
**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): June 9, 2009

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
(Address of Principal Executive Offices)

01824
(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 8.01 Other Events.

On June 9, 2009, Mercury Computer Systems, Inc. issued a press release announcing the sale of its Visualization Sciences Group business to an affiliate of France-based IRDI-ICSO Private Equity. A copy of the press release is attached hereto as Exhibit 99.1 and is incorporated by reference into this Item 8.01.

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. issued on June 9, 2009 (filed herewith). |

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.

Dated: June 9, 2009

MERCURY COMPUTER SYSTEMS, INC.

By: /s/ Alex A. Van Adzin

Alex A. Van Adzin
Vice President, General Counsel,
and Corporation Secretary

EXHIBIT INDEX

| Exhibit No. | Description |
|--------------------|---|
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News Release

FOR IMMEDIATE RELEASE

Mercury Computer Systems Announces the Sale of its Visualization Sciences Group to IRDI-ICSO Private Equity for US\$12 Million

CHELMSFORD, Mass. — June 9, 2009 — Mercury Computer Systems, Inc. (NASDAQ: MRCY), a leading provider of embedded, high-performance computing systems and software for complex image, sensor, and signal processing applications, announced that it signed a definitive agreement and closed on the sale of its Visualization Sciences Group (VSG) to IRDI-ICSO Private Equity, based in Toulouse, France. The purchase price paid at closing is US\$12 million, with an additional amount of up to US\$2.5 million payable upon achievement of certain performance milestones over a period ending June 30, 2013.

VSG provides advanced 3D visualization tools for engineers and scientists, delivering high-end 3D software solutions for scientific data visualization, engineering and simulation, materials science and geosciences. IRDI-ICSO assumes responsibility through a holding company, with VSG operating as an independent entity.

“With this transaction, we have successfully met our goal of portfolio rationalization completion before fiscal year-end,” said Mark Aslett, President and CEO of Mercury Computer Systems. “The successful match of VSG with IRDI-ICSO can provide the necessary financial support to build on VSG’s growing business in the 3D visualization space. Moreover, all VSG employees and customer commitments transition with the sale. The existing management team will also remain intact, ensuring that business operations will continue uninterrupted.”

IRDI-ICSO Private Equity is the largest independent regional actor in France, managing funds at risk (FCPR) and Investment Funds Proximity (FIP) to cover the needs for capital funding in the West and South of France and Northern Spain.

201 Riverneck Road, Chelmsford, Massachusetts 01824-2820 U.S.A.
978-256-1300 • Fax 978-256-3599 • www.mc.com

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, 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 agreement to sell the Visualization Sciences Group to IRDI-ICSO Private Equity. 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 filings with the U.S. Securities and Exchange Commission, including its Annual Report on Form 10-K for the fiscal year ended June 30, 2008. 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:

Robert Hult, Senior Vice President and CFO
Mercury Computer Systems, Inc.
978-967-1990

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