

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): September 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))

**Item 7.01. Regulation FD Disclosure.**

The management of Mercury Computer Systems, Inc. ("Mercury") will present an overview of Mercury's business on Wednesday, September 6, 2006 at the Kaufman Brothers 9th Annual Investor 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 September 6, 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: September 6, 2006

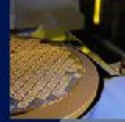
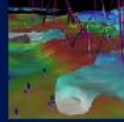
By: /s/ Robert E. Hult  
Robert E. Hult  
Senior Vice President,  
Chief Financial Officer

EXHIBIT INDEX

Exhibit No.  
99.1

Description  
Presentation materials dated September 6, 2006.

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# Kaufman Bros. 9th Annual Investor Conference September 6, 2006

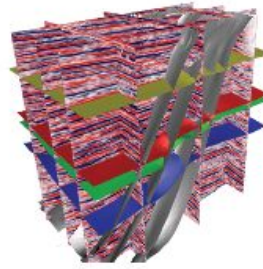
**Jay Bertelli, President, Chief Executive Officer & Chairman**  
**Bob Hult, SVP, Chief Financial Officer**

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 2006 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 Quarterly Report on Form 10-Q for the quarter ended March 31, 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.

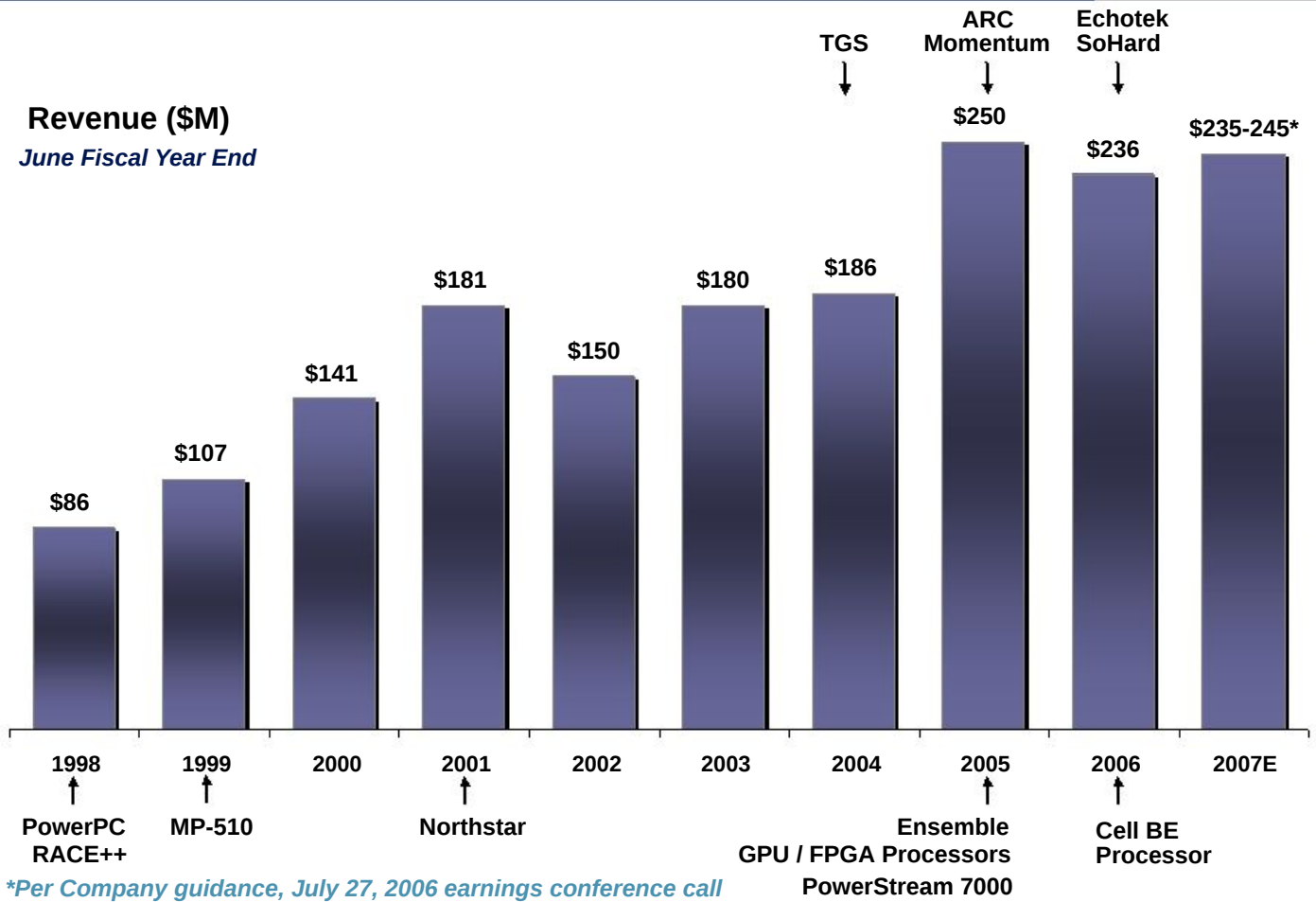
## **Use of Non-GAAP (Generally Accepted Accounting Principles) Financial Measures**

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 Fourth Quarter and Fiscal Year 2006 earnings release, which can be found on our website at [www.mc.com/mediacenter/pr/](http://www.mc.com/mediacenter/pr/).

- **Leading provider of embedded computing solutions for specialized applications**
- **FY06 revenues: \$236 million**
- **836 employees**
- **HQ in Chelmsford, MA**
  - Sales, support, and R&D centers in U.S., Europe, and Japan
- **Industry focus areas:**
  - Aerospace & Defense
  - Life Sciences
  - Semiconductor Equipment
  - Geosciences
  - Communications



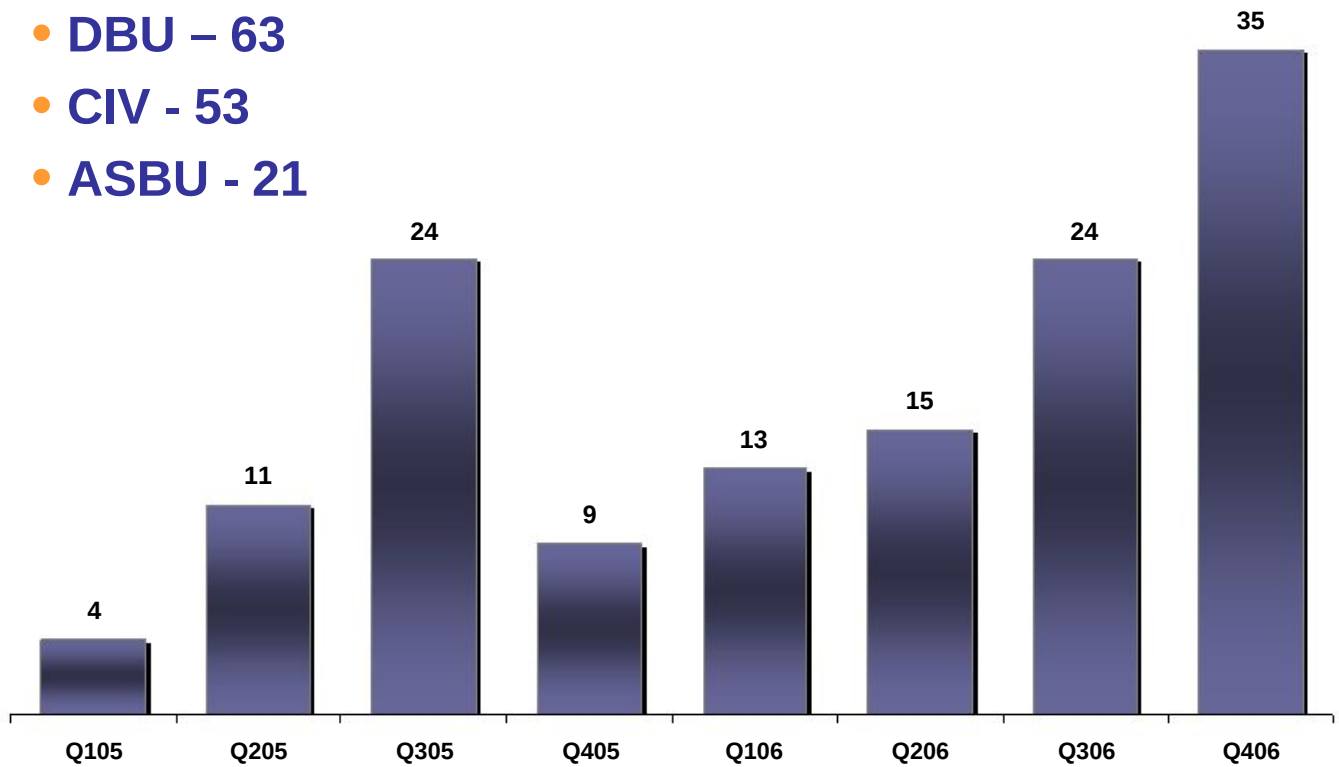
# Revenue Follows Technology Cycles





## Total Design Wins

- DBU – 63
- CIV - 53
- ASBU - 21



- **Data explosion across multiple markets, driving need for increased use of 3D visualization**
- **Continued need for real-time processing in demanding applications**
- **Introduction of multi-core processors across markets to increase performance**
  - IBM Cell BE
- **Trend to embed specialized computers into products across industries**

## Helping our Customers to Compete

- **Unique skill set and software for processing and visualizing data**
- **Mercury's heterogeneous architectures enable systems to perform optimally in demanding applications**
- **Libraries and tools for multi-core, multi-processor computing to economically solve the most challenging compute problems**

- **Leverage technology investments across multiple high-performance computing applications in diverse markets**
- **Develop and acquire application software for select markets**
  - PACS, Biotechnology, VistaNav™, etc.
- **Deliver more of the overall solution**
  - TGS, Echotek, SoHard, Momentum

- **Diversified revenue base**

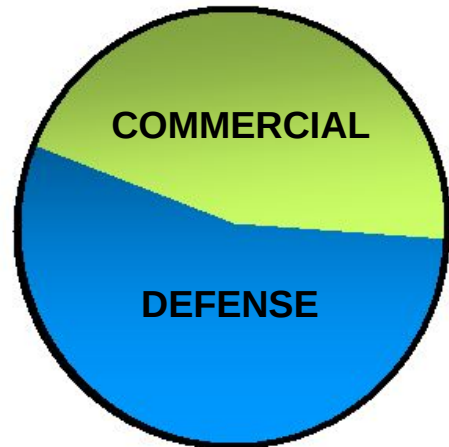
- **Defense**

- Radar
- Sonar
- SIGINT
- Communications

- **Commercial**

- Medical Imaging
- Wafer Inspection
- Mask Generation
- Oil & Gas Exploration
- Semiconductor Design for Manufacturing
- Communications

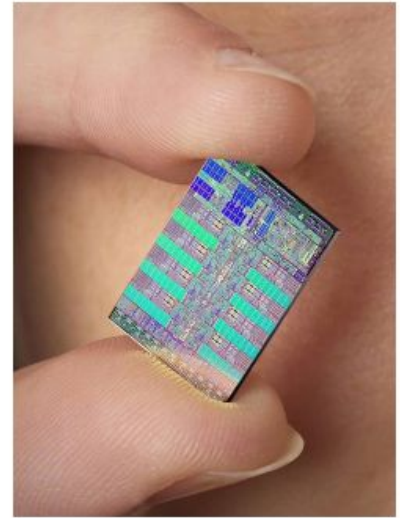
## FY06 Revenue Mix



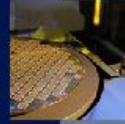
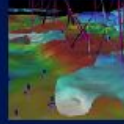
- **New market opportunities**

- Synthetic Vision
- Biotechnology

- **5-100x faster than conventional microprocessors**
- **Designed to solve the same types of problems Mercury has been solving for many years**
- **Mercury is 1<sup>st</sup> non-gaming company to integrate Cell**
- **Applicable across multiple markets**

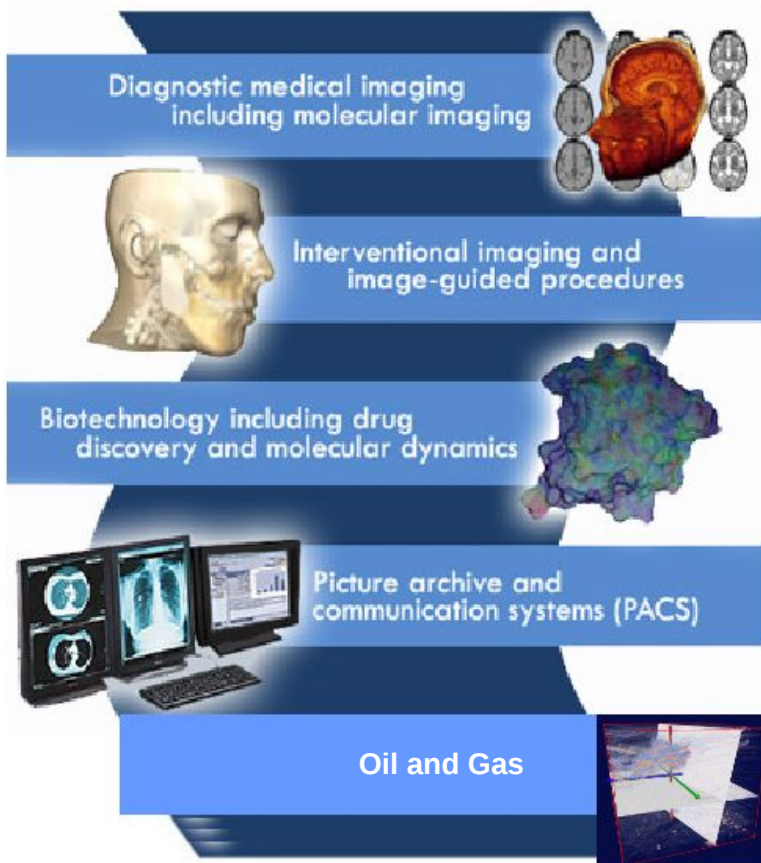


*Cell Broadband Engine is a trademark of Sony Computer Entertainment Inc.*

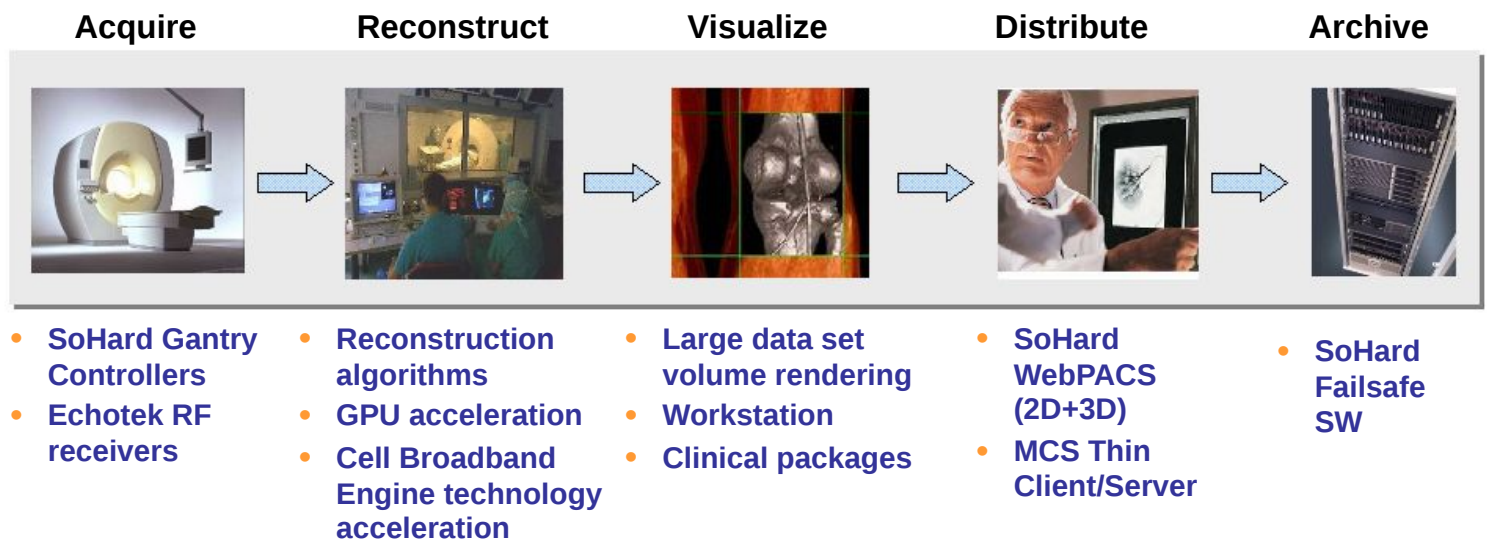


# Commercial Imaging and Visualization (CIV)

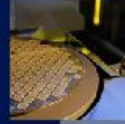
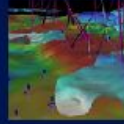
# CIV Customers & Targets (not all-inclusive)







- Broad end-to-end medical systems OEM solution portfolio
- All steps from scanner output to end-user applications
- Image reconstruction, processing, and visualization
- Embedded components and integrated solutions



# Advanced Solutions Business Unit (ASBU)

# ASBU Customers & Targets (not all-inclusive)



**Semiconductor Capital Equipment:**  
Wafer Inspection, Reticle Inspection,  
Mask Generation



**TOSHIBA**



**MICRONIC**



**Wireless Infrastructure**  
Base Stations and Radio Network  
Controllers



**MOTOROLA**



**NOKIA**  
Connecting People



**Silicon IP and Component Solutions**

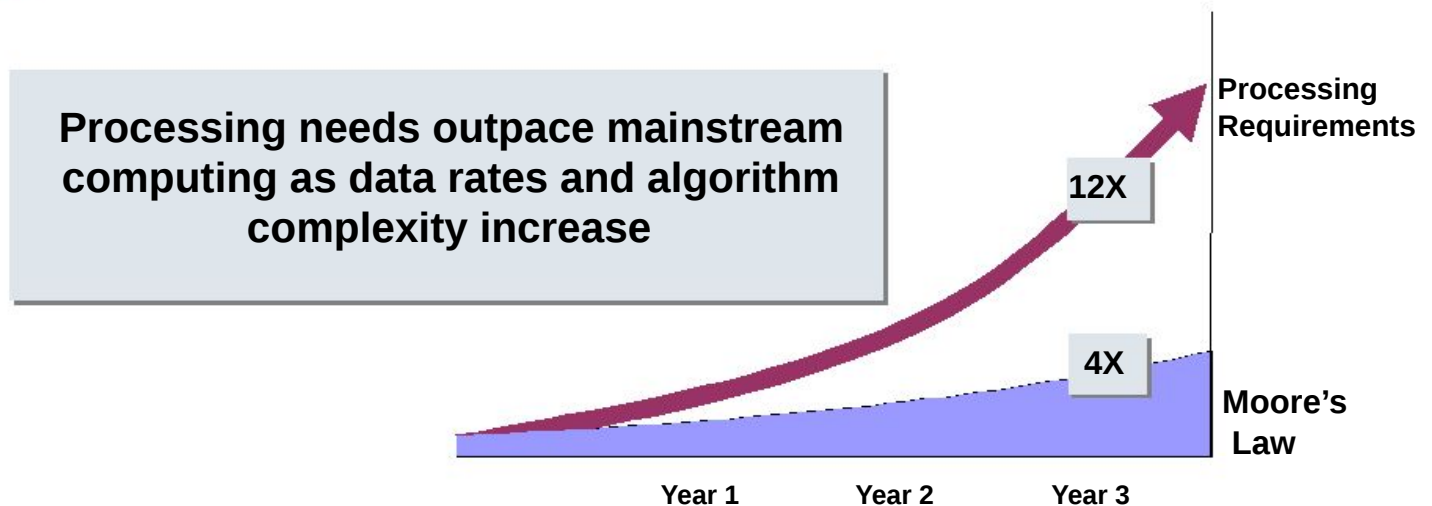


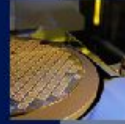
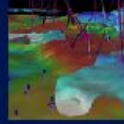
**Raytheon**



**Satellite Data Links and Software Radio**

- ↑ **Consumer demand for faster, lower power, lower-cost electronics**  
Drives the need for higher-performance chip equipment
- ↑ **Hard problems that are getting harder**  
More complex algorithms, higher data rates
- ↑ **New applications that require massive compute power**  
Example: Reticle design rule verification and direct write lithography
- ↓ **Subject to market cyclicity**





## Defense Business Unit (DBU)

- **Market focus**

- Radar
- Signals Intelligence (SIGINT)
- Other defense technologies

- **Technology leadership**

- Strong COTS model
- Aboard demanding platforms in air, on land, under sea
- Full life-cycle support



Representative



**Raytheon**



**NORTHROP GRUMMAN**



**BAE SYSTEMS**

**Enabling our customers to win by providing commercial off-the-shelf technology for new applications**

- **Radar Processing Leadership**

- Tactical fighters: JSF, F-22, F-16
- Airborne surveillance: MP-RTIP
  - Global Hawk
  - E10-A, JSTARS, AWACS
- Shipboard missile defense: Aegis
- UAV SAR: Predator LYNX

- **Radar Market Opportunities**

- Upgrades to existing radars
- Land-based/mobile radar
- Passive radars

- **Cell Broadband Engine**

JSF (F-35)



Aegis (BMD)



- **Communications Intelligence (COMINT) and Electronic (ELINT) Intelligence**
- **Fastest growing defense segment**
  - 19% 5-Year CAGR
- **Comprehensive product offering**



- **Investments for defense communications**

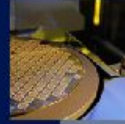
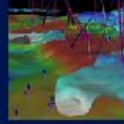
## *What You Could Only Dream About Before*

### **Widespread deployment of battlefield visualization and decision aids previously found only in research laboratories**

- Multi-sensor visualization for ALL warfighters on the move
- Comprehensive battlefield pictures for all warfighters
- Super-smart compression for limited capacity, wide-band data links
- Detection and acquisition of previously intractable targets

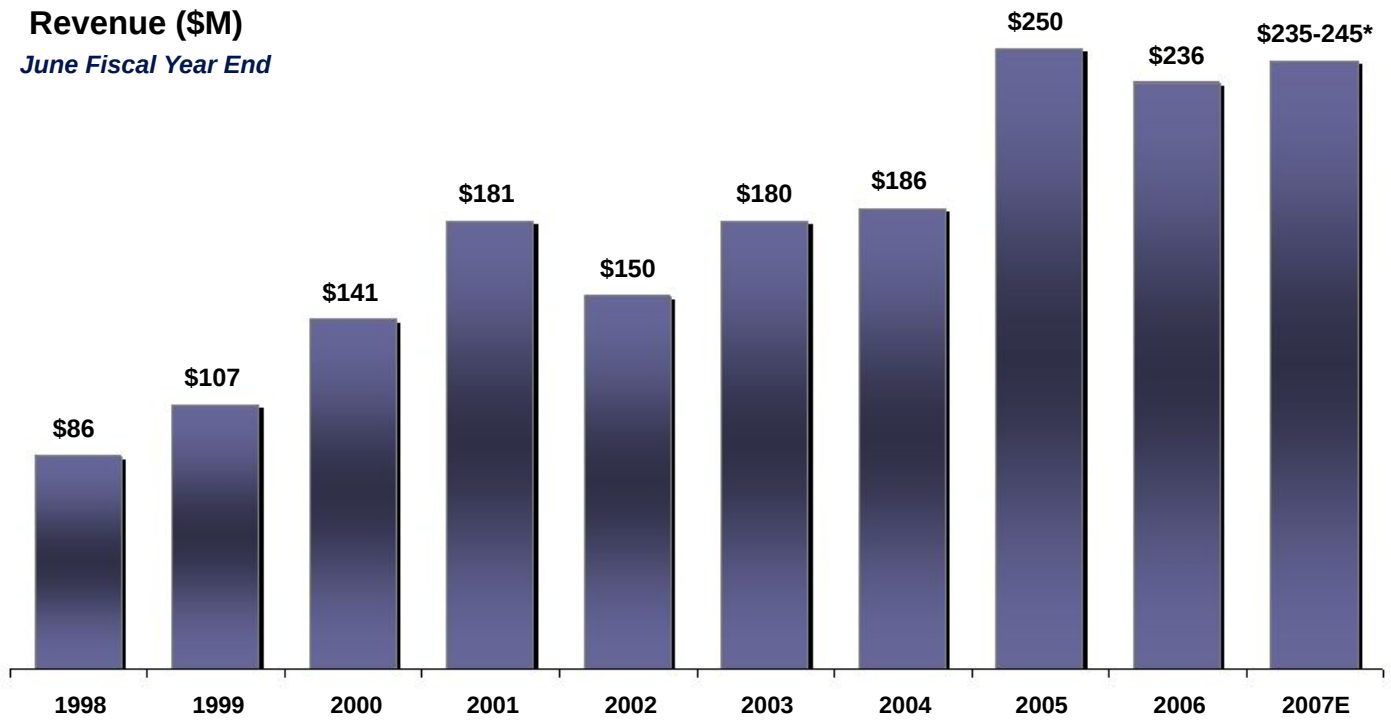


**PowerBlock™ 200**



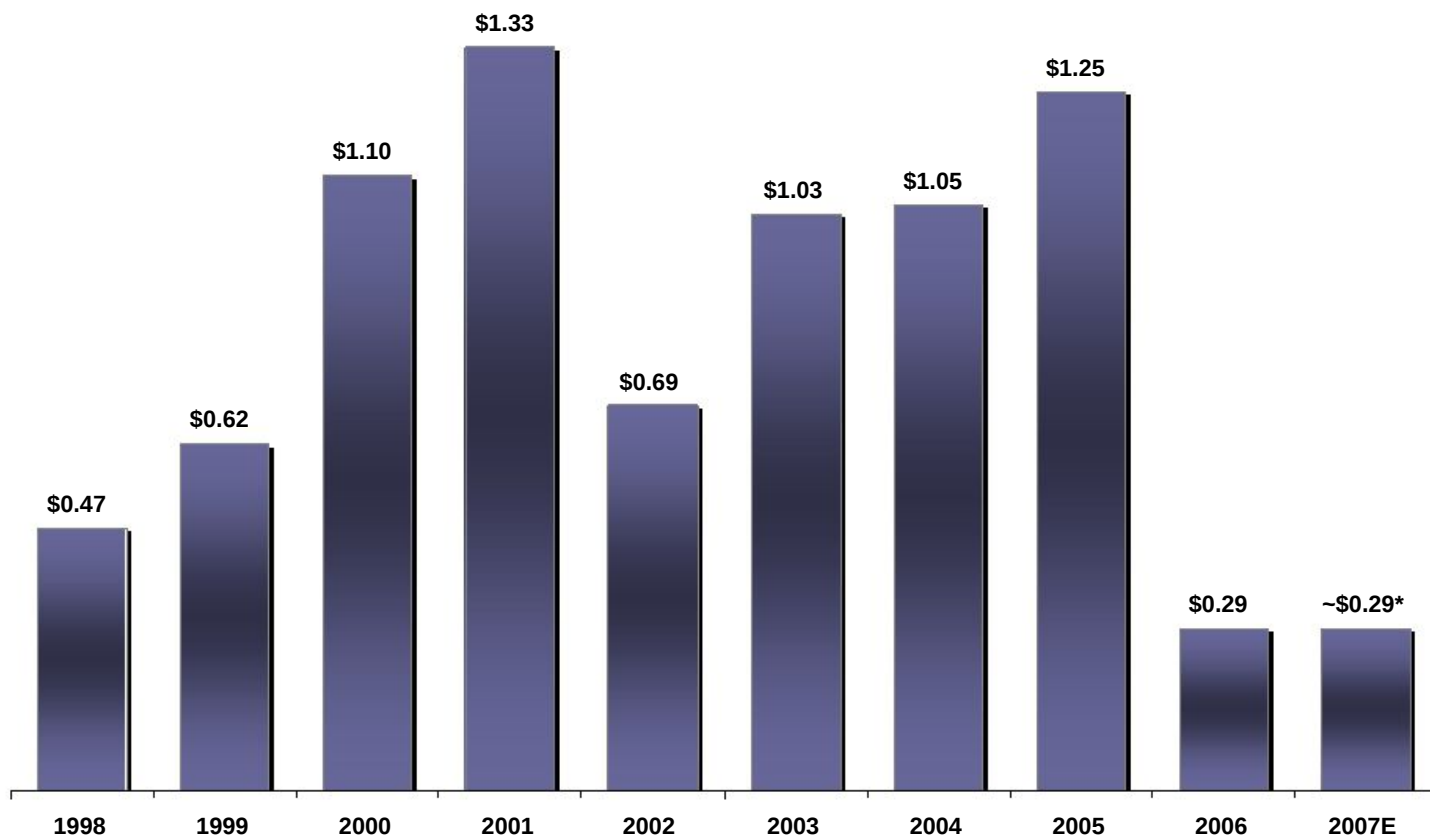
## Financial Overview

## Revenue Follows Technology Cycles



*\*Per Company guidance, July 27, 2006 earnings conference call*

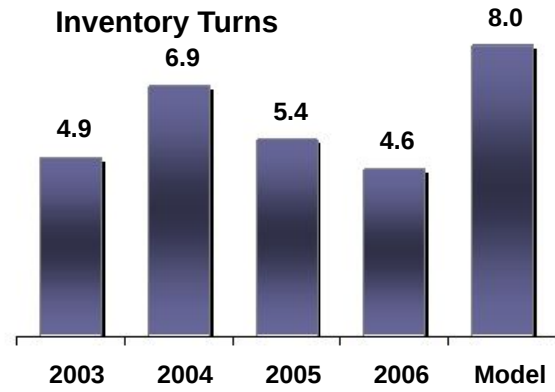
# Earnings per Share



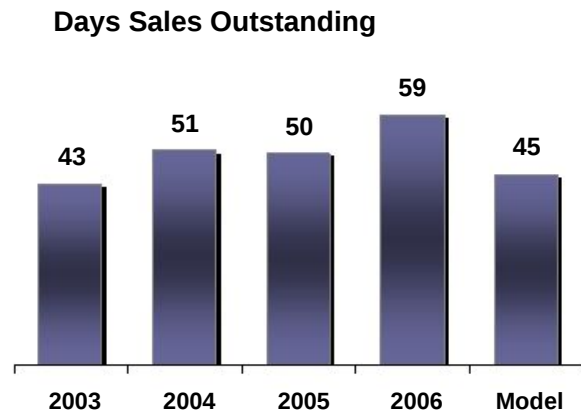
*\*Per Company guidance, July 27, 2006 earnings conference call*

*Note: Non-GAAP EPS shown from 2006 onward*

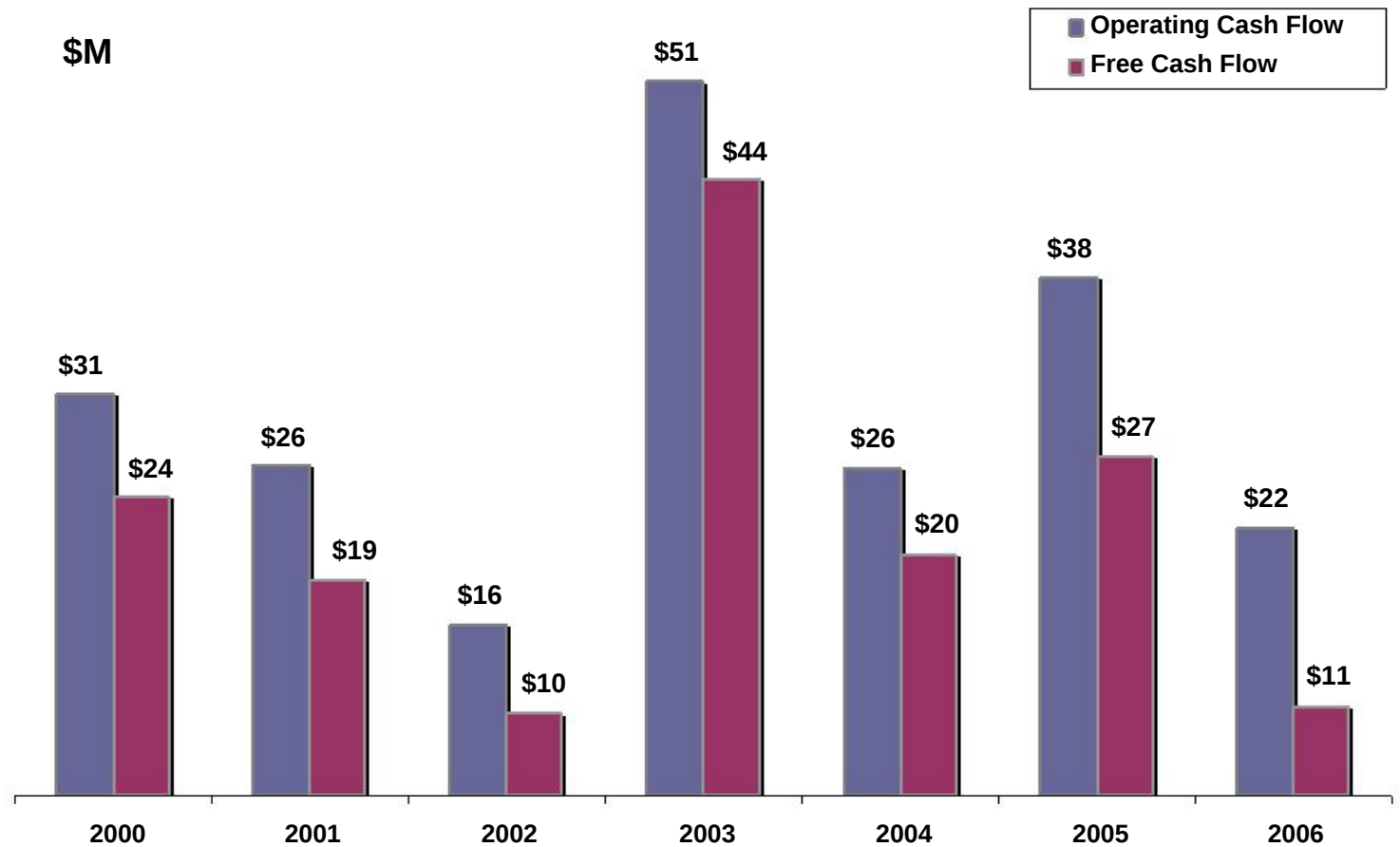
- **Supply chain investment**
  - **Competitive advantage for Mercury and customers**



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



# Cash Generation



**Historically strong  
balance sheet**

**Supports open  
innovation growth  
agenda**

<i>Quarter ended June 30, 2006</i>	
Cash and Equivalents	\$162
Total Current Assets	\$200
Total Assets	\$379
Total Debt *	\$136
Total Liabilities	\$187
Stockholders' Equity	\$192

*\* Includes \$125 million convertible senior notes offering*



	Quarter Ending September 30, 2006	
<b>Revenues (\$M)</b>	<b>\$50-53</b>	
	<b>GAAP</b>	<b>Non-GAAP</b>
<b>Gross Margin</b>		<b>57%</b>
<b>EPS</b>	<b>\$(0.35)-(0.29)</b>	<b>\$(0.17)-(0.11)</b>

- Impact of equity-based compensation costs related to FAS 123(R) 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, July 27, 2006 earnings conference call*

	Fiscal Year Ending June 30, 2007	
<b>Revenues (\$M)</b>	<b>\$235-245</b>	
	<b>GAAP</b>	<b>Non-GAAP</b>
<b>Gross Margin</b>		<b>57%</b>
<b>EPS</b>	<b>~\$(0.37)</b>	<b>~\$0.29</b>

- Impact of equity-based compensation costs related to FAS 123(R) excluded from Non-GAAP
- Acquisition-related amortization of approximately \$6.8M 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, July 27, 2006 earnings conference call

<i>Non-GAAP</i>	FY04	FY05	FY06	Guidance FY07*	Timeless Business Model
<b>Revenue</b>	100%	100%	100%	100%	<b>100%</b>
<b>Gross Margin</b>	67%	66%	62%	57%	<b>60+%</b>
<b>SG&amp;A</b>	30%	29%	34%		
<b>R&amp;D</b>	21%	20%	25%		
<b>Income from Operations</b>	17%	17%	3%	~2%	<b>16-18%</b>

*\*Per Company guidance, July 27, 2006 earnings conference call*

**www.mc.com**  
**NASDAQ: MRCY**