

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): November 6, 2006

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 7.01. Regulation FD Disclosure.

The management of Mercury Computer Systems, Inc. ("Mercury") will present an overview of Mercury's business on November 6 and 7, 2006 at the American Electronics Association (AeA) Classic Financial Conference. Attached as Exhibit 99.1 to this Current Report on Form 8-K (the "Report") is a copy of the slide presentation to be made by Mercury at the conference.

This information is being furnished pursuant to Item 7.01 of this Report and shall not be deemed to be "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section and will not be incorporated by reference into any registration statement filed by Mercury under the Securities Act of 1933, as amended, unless specifically identified as being incorporated therein by reference. This Report will not be deemed an admission as to the materiality of any information in this Report that is being disclosed pursuant to Regulation FD.

Please refer to page 2 of Exhibit 99.1 for a discussion of certain forward-looking statements included therein and the risks and uncertainties related thereto, as well as the use of non-GAAP financial measures included therein.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
99.1	Presentation materials dated November 6-7, 2006.

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.

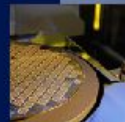
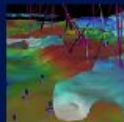
MERCURY COMPUTER SYSTEMS, INC.
(Registrant)

Date: November 6, 2006

By: /s/ Alex N. Braverman
Alex N. Braverman
Vice President, Controller and Chief Accounting Officer

EXHIBIT INDEX

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The AeA Classic Financial Conference November 6-7, 2006

Jay Bertelli, President, Chief Executive Officer & Chairman

Bob Hult, SVP, Chief Financial Officer

Mark Skalabrin, VP & GM, Advanced Solutions Business

This presentation contains certain forward-looking statements, as that term is defined in the Private Securities Litigation Reform Act of 1995, including those relating to anticipated fiscal 2007 business performance and beyond. 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 geopolitical 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, the 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 quarter ended June 30, 2006. 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.

Use of Non-GAAP (Generally Accepted Accounting Principles) Financial Measures

In addition to reporting financial results in accordance with generally accepted accounting principles, or GAAP, the Company provides non-GAAP financial measures adjusted to exclude certain non-cash and other specified charges, which the Company believes are useful to help investors better understand its past financial performance and prospects for the future. However, the presentation of non-GAAP financial measures is not meant to be considered in isolation or as a substitute for financial information provided in accordance with GAAP. Management believes these non-GAAP financial measures assist in providing a more complete understanding of the Company's underlying operational results and trends, and management uses these measures, along with their corresponding GAAP financial measures, to manage the Company's business, to evaluate its performance compared to prior periods and the marketplace, and to establish operational goals. A reconciliation of GAAP to non-GAAP financial results discussed in this presentation is contained in the company's First Quarter Fiscal Year 2007 earnings release, which can be found on our website at www.mc.com/mediacenter/pr/.

- **HQ in Chelmsford, MA**
 - Sales, support, and R&D centers in U.S., Europe, and Japan
 - 823 employees worldwide
- **Founded in 1983**
 - Seven acquisitions since 2004
- **FY06 revenues: \$236M**
 - 56/44% defense/commercial
- **Four segments:**
 - Defense Business Unit (DBU)
 - Commercial Imaging & Visualization (CIV)
 - Advanced Solutions Business Unit (ASBU)
 - Modular Products & Services (MPS)
- **Nasdaq: MRCY**



Leading provider of:

Computing solutions
for specialized,
compute- and data-
intensive applications

For diverse customers in:

Aerospace & Defense
Communications
Geosciences
Life Sciences
Semiconductor



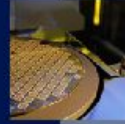
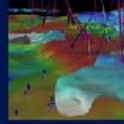
- **Focus on relatively small (\$200-400M) niche markets that are not well served by mainstream suppliers**
- **Leverage technology investments across multiple markets**
- **Focus on solving problems that are challenging and can command high margins**
- **Focus on core competencies**
 - Multicomputer architectures
 - Signal and image processing
 - Visualization
- **Market specific domain expertise**

Commercial



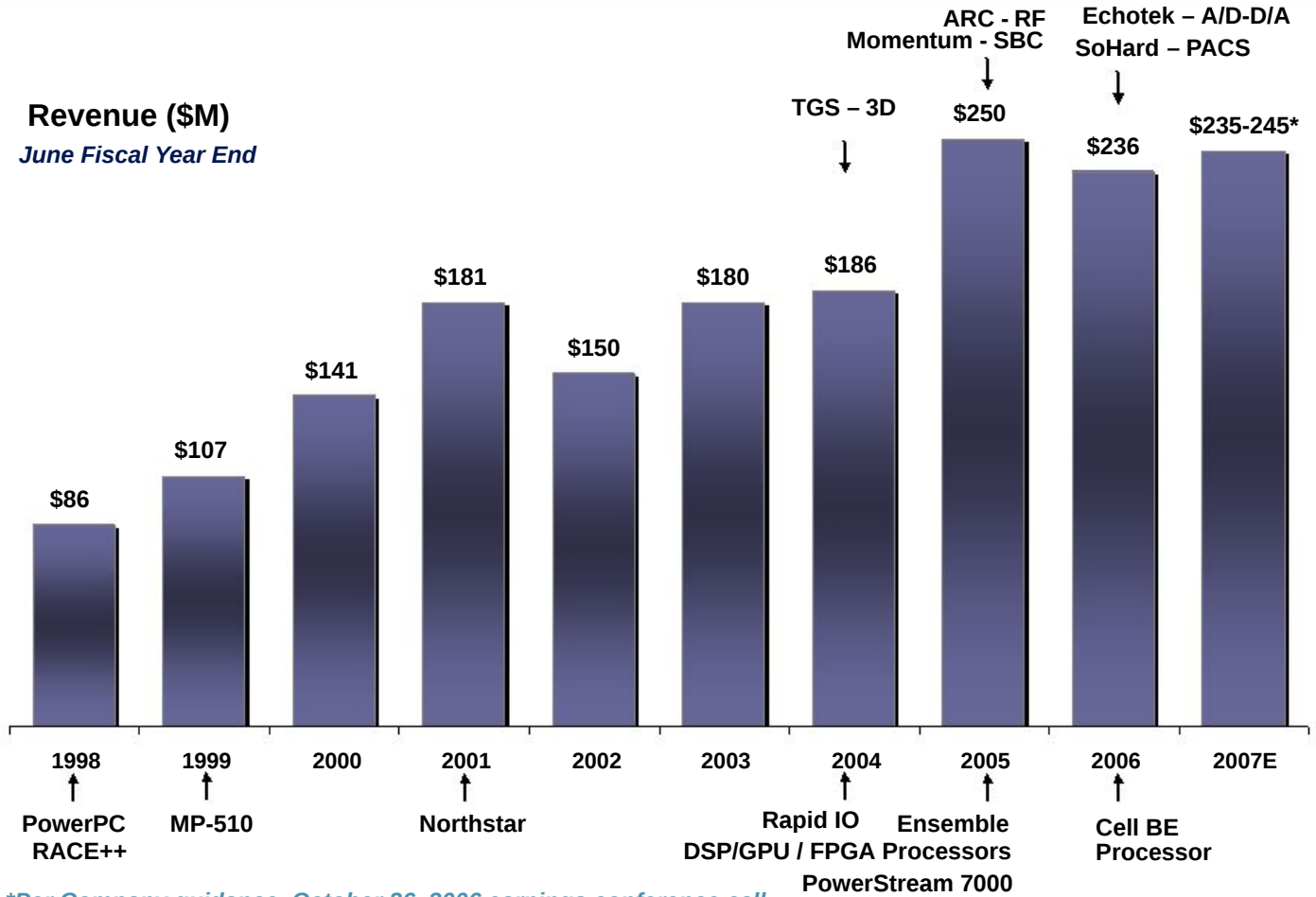
Defense





What is Driving Growth?

Revenue Follows Technology Cycles

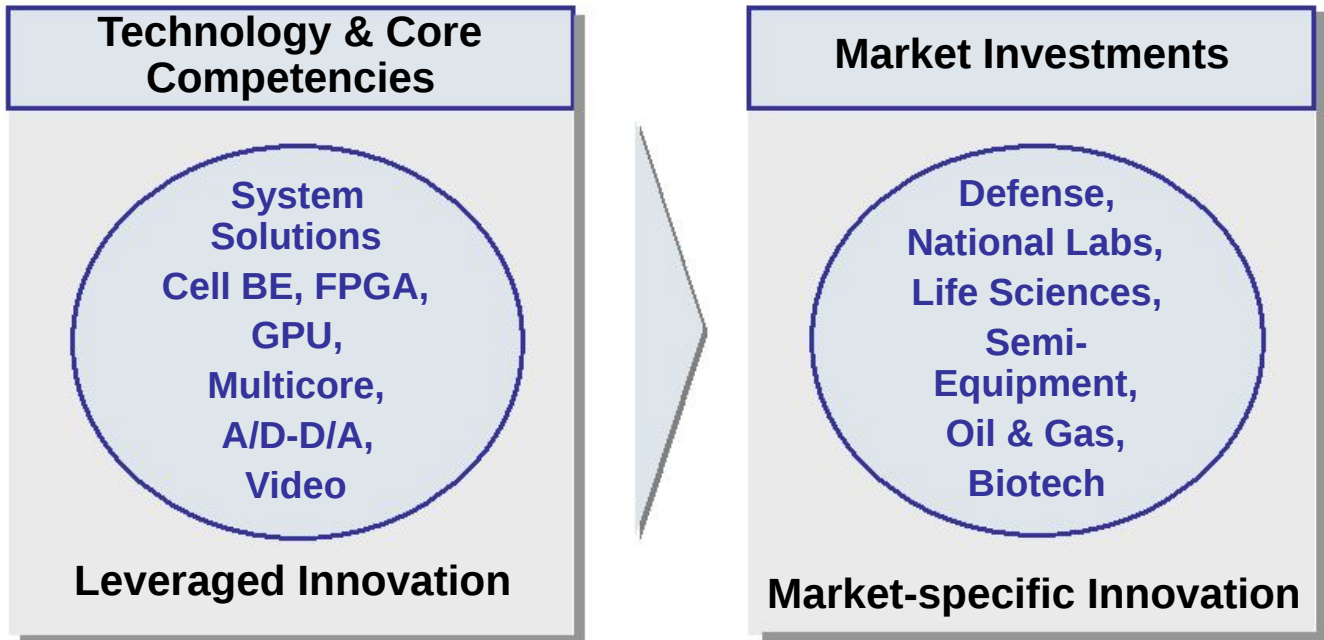


*Per Company guidance, October 26, 2006 earnings conference call

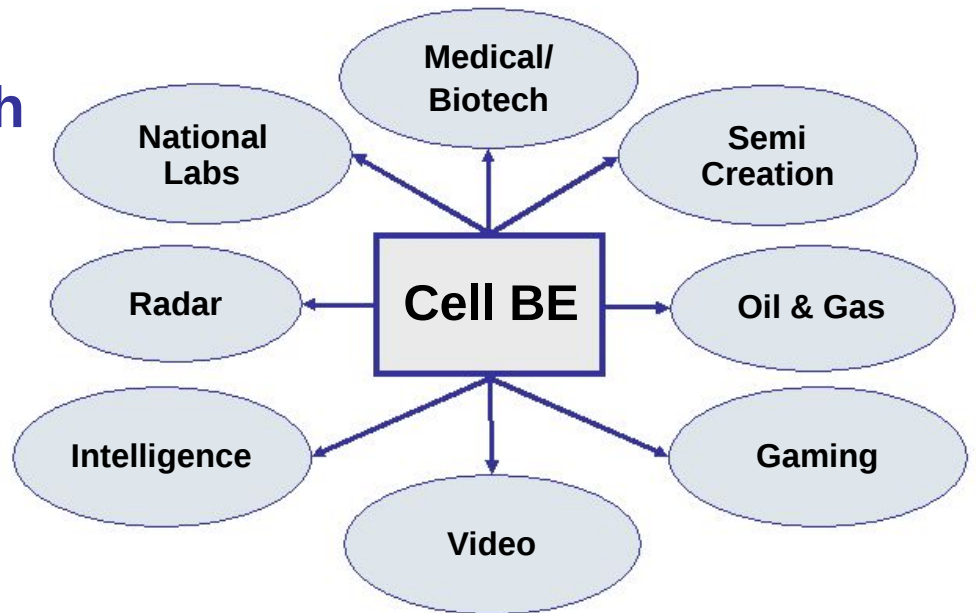
History of finding challenging computing problems that can be solved with Mercury technology

- **Recently expanded market opportunities**
 - Aerospace & Defense - Synthetic vision
 - Communications - Wideband data links satellite communications
 - Geosciences – Data-intensive computation (oil & gas)
 - Life Sciences - 3D medical imaging applications
 - Semiconductor - Design for manufacturing
- **Future market opportunities**
 - Biotechnology - Drug discovery
 - Video Processing – Intelligence to compensate for bandwidth limitations
 - Defense - Homeland security

Multi-market leverage of technology and core competencies results in strong competitive advantage and significant barriers to entry



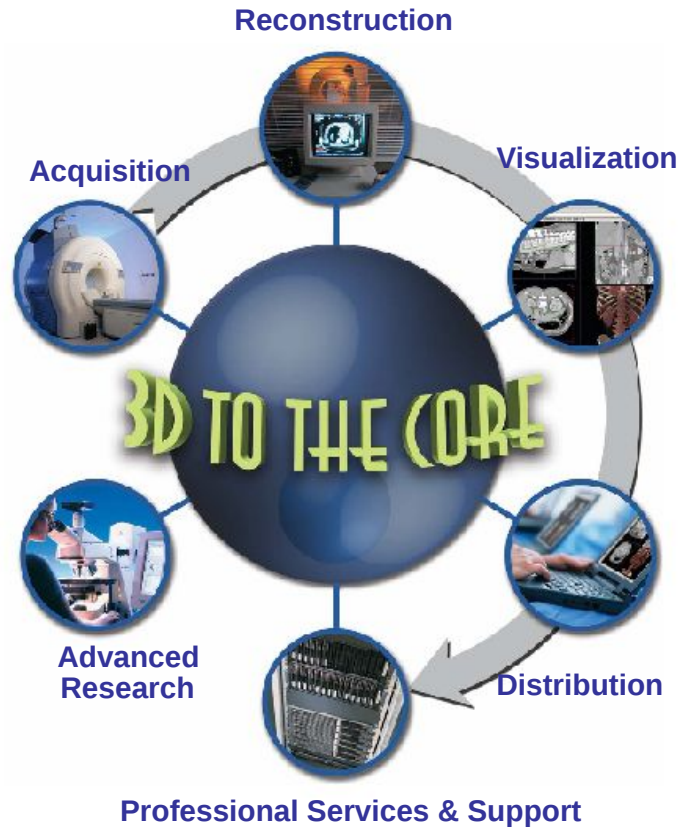
- 5-100x faster than conventional microprocessors
- Designed to solve the same types of problems Mercury has been solving for many years
- Established relationship with IBM



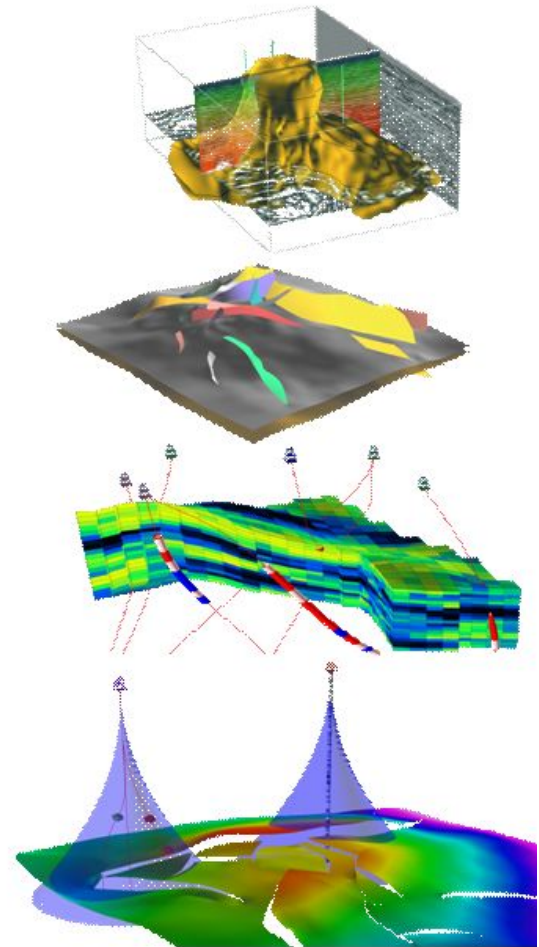
- **Medical Imaging**
 - 19 years of experience
 - Unique skill set for emerging 3D market
- **Successful introduction of software applications and full systems for end users**
- **Expanding product portfolio**
 - PACS
 - 3D visualization server
 - MRI data acquisition
- **End-to-end medical image management**



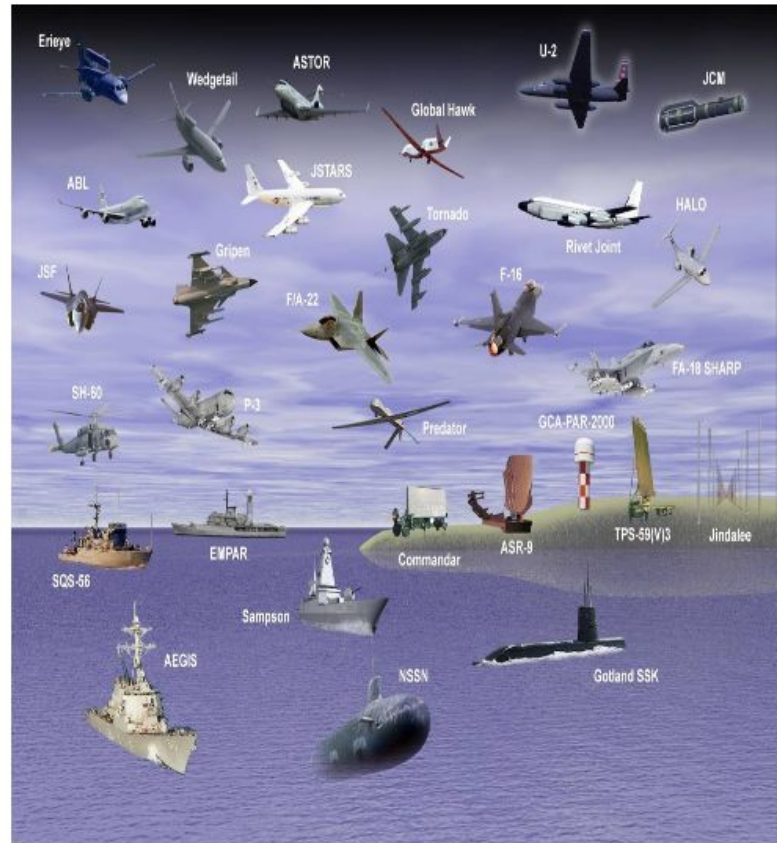
- Multi-slice CT scanners, PET/CT, multi-channel MRI and new clinical applications are flooding the diagnostic workflow with data
- The market requires a more productive means of visualization
 - Revolutionary 3D transformation throughout the medical imaging workflow is occurring



- **Competitive advantages in computing and visualization**
 - Performance/watt/cubic Inch
 - Extremely large data sets
- **Computing platforms**
 - Seismic acquisition and processing
- **Visualization**
 - Seismic QC and interpretation
 - Horizons, faults, well bores, etc.
 - Core analysis
 - Drilling planning
 - Reservoir models

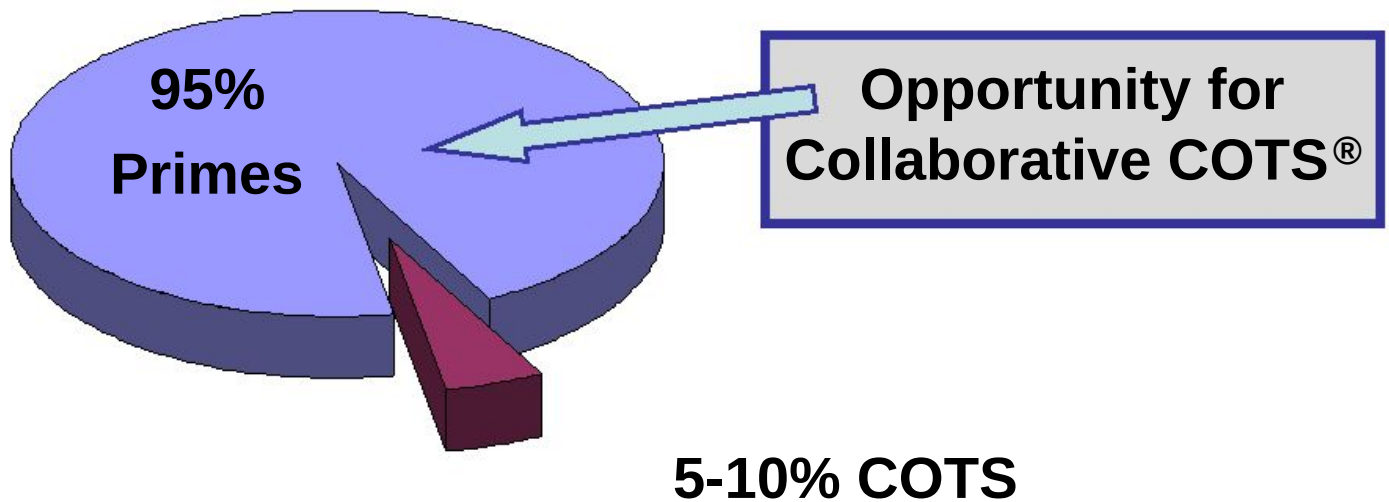


- **Leader in airborne surveillance**
 - 14 years of experience
- **Investing and innovating to maintain leadership position**
- **Strong business partnership relationship with defense primes**



Representative

A \$14.2 Billion Available Market



Source: The Embedded Computing Market 2006, Electronic Trend Publications Inc & Internal Estimates.
Defense Weapons & C3 Boards and Systems

- **Airborne surveillance: MP-RTIP**
 - Global Hawk (15 platforms)
 - JSTARS and AWACS upgrade potential
- **Tactical fighters: F-35, F-22, F-16**
- **Shipboard missile defense: Aegis**
- **UAV: Predator LYNX SAR**
- **Land-based/mobile radar**

JSF (F-35)



Aegis (BMD)

Projected widespread deployment of battlefield visualization and decision aids

- Multi-sensor visualization for warfighters on the move
- Comprehensive battlefield pictures for warfighters
- Super-smart compression for limited capacity
- Detection and identification of targets in an urban/civilian environment



- **Ground, shipboard, and airborne communications via satellite**
- **Deployment of broadband closer to the war fighter driving need for new compute solutions**
- **Mercury well positioned with COTS software-defined radio (SDR) and scalable FPGA and DSP solutions**
- **Technology demonstrated at MILCOM (Oct. 2006)**

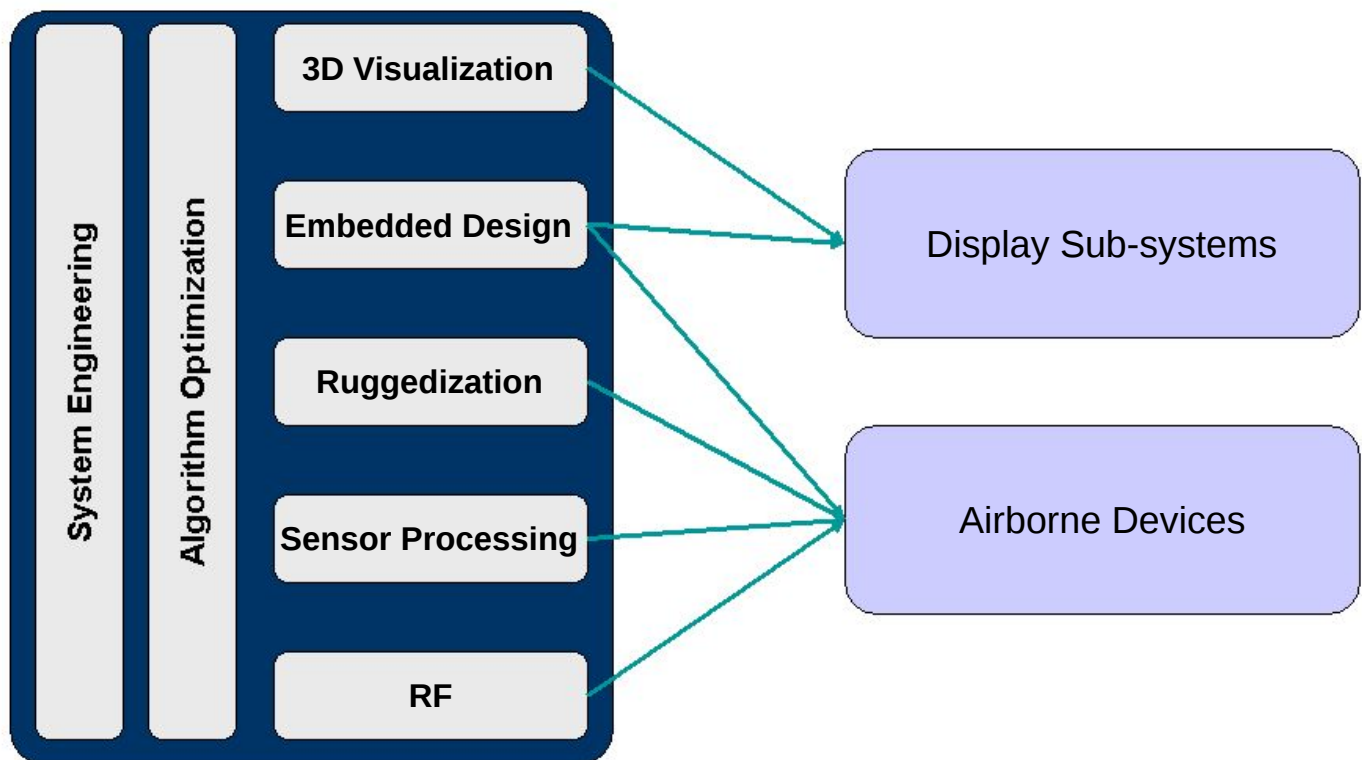


Synthetic Vision and Sensor Data Fusion

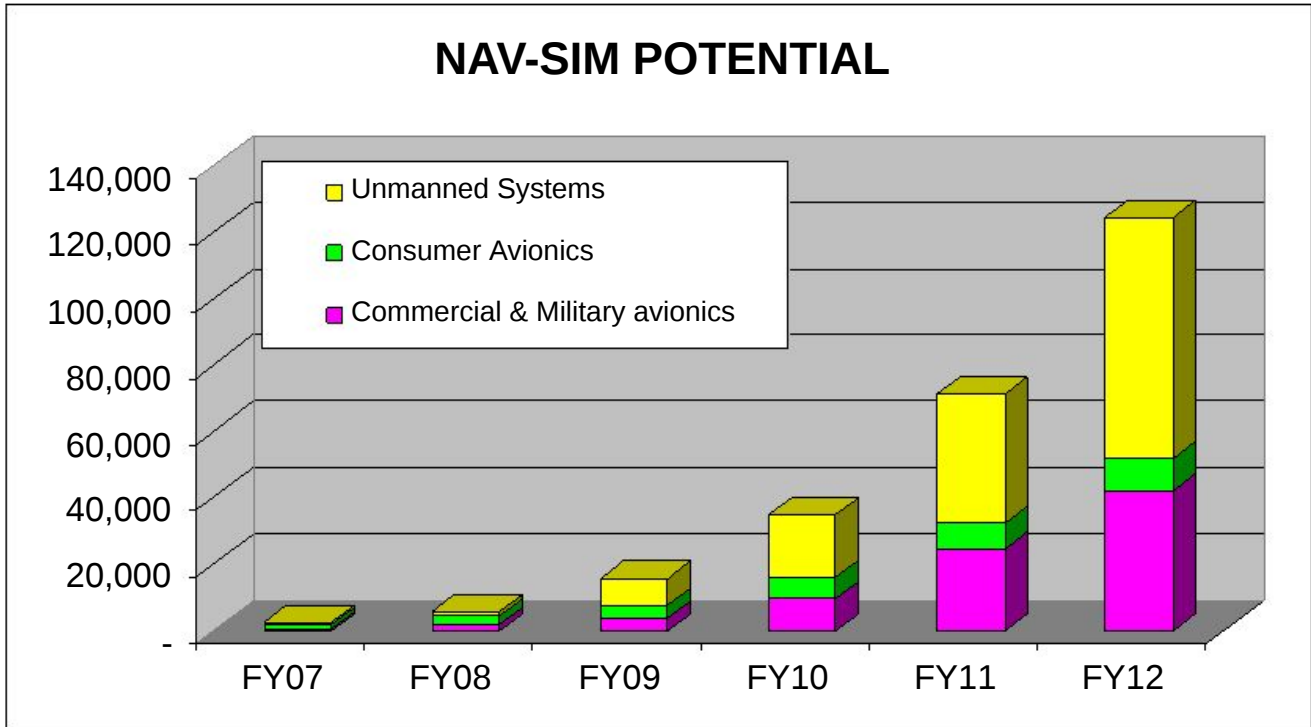
- **Forest fire detection and monitoring**
- **Precision agriculture**
- **Border surveillance**
- **Oil and gas pipeline monitoring**
- **Power line monitoring**
- **Surveillance and reconnaissance**
- **Commercial and military avionics**



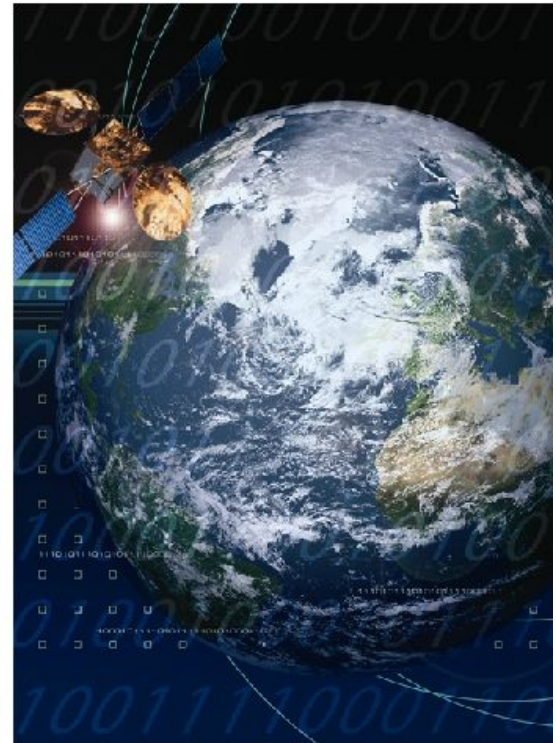
Aeronautical Applications & Systems Knowledge



	FY07	FY08	FY09	FY10	FY11	FY12
<i>Commercial & Military avionics</i>	550	1,750	4,000	9,500	24,500	42,000
<i>Consumer Avionics</i>	1,300	2,500	4,000	6,500	8,000	10,000
<i>Unmanned Systems</i>	450	1,750	7,850	19,000	39,000	72,500
TOTAL AVIONICS	2,300	6,000	15,850	35,000	71,500	124,500



- **Communications market potential**
 - System development platforms for wireless infrastructure applications
- **Growth Opportunity**
 - **Advanced TCA DSP and FPGA compute solutions**
 - **Example: Satellite ground stations for Ancillary Terrestrial Component (ATC)**

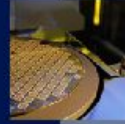
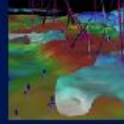


- **Semiconductor market applications**
 - **Wafer and reticle inspection systems**
 - Process streaming data to find defects
 - **Mask writing systems**
 - Generate patterns to write to semiconductor and flat-panel masks
- **Mercury Cell BE-based solutions driving growth in existing and new applications**
- **Emerging applications**
 - **Stepper/scanner control**
 - **Electronic Design Automation (EDA) – Mask synthesis**



- **Compute-intensive processing required to prepare designs for mask creation**
 - **Resolution Enhancement Technology (RET)**
 - **Design For Manufacturing (DFM)**
- **Mercury Cell-based solutions to provide over 10 Teraflops to speed application by 10x to 100x**
- **Working with a leading EDA company to deploy a solution by the end of the year**



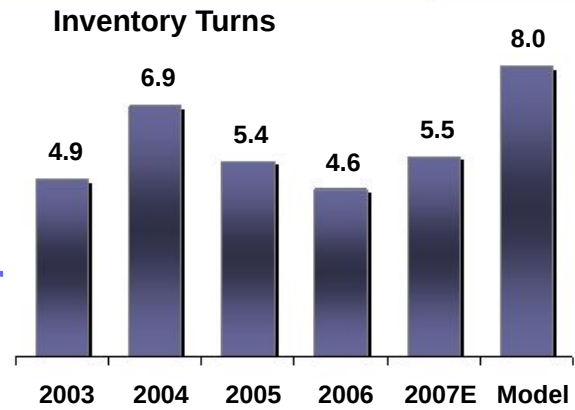


Financial Overview

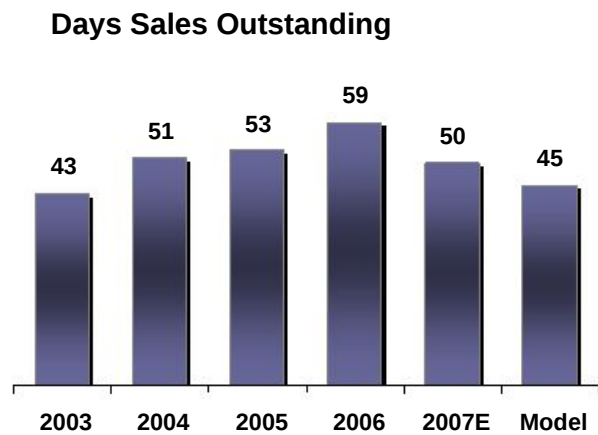
<i>Non-GAAP</i>	FY04	FY05	FY06	Guidance FY07*	Timeless Business Model
Revenue	100%	100%	100%	100%	100%
Gross Margin	67%	66%	62%	57%	60+%
SG&A	30%	29%	34%		
R&D	21%	20%	25%		
Income from Operations	17%	17%	3%	3%	16-18%

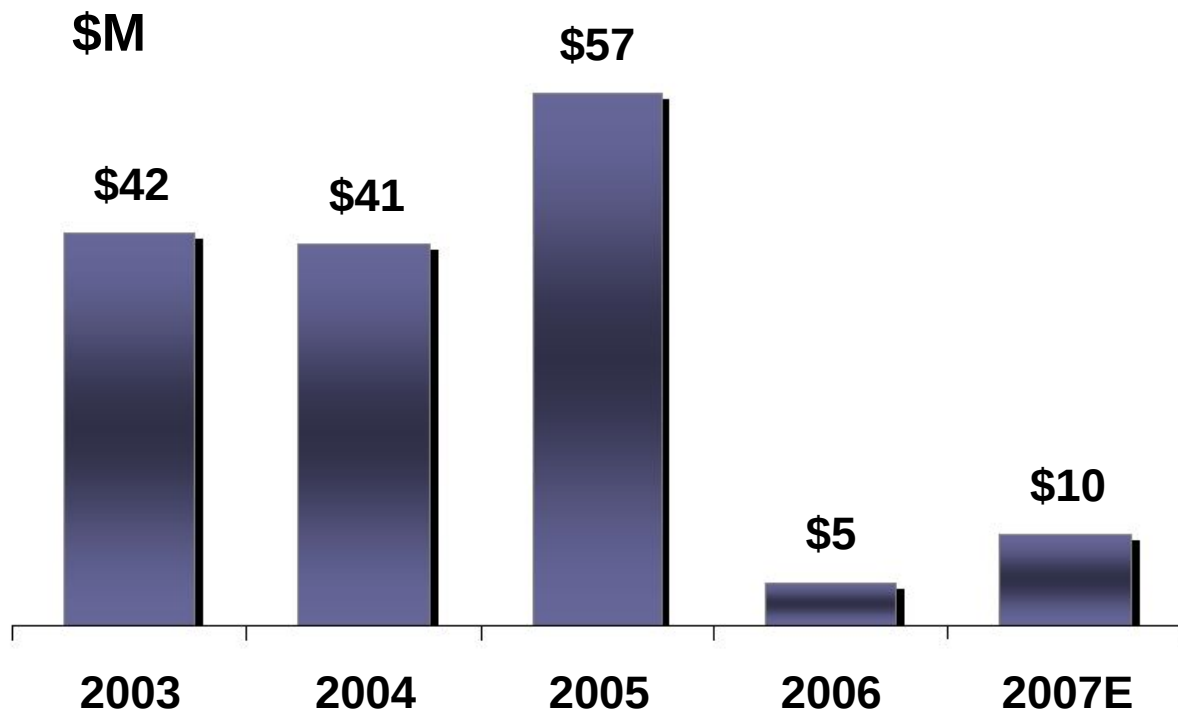
**Per Company guidance, October 26, 2006 earnings conference call*

- **Supply chain transformation**
 - **Competitive advantage for Mercury and customers**



- **Customer satisfaction**
 - **DSO target 45 days**





**Per Company guidance, October 26, 2006 earnings conference call*

**Historically strong
balance sheet**

Net cash positive

<i>Quarter ended September 30, 2006 *</i>	
Cash and Equivalents	\$142
Total Current Assets	\$172
Total Assets	\$368
Total Debt **	\$125
Total Liabilities	\$184
Stockholders' Equity	\$184

** Adjusted for October 19 mortgage payoff*

*** Convertible senior notes offering*

	Quarter Ending December 31, 2006	
Revenues (\$M)	\$52-54	
	GAAP	Non-GAAP
Gross Margin		55%
EPS	\$(0.48)-(0.43)	\$(0.23)-(0.19)

- Impact of equity-based compensation costs related to FAS 123(R) of approximately \$2.6M excluded from non-GAAP
- Acquisition-related amortization of approximately \$1.7 M excluded from Non-GAAP

Notes:

- 1) *Figures in millions, except percent and per share data which includes adjustment for contingent convertibles, in accordance with GAAP*
- 2) *Company guidance, October 26, 2006 earnings conference call*

	Fiscal Year Ending June 30, 2007	
Revenues (\$M)	\$235-245	
	GAAP	Non-GAAP
Gross Margin		~57%
EPS	~\$(0.50)	~\$0.29

- Impact of equity-based compensation costs related to FAS 123(R) of approximately \$9.8M excluded from non-GAAP
- Acquisition-related amortization of approximately \$7M, Q1 in-process R&D charge of \$3.1M, and Q1 restructuring impairment charge of \$800K excluded from non-GAAP

Notes:

- 1) *Figures in millions, except percent and per share data which includes adjustment for contingent convertibles, in accordance with GAAP*
- 2) *Company guidance, October 26, 2006 earnings conference call*

- **Strong competitive position in attractive and growing markets**
- **Large growth opportunities in 3D medical imaging, semiconductor applications, defense communications, and synthetic vision**
- **Leverage technology investments across multiple applications in diverse markets**
 - **Defense and commercial**
- **Open innovation strategy through partnerships and acquisitions**
- **Strong financial position supports continued investments in technology and new market development**

www.mc.com
NASDAQ: MRCY