Mercury Computer Systems, Inc., a Massachusetts corporation (the "Company"), and Robert E. Hult (the "Executive").

WHEREAS, the Company and the Executive are parties to an Employment Agreement dated March 8, 2007 (the "Agreement"), pursuant to which the Executive is entitled to certain benefits in the event of his continued employment with the Company and under certain circumstances following the cessation of his employment with the Company; and

WHEREAS, on June 29, 2007 the Executive notified the Company of his intention to retire, effective September 28, 2007, in accordance with the terms of the Agreement; and

WHEREAS, the Company desires to retain the services of the Executive as Senior Vice President, Chief Financial Officer and Treasurer through February 1, 2008, and the Executive is willing to defer his retirement until such date, subject to the terms and conditions of the Agreement, as modified by this First Amendment; and

WHEREAS, capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed to them in the Agreement;

NOW, THEREFORE, in consideration of the foregoing and other respective covenants and agreements of the parties herein contained, the parties hereto agree as follows:

1. For purposes of Section 4(e) of the Agreement, the Executive shall be deemed to have given the Company written notice of his intention to retire, effective February 1, 2008.

2. Section 5.1(c) of the Agreement is hereby deleted in its entirety and the following is substituted therefor:

"(c) Termination by the Executive. If the Executive terminates his employment for any reason, including retirement, as provided in Section 4(e), then the Company shall, through the date of termination, pay the Executive his Accrued Benefit. If the Executive retires on or after February 1, 2008, then payment of the Executive's bonus under the Company's annual executive bonus program for fiscal year 2008 will be pro-rated to reflect his period of service during the fiscal year through his retirement date, provided that the portion of the Executive's bonus tied to corporate performance shall be calculated as if the Company had achieved 100% of the corporate performance targets for the fiscal year, and the portion of the Executive's bonus tied to MBRs shall be based on an evaluation of the Executive's performance against goals through his retirement date, as determined by the Compensation Committee of the Company's Board of Directors, based on the recommendation of the Company's chief executive officer. Payment of the pro-rated bonus described above shall be made not later than the 30th day following the Executive's retirement date.

“In addition, if the Executive elects to retire, on or after February 1, 2008, and the Executive is willing to provide consulting services to the Company, that are commensurate with his current position and duties, such as attending investor relations conferences and participating in preparation of annual reports, at such time and frequencies as reasonably requested by the Company but not to exceed 400 hours per year (“Consulting Services”),

“(i) so long as the Executive continues to be willing to provide Consulting Services to the Company, the Company shall pay the Executive an annual amount equal to Fifty Percent (50%) of the Executive’s Base Salary from the date of termination through February 1, 2010 (the “Consulting Amount”). The Consulting Amount shall be paid out in substantially equal bi-weekly installments; and

“(ii) from the date of termination through February 1, 2010, so long as the Executive continues to be willing to provide Consulting Services to the Company, the restricted stock awards granted to the Executive on August 12, 2005, February 20, 2006 and June 5, 2007, respectively, shall continue to vest on the terms set forth in the relevant stock award agreements, in each case as if the Executive remained continuously employed by the Company from the date of termination through each applicable vesting date; and

“(iii) subject to signing by the Executive of a general release of claims in a form and manner satisfactory to the Company, upon the date of termination, the Executive shall become entitled to exercise a certain number of shares of the Company’s common stock underlying the stock option granted to him on June 1, 2006. Said number shall be determined by multiplying 62,000 by a fraction, the numerator of which shall be the number of days the Executive was employed as a full-time employee from June 1, 2006 through the date of termination and the denominator of which shall be 1096.

“If the Executive does not agree to provide Consulting Services to the Company in accordance with the terms of this Agreement, the Company has no obligation to the Executive other than payment of his Accrued Benefit and the pro-rata portion of his bonus under the Company’s annual executive bonus program for fiscal year 2008 as described above. For the avoidance of doubt, the Executive shall be entitled to be paid the Consulting Amount, and the restricted stock awards shall continue to vest in accordance with subsection (ii) above, even if the Company does not request Consulting Services so long as the Executive continues to be willing to provide such services in accordance with this Agreement upon the Company’s request.”

3. Anything in the Agreement, as amended by this First Amendment, to the contrary notwithstanding, if at the time of the Executive’s termination of employment, the Executive is considered a “specified employee” within the meaning of Section 409A(a)(2)(B)(i) of the Code,

and if any payment that the Executive becomes entitled to under the Agreement, as amended by this First Amendment, is considered deferred compensation subject to interest and additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, then no such payment shall be payable prior to the date that is the earliest of (i) six months after the Executive's date of termination, (ii) the Executive's death, or (iii) such other date as will cause such payment not to be subject to such interest and additional tax, and the initial payment shall include a catch-up amount covering amounts that would otherwise have been paid during the first six-month period but for the application of this Section 3 of this First Amendment.

4. Except to the extent expressly amended hereby, the provisions of the Agreement shall remain in full force and effect.

5. The validity, interpretation, construction and performance of this First Amendment shall be governed by the laws of the Commonwealth of Massachusetts.

6. This First Amendment may be executed in several counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same instrument.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned officer, on behalf of Mercury Computer Systems, Inc., and the Executive have hereunto set their hands as an agreement under seal, all as of the date first above written.

MERCURY COMPUTER SYSTEMS, INC.

By: /s/ James R. Bertelli

Name: James R. Bertelli

Title: President and Chief Executive Officer

EXECUTIVE:

/s/ Robert E. Hult

Robert E. Hult