
**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): January 6, 2010 (January 4, 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 01824
(Address of Principal Executive Offices) (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.

Russell K. Johnsen resigned as a director and the Chairman of the Board of Mercury Computer Systems, Inc. effective January 4, 2010. Vincent Vitto, a non-employee member of the Board of Directors, was elected Chairman of the Board on January 5, 2010.

Item 7.01 Regulation FD Disclosure.

Mercury Computer Systems, Inc. issued a press release on January 6, 2010, announcing the resignation of Mr. Johnsen as Chairman of the Board and a director, and the election of Mr. Vitto as Chairman of the Board as described in this Current Report. A copy of the press release is attached as Exhibit 99.1, and incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

| <u>Exhibit No.</u> | <u>Description</u> |
|--------------------|--|
| 99.1 | Press Release issued by Mercury Computer Systems, Inc. on January 6, 2010. |

Exhibit Index

Exhibit No.

Description

99.1 Press Release issued by Mercury Computer Systems, Inc. on January 6, 2010.



Press Release

FOR IMMEDIATE RELEASE**Mercury Computer Systems Announces Resignation of Chairman of the Board
Russell K. Johnsen*****Current non-employee Director Vincent Vitto to assume Chairman's role***

CHELMSFORD, Mass. — January 6, 2010 — Mercury Computer Systems, Inc. (NASDAQ: MRCY), a leading provider of embedded, high-performance computing solutions for image, sensor, and signal processing applications, announced that Russell K. Johnsen has resigned as Chairman of the Board and as a Director effective as of January 4, 2010, and that the Board of Directors has elected Vincent Vitto, a non-employee member of the Board, as the Chairman of the Board effective as of January 5, 2010.

Mr. Johnsen joined Mercury as a member of its Board of Directors in 2001 and was elected as its Chairman in November 2008. He recently became the President of USfalcon, Inc., a provider of integrated technology solutions worldwide to Department of Defense clients in the areas of C4ISR operations, aerospace mission support, engineering information technology, logistics, and training.

Mr. Vitto has been a Mercury Board member since 2006. He served as President and CEO of Draper Laboratory, an R&D laboratory, from 1997 to his retirement in 2006. Previously, he spent 32 years of increasing responsibility at MIT Lincoln Laboratory, an R&D laboratory, rising to Assistant Director for Surface Surveillance and Communications. He is also Chairman of the Intelligence Science Board and serves on the boards of QinetiQ North American Operations, LLC, and The Aerospace Corporation.

“On behalf of Mercury’s Board of Directors and shareholders, I thank Russ Johnsen for his many years of outstanding service and support and wish him the very best in his other endeavors,” said Mark Aslett, Mercury’s President and Chief Executive Officer. “We also look forward to the continued advice and guidance of Vincent Vitto in his new position as Chairman of the Board.”

Mercury Computer Systems, Inc. – Where Challenges Drive Innovation™

Mercury Computer Systems (www.mc.com, NASDAQ: MRCY) provides embedded computing systems and software that combine image, signal, and sensor processing with information management for data-intensive applications. With deep expertise in optimizing algorithms and software and in leveraging industry-standard technologies, we work closely with customers to architect comprehensive, purpose-built solutions that capture, process, and present data for defense electronics, semiconductor equipment manufacturing, commercial computing, homeland security, and other computationally challenging commercial markets. Our dedication to performance excellence and collaborative innovation continues a 25+-year history in enabling customers to gain the competitive advantage they need to stay at the forefront of the markets they serve.

Mercury is based in Chelmsford, Massachusetts, and serves customers worldwide through a broad network of direct sales offices, subsidiaries, and distributors.

Forward-Looking Safe Harbor Statement

This press release contains certain forward-looking statements, as that term is defined in the Private Securities Litigation Reform Act of 1995, including those relating to the Mercury Computer Systems, Inc. Board of Directors. You can identify these statements by our use of the words “may,” “will,” “should,” “plans,” “expects,” “anticipates,” “continue,” “estimate,” “project,” “intend,” and similar expressions. These forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected or anticipated. Such risks and uncertainties include, but are not limited to, general economic and business conditions, including unforeseen weakness in the Company’s markets, effects of continued geo-political unrest and regional conflicts, competition, changes in technology and methods of marketing, delays in completing engineering and manufacturing programs, changes in customer order patterns, changes in product mix, continued success in technological advances and delivering technological innovations, continued funding of defense programs, the timing of such funding, changes in the U.S. Government’s interpretation of federal procurement rules and regulations, market acceptance of the Company’s products, shortages in components, production delays due to performance quality issues with outsourced components, inability to fully realize the expected benefits from acquisitions and divestitures or delays in realizing such benefits, challenges in integrating acquired businesses and achieving anticipated synergies, and difficulties in retaining key customers. These risks and uncertainties also include such additional risk factors as are discussed in the Company’s recent filings with the U.S. Securities and Exchange Commission, including its Annual Report on Form 10-K for the fiscal year ended June 30, 2009. The Company cautions readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. The Company undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made.

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Contact:

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