

**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): April 20, 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))
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Item 2.03. Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant.

On April 20, 2007, Mercury Computer Systems, Inc. (the "Company"), as tenant, entered into a Lease with BTI 199-201 Riverneck, L.P. ("BTI"), as landlord, covering the Company's principal executive offices located in Chelmsford, Massachusetts (the "Facility") in connection with the closing of the previously announced sale by the Company of the Facility to BTI.

The material terms of the Lease are as follows:

- The initial term of the Lease is ten years. The Company has the option to extend the term of the Lease for two additional five-year terms, subject to the satisfaction of certain conditions customary for transactions of this type.
- The Company will pay annual base rent of \$1,945,933.50 during years one through five of the initial term, and \$2,140,526.85 during years six through ten of the initial term. The base rent payable during each of the two extension terms will be based on the Fair Market Rental Value (as defined in the Lease) of the Facility as of the commencement of each such term. The annual base rent is payable in 12 equal monthly installments.
- In addition to base rent, the Company will also reimburse BTI for certain operating costs incurred by BTI in connection with the Lease, including without limitation the cost of maintaining, repairing and replacing structural elements of the buildings, providing property insurance for the buildings, and a management fee to a property manager.
- The Company has delivered a security deposit to BTI in the form of a standby letter of credit in the amount of \$3,000,000, which must be maintained throughout the term of the Lease.
- The Lease contains additional provisions that are customary for transactions of this type which cover, among other things, the parties' respective rights and obligations in connection with a default under the Lease or a casualty affecting the Facility, the Company's right to make alterations or to sublet or assign its rights under the Lease, and the Company's obligation to maintain the Facility, to carry general liability and other insurance coverage, and to indemnify BTI under certain circumstances.

A copy of the Lease will be filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2007.

Item 8.01. Other Events.

On April 20, 2007, the Company completed the sale of the Facility and an adjacent vacant parcel to BTI. The Company received net cash proceeds of approximately \$26.5 million from the sale of the property.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press Release, dated April 23, 2007, of Mercury Computer Systems, Inc.

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: April 23, 2007

By: /s/ Robert E. Hult
Robert E. Hult
Senior Vice President and Chief Financial Officer

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press Release, dated April 23, 2007, of Mercury Computer Systems, Inc.

News Release



FOR IMMEDIATE RELEASE

Mercury Computer Systems Announces Sale and Leaseback of Chelmsford, MA Property; Facility to Remain Occupied by Company

CHELMSFORD, Mass. – April 23, 2007 – Mercury Computer Systems, Inc. (NASDAQ: MRCY) announced the completion of the sale and leaseback of its property located in Chelmsford, MA. The company received net cash proceeds of approximately \$26.5 million from the sale of the property. The transaction includes a leaseback agreement with an initial term of 10 years, plus multiple renewal options. The property will continue to house Mercury's corporate headquarters.

"The sale/leaseback of the Chelmsford property allows Mercury to focus more on its business and less on its real estate holdings," said Robert Hult, Chief Financial Officer, Mercury Computer Systems. "The cash generated by this transaction will be put back into the company for general corporate purposes."

Mercury Computer Systems, Inc. – Where Challenges Drive Innovation

Mercury Computer Systems is the leading provider of computing systems and software for data-intensive applications that include image processing, signal processing, and visualization. With a strong commitment to innovation, our expertise in algorithm optimization, systems development, and silicon design is blended with software application knowledge and industry-standard technologies to solve unique computing challenges. We work closely with our customers to architect solutions that have a meaningful impact on everyday life: detecting aneurysms; designing safer, more fuel-efficient aircraft; identifying security threats; discovering oil; developing new drugs; and visualizing virtually every aspect of scientific investigation.

Mercury's comprehensive, purpose-built solutions capture, process, and present data for the world's largest medical imaging companies, 8 of the 10 top defense prime contractors, and other leading Fortune 500 and mid-market companies in semiconductor, energy, telecommunications, and other industries. Our dedication to performance excellence and collaborative innovation continues a 24-year history in enabling customers to stay at the forefront of the markets they serve.

- more -

199 Riverneck Road, Chelmsford, Massachusetts 01824-2820 U.S.A.
978-256-1300 · Fax 978-256-0852 · www.mc.com

Mercury is based in Chelmsford, Massachusetts and serves customers worldwide through a broad network of direct sales offices, subsidiaries, and distributors. We are listed on the Nasdaq National Market (NASDAQ: MRCY). Visit Mercury at www.mc.com.

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Contact:

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