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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549**

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**FORM 8-K**

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**CURRENT REPORT**

**PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

**Date of report (Date of earliest event reported): July 15, 2010 (July 13, 2010)**

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**Mercury Computer Systems, Inc.**

(Exact Name of Registrant as Specified in Charter)

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**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)

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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.**

The Board of Directors of Mercury Computer Systems, Inc. (the "Company") elected George K. Muellner as a director on July 13, 2010.

Mr. Muellner was granted stock options and equity awards upon his election pursuant to the Company's Compensation Policy for Non-Employee Directors. Pursuant to the policy, new non-employee directors are granted equity awards in connection with their first election to the Board, consisting of the following components:

1. Stock options to purchase 15,000 shares of common stock. These awards will vest as to 50% of the covered shares on each of the first two anniversaries of the date of grant and will expire on the seventh anniversary of the date of grant; and
2. Restricted stock awards for 10,000 shares of common stock. These awards will vest as to 50% of the covered shares on each of the first two anniversaries of the date of grant.

**Item 7.01 Regulation FD Disclosure.**

The Company issued a press release on July 15, 2010, announcing the election of Mr. Muellner as a director. 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 July 15, 2010.



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**Exhibit Index**

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press Release issued by Mercury Computer Systems, Inc. on July 15, 2010.



## News Release

**FOR IMMEDIATE RELEASE**

**George K. Muellner Elected to the  
Mercury Computer Systems Board of Directors**

**CHELMSFORD, Mass. – July 15, 2010** – Mercury Computer Systems, Inc. (NASDAQ: MRCY) a trusted ISR subsystems provider, announced that George K. Muellner has been elected to the Company's Board of Directors.

Mr. Muellner was president of Advanced Systems for the Integrated Defense Systems business unit of The Boeing Company until his retirement in February 2008. In this role, he was responsible for developing advanced concepts and technologies, and executing new programs prior to their reaching the system design and development phase. Prior to this assignment, Mr. Muellner was vice president-general manager of Air Force Systems at Boeing starting in July 2002, responsible for all domestic and international Air Force programs. He became president of Phantom Works, Boeing's advanced research and development unit in June 2001, after serving as vice president-general manager since October, 1998, when he joined Boeing. Prior to that, he served 31 years in the U.S. Air Force, retiring as a lieutenant general from the position of principal deputy for the Office of the Assistant Secretary of the Air Force for Acquisition in Washington, D.C.

A highly decorated veteran, Mr. Muellner spent most of his career as a fighter pilot and fighter weapons instructor, test pilot, and commander. He flew combat missions in Vietnam and commanded the Joint STARS deployment during Operation Desert Storm. Mr. Muellner is a Fellow of the Society of Experimental Test Pilots, a Fellow of the Royal Aeronautical Society, a Fellow and Past President of the American Institute of Aeronautics and Astronautics, and served on the Board of Directors of the Air Force Association.

"We are pleased to welcome George to the Board, and to add to the team his wealth of executive experience with defense contracting, his military experience, and his knowledge of defense and aerospace technology," said Mark Aslett, President and CEO of Mercury Computer Systems, Inc.

201 Riverneck Road, Chelmsford, Massachusetts 01824-2820 U.S.A. 978-256-1300 — Fax 978-256-3599 —  
[www.mc.com](http://www.mc.com)

**Mercury Computer Systems, Inc. – Where Challenges Drive Innovation®**

Mercury Computer Systems (www.mc.com, NASDAQ: MRCY) is a best of breed provider of open, application-ready, multi-INT subsystems for the ISR market. With 25+ years' experience in embedded computing, superior domain expertise in radar, EW, EO/IR, C4I, and sonar applications, and more than 300 successful program deployments including Aegis, Global Hawk, and Predator, Mercury's Services and Systems Integration team leads the industry in partnering with customers to design and integrate system-level solutions that minimize program risk, maximize application portability, and accelerate customers' time to market.

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 election of the new director discussed herein. 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 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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Challenges Drive Innovation is a registered trademark of Mercury Computer Systems, Inc. Other product and company names mentioned may be trademarks and/or registered trademarks of their respective holders.

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