UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

June 29, 2004
Date of Report (Date of earliest event reported)

Mercury Computer Systems, Inc.

(Exact name of registrant as specified in its 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)

(978) 256-1300

Registrant's telephone number, including area code

N/A

(Former name or former address, if changed since last report)

Item 5. Other Events.

On June 29, 2004, George W. Chamillard was elected to the Board of Directors of Mercury Computer Systems, Inc. Mr. Chamillard is chairman of the Board of Directors of Teradyne, Inc. With the addition of Mr. Chamillard, Mercury Computer Systems' board now has eight members.

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.

Date: June 29, 2004

MERCURY COMPUTER SYSTEMS, INC.

By: /s/ JOSEPH HARTNETT

Name: Joseph M. Hartnett

Title: Vice President, Controller and Chief Accounting Officer