UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

> June 24, 2004 Date of Report (Date of earliest event reported)

Mercury Computer Systems, Inc.

(Exact name of registrant as specified in its charter)

Massachusetts (State or other jurisdiction of incorporation) 000-23599 (Commission File Number) 04-2741391 (IRS Employer Identification No.)

01824

(Zip Code)

199 Riverneck Road, Chelmsford, Massachusetts (Address of principal executive offices)

(978) 256-1300

Registrant's telephone number, including area code

N/A

(Former name or former address, if changed since last report)

Item 9. Regulation FD Disclosure.

On June 24, 2004, management of Mercury Computer Systems, Inc. ("Mercury") will make a presentation at the William Blair 24th Annual Growth Stock 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 9 of this Report and shall not be deemed to be "filed" for the purposes of Section 18 of the Securities and 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.

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.

Date: June 24, 2004

MERCURY COMPUTER SYSTEMS, INC.

By: /s/ Joseph Hartnett

Name: Joseph M. Hartnett Title: Vice President, Controller and Chief Accounting Officer

		EXHIBIT INDEX
Exhibit No.	Description	
Exhibit 99.1	Presentation Materials dated June 24, 2004 *	

* Filed herewith.



William Blair Growth Conference

June 24, 2004

Jay R. Bertelli Chairman, President and CEO Bob Hult SVP, Chief Financial Officer

The Ultimate Performance Machine



Safe Harbor Statement

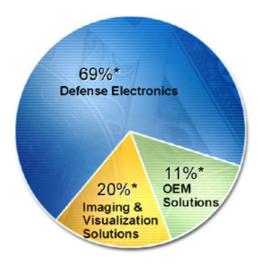
Certain information (including oral remarks) presented may contain "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995. These statements include, among others, those dealing with overall business, segment, and market growth and our business and financial outlook. You can identify forward-looking 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.

Factors that could cause or contribute to such risks and uncertainties include, but are not limited to: general economic and business conditions, competition, changes in technology and methods of marketing, delays in completing various 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 and the timing of such funding, shortages in components, production delays due to performance quality issues with outsourced components, the failure to locate favorable acquisition and partnership opportunities and achieve expected results, and various other factors beyond the Company's control.

These risks and uncertainties include such additional factors as are described in the Company's recently filed reports with the U.S. Securities and Exchange Commission, including its periodic reports on Form 10-K and Form 10-Q. The Company cautions the audience 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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Company Overview



* 2003 Percentage of total revenue.

- Founded in 1981
- Leading provider of innovative, engineered computing solutions
- Office locations in U.S., UK, France, Germany and Japan; R&D centers in U.S., France, and Germany
- FY04 estimated revenues: \$180-\$183 million
- 665 employees worldwide; 265 engineers
- Investment in knowledge of customer applications

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Market Applications

Defense Electronics

- Radar
- · Signals intelligence
- Data exploitation, smart weapons, imagery and sonar

Imaging & Visualization Solutions

- Life sciences: medical imaging, biotechnology
- · Geosciences: oil and gas exploration
- Simulation

OEM Solutions

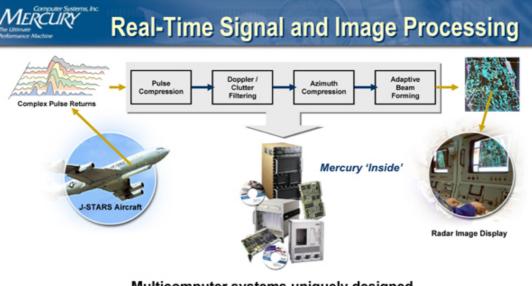
- Semiconductor equipment: mask generation, wafer inspection
- · High-end baggage scanning
- Telecommunications





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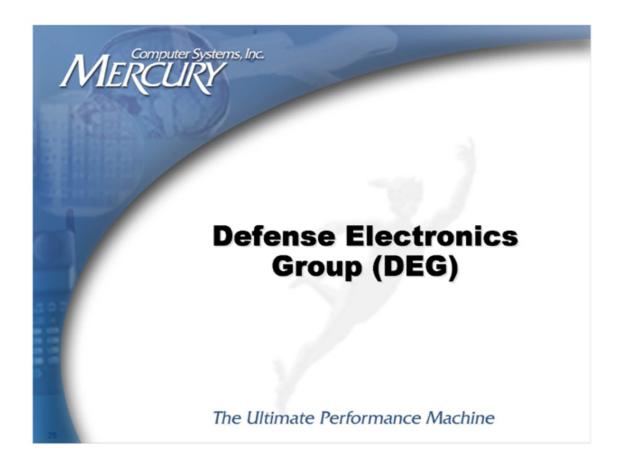
Multicomputer systems uniquely designed for real-time signal and image processing applications

- · Scalable input/output and inter-system communications bandwidth
- Scalable processing power in very dense packaging .
- Packaging and cooling expertise •
- Intimate understanding of customer applications .

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MERCURY Defense Electronics Group Overview

Deployed across all environments

- · Air, land, and sea
- Commercial, rugged, and conduction- and spray-cooled configurations

Full life-cycle support

 From R&D through deployment

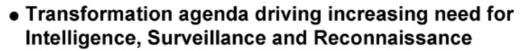
DEG is well positioned

 Driving innovation for the next generation



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- ISR drives demand for computing capability

ISR moving to lower echelons

- Smaller systems
- More platforms

Communications

- Network Centric Warfare
- Software Radio

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ISR Programs

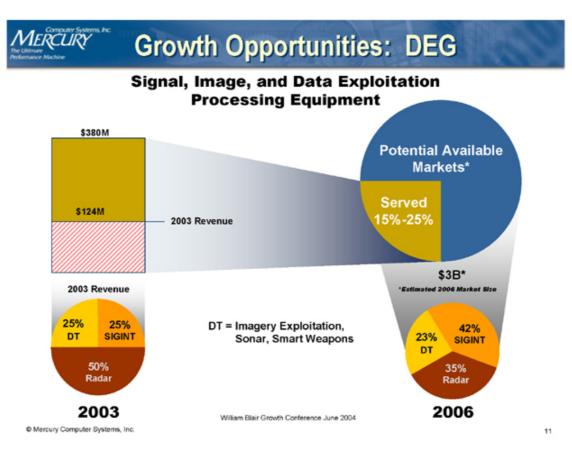
This is a listing of programs in which Mercury is involved as well as programs that represent target applications for Mercury technology.

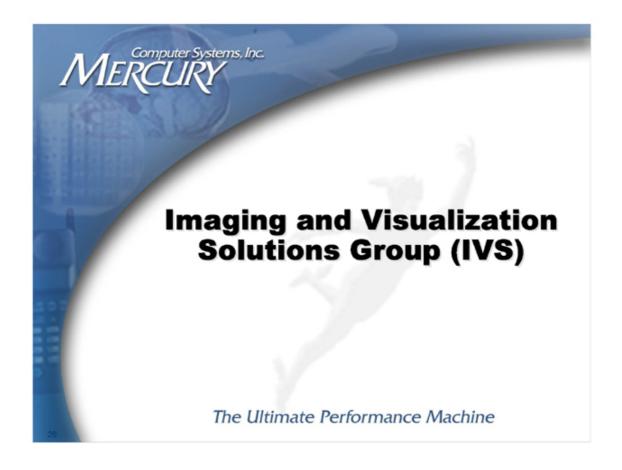
ACS	Aerial Common Sensor	
ASIP	Airborne Signals Intelligence Payload	
BAMS	Broad Area Maritime Surveillance	
DCGS	Distributed Common Ground/Surface Systems	
DDX	new Navy destroyer	
E2C	Advanced Hawkeye Navy airborne surveillance and command-and-control platform	
EuroHawk	Unmanned Air Vehicle	
FCS	Future Combat Systems	
Global Hawk	Unmanned Air Vehicle	
JCM	Joint Common Missile	
JSF (F-35)	Joint Strike Fighter	
JTRS	Joint Tactical Radio System	
MC2A	Multi-Sensor Command and Control Aircraft	
MMA	Multi-mission Maritime Aircraft	
MPA	Maritime Patrol Aircraft	
Prophet	Armored Cavalry Regiment commander's principal signals intelligence & electronic warfare system	
STARE	Small Tactical Arms Recognition Equipment	
J-UCAS	Joint Unmanned Combat Air Systems	



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Open Innovation



The Ultimate Performance Machine



Mercury provides more of the total solution to meet customer needs

 Shared commitment to customer success

- Complementary technology and expertise
- Positioned to strengthen market presence in medical diagnostic imaging
- Opens new market opportunities in biotechnology, oil and gas exploration, simulation

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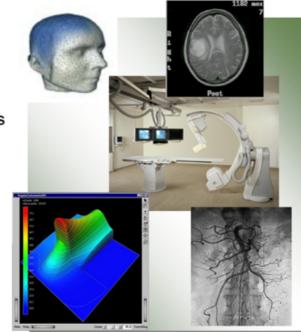
Imaging & Visualization Solutions

Applications

- 2D medical imaging
- 3D imaging

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- Image-guided surgery (4D)
- Computer-aided diagnostics
- Simulation commercial and defense
- Molecular imagery
- Biotechnology
- Oil and gas exploration



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IVS Growth Drivers

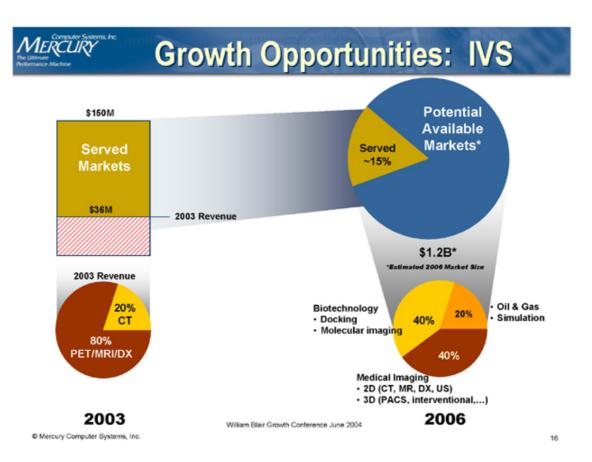
- Increased volume of data from sensors is driving the need for increased processing power in all target markets
- Increased image understanding through innovative visualization technology
 - Faster, better imaging and less invasive procedures are needed for safer, more accurate diagnoses
 - Intensive computing capabilities are required for 3D image reconstruction in real time (4D)



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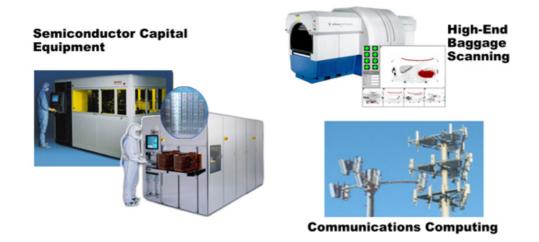
AERCURY





OEM Solutions Group

Delivering specialized processing solutions for demanding commercial OEM applications



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Significant growth opportunity in semiconductor capital equipment market

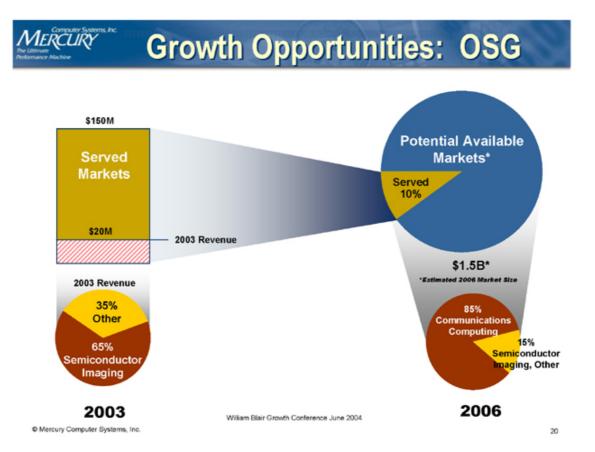
- Unique value proposition
- Design wins moving to production
- Semiconductor equipment market in expansion phase

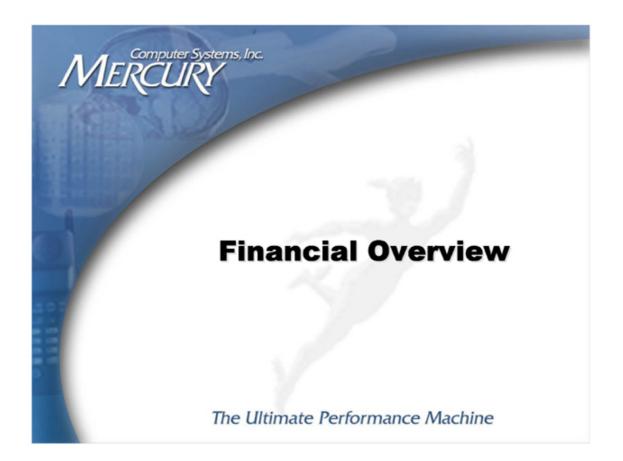
Continuing market development in telecommunications

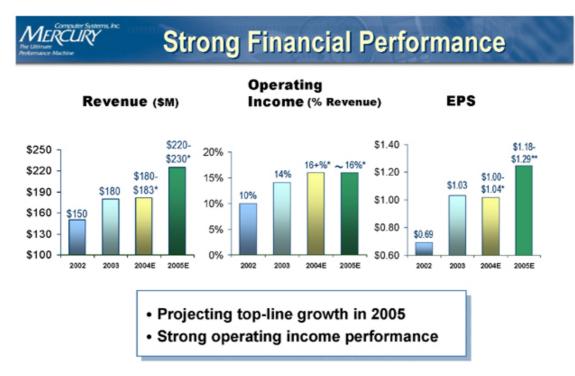
- Positioning for growth as market moves to deploy new solutions
 - E.g., Ensemble[™], a serial RapidIO Advanced Telecom Computing Architecture (AdvancedTCA[®]) development system

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- * Per Company guidance April 15, 2004 Q3 earnings conference call.
- ** First Call range as of June 2004.

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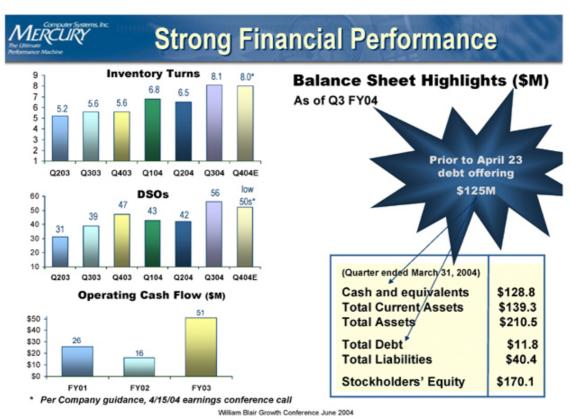


Business Model

	FY02	FY03	Guidance FY04	Business Model
Revenue	100%	100%	100%	100%
Gross Margin	65%	66%	66%	64-66%
SG&A	32%	30%		28-30%
R&D	23%	21%		19-21%
Operating expenses	55%	51%	49-50%	47-51%
Income from operations	10%	14%	16+%	15-17%
Non operating income*	5%	4%		0%
PBT	15%	18%		15-17%
Taxes	4%	5%		5%
Net income	11%	13%	12+%	10-12%

* 2003, 2002 net income each include ~\$7M non-operating income associated with the sale of SSBU William Blair Growth Conference June 2004

O Mercury Computer Systems, Inc.



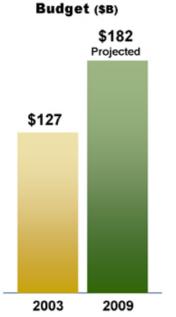
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Market Growth Drivers

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DoD Investment Accounts

AFRCURY



- FY04 defense budget real increases in top line.
- Investment accounts (RDT&E plus Procurement) shift toward RDT&E
- FY05 RDT&E budget projected to be the largest in 50 years in absolute terms
- Transformation initiatives gaining momentum

RDT&E Budget Share				
FY2004-09:	15.5%			
FY1980-03	11.7%			
FY1954-03	10.1%			

Source: DFI International, 11/03

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Programs Driving ISR

Multi-Platform Radar Technology Insertion Program (MP-RTIP)

- Modular, active electronically scanned array radar systems scaled for integration on manned and unmanned airborne platforms
- Planned for deployment on: Global Hawk (Unmanned Air Vehicle) and Multi-Sensor Command and Control Aircraft (MC2A)

Northrop Grumman Receives \$888 Million Contract to Develop Advanced Airborne Radar

MP-RTIP Radar will enhance surveillance and tracking of ground targets and cruise missiles

EL SEGUNDO, Calif. -- May 3, 2004 -- The U.S. Air Force's ability to track and identify stationary and moving vehicles, and low-flying cruise missiles will increase dramatically using a new airborne radar system being developed by

Northrop Grumman Corporation (NYSE: NOC).

Mercury Computer Systems Receives Order for Phase II of Multi-Platform Radar Technology Insertion Program (MP-RTIP)

High-Density TeraFLOPS Multicomputer Chosen for Next-Generation Military Radar

CHELMSFORD, Mass. –June 15, 2004 – Mercury Computer Systems, Inc. (NASDAQ: MRCY), announced today it has received an \$8.3 million order from Northrop Grumman Corporation (NYSE: NOC) for the recently announced Phase II U.S. Air Force Multi-Platform Radar Technology Insertion Program (MP-RTIP).

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Summary

- Positioned for top-line growth
- Strong competitive position in attractive and growing markets
- Diversified revenue base
- Straightforward operating model and financial structure
- Strong balance sheet, cash and operating cash flow and significant financing flexibility
- Open innovation strategy through partnerships and acquisitions to enhance capability to deliver solutions across target markets

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