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

Date of report (Date of earliest event reported): April 17, 2003

MERCURY COMPUTER SYSTEMS, INC.

(Exact Name of Registrant as Specified in Charter)

Massachusetts	000-23599	04-2741391		
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(IRS Employer Identification No		
199 Riverneck Road, Chelmsford, Massachusetts			01824	
(A	address of Principal Executive Offices)		(Zip Code)	

Registrant's telephone number, including area code (978) 256-1300

(Former Name or Former Address, if Changed Since Last Report)

Item 7. Financial Statements, Financial Information and Exhibits.

(c) Exhibits.

Exhibit No.	Description
99.1	Press Release, dated April 17, 2003, of Mercury Computer Systems, Inc.

Item 9. Regulation FD Disclosure.

The following information is intended to be included under "Item 12. Results of Operations and Financial Condition" and is included under this Item 9 in accordance with SEC Release No. 33-8216.

On April 17, 2003, Mercury Computer Systems Inc. (the "Company") issued a press release regarding its financial results for the quarter ended March 31, 2003. The Company's press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and incorporated by reference herein.

The information in this Current Report on Form 8-K and the Exhibit attached hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, regardless of any general incorporation language in such filing.

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: April 17, 2003

MERCURY COMPUTER SYSTEMS, INC.

By: /s/ JOHN F. ALEXANDER II

Name: John F. Alexander II Title: Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)

EXHIBIT INDEX

Exhibit No. Description

99.1 Press Release, dated April 17, 2003, of Mercury Computer Systems, Inc.

PRESS RELEASE

Mercury Computer Systems Reports Strong Performance in Third Quarter Fiscal 2003 Delivers \$0.35 Earnings Per Share and Revenues of \$48.7 Million

CHELMSFORD, Mass. — April 17, 2003 — Mercury Computer Systems, Inc. (NASDAQ: MRCY) today reported results for its third quarter fiscal 2003 ended March 31, 2003.

The Company posted its 49th consecutive quarter of profitable performance. In the third quarter:

- Revenues were \$48.7 million, an increase of 40% over the prior year's third quarter.
- Operating income was \$8.6 million, representing 18% of revenues.
- Non-operating income was \$2.8 million, which includes the 12th and final \$1.6 million quarterly payment and the \$1.0 million payment held in escrow for the sale of Mercury's Shared Storage Business Unit ("SSBU") completed in January 2000.
- Net income was \$7.9 million, representing 197% growth over the prior year's third quarter.
- Earnings per share (diluted) were \$0.35, an increase of 192% over the prior year's third quarter.
- · Cash flows from operating activities generated \$6.3 million. Cash and investments increased to \$111.2 million.

"We are pleased with the results for the quarter," said Jay Bertelli, president and chief executive officer of Mercury Computer Systems. "It was a very strong performance with revenue increasing 40% over last year, expanding margins, and solid working capital management resulting in another strong quarter of cash generation. The Company generated \$6.3 million in cash flow from operating activities in the quarter, bringing the total for the year to approximately \$42.9 million."

Order Rates and Backlog

Order rates for the quarter were low within the defense electronics and medical imaging segments resulting in a book-to-bill ratio below 1.0. The Company's total backlog position at the end of the quarter was \$59.8 million, down from \$78.4 million at the beginning of the fiscal year. Of the current total backlog, \$54.2 million represents shipments scheduled over the next 12 months.

Defense Electronics

Revenues for the quarter from defense electronics were \$34.4 million, representing 71% of total revenues. Defense electronics revenues continued to recover from last year's nadir, increasing 95% over the prior year's third quarter performance of \$17.6 million. For the first nine months of fiscal 2003, defense electronics revenues were \$91.6 million, representing 67% of the Company's total revenues, compared to \$64.1 million for the same period of fiscal 2002, a year-over-year increase of 43%. The year-over-year increase in defense electronics occurred across each of the three primary application markets within the segment, including radar, signals intelligence, and emerging applications markets.

Medical Imaging

Revenues for the quarter from medical imaging were \$8.2 million, representing 17% of total revenues. Medical imaging revenues were down 43% compared to the prior year's third quarter performance of \$14.3 million. For the first nine months of fiscal 2003, medical imaging revenues were \$28.4 million, representing 21% of the Company's total revenues, compared to \$34.8 million for the same period of fiscal 2002, a year-over-year decrease of 18%. Medical imaging revenues were down year-over-year due primarily to continued reductions in CT-related revenues as customers introduce CT models that do not contain the Company's products. The reduction has been partially offset by increasing revenues in other modalities, including MRI, and Digital X-ray. The Company anticipates shipments for the CT modality to be essentially completed by the end of the fourth quarter.

OEM Solutions

Revenues for the quarter from OEM solutions were \$6.1 million, representing 12% of the Company's total revenues. OEM solutions revenues increased 103% compared to the prior year's third quarter performance of \$3.0 million. For the first nine months of fiscal 2003, OEM solutions revenues were \$15.8 million, representing 12% of the Company's total revenues, compared to \$8.3 million for the same period of fiscal 2002, a year-over-year increase of 90%. The year-over-year increase in OEM solutions revenues is due primarily to increased shipments of systems for inclusion in baggage scanning/Explosive Detection Systems ("EDS") applications, and to increased shipments to semiconductor imaging OEMs for developing and testing of new semiconductor imaging systems. Growth in this business segment is constrained by the continued weakness in the overall semiconductor capital equipment industry.

Business Outlook

This section presents our current expectations and estimates, given current visibility, on our business outlook. It is possible that actual performance will differ materially from the ranges and estimates given — either on the upside or on the downside. Investors should consider all of the risks identified, including those listed in the Safe Harbor Statement below, with respect to these estimates and make themselves aware of the risk factors that may impact the Company's actual performance.

For the fourth quarter, the Company expects revenues in the range of \$43 million to \$46 million. The mid-point of this range would represent 3% growth over the year-ago period. At these revenue levels, operating income should approximate 12% of revenues resulting in an estimated diluted EPS in the range of \$0.16 to \$0.20 for the quarter. The mid-point of this range would represent a 25% decrease from the year-ago quarter. The year-earlier period included \$1.6 million in non-operating income, representing \$0.05 in diluted earnings per share, associated with the sale of the SSBU.

Assuming the mid-point of the range for Q4, the Company expects to complete FY03 with revenues of approximately \$180 million and diluted earnings per share of approximately \$1.00.

There is significant uncertainty in all of our markets due to a combination of the current geo-political environment and the continued weakness in worldwide economies. Faced with this level of uncertainty, the Company is not prepared at this time to provide specific guidance beyond the fourth quarter. Recognizing the current limited visibility to revenue growth, the Company will closely monitor market trends, order rates and expenses as it develops its fiscal 2004 operating plan. At this point in the planning process, the Company is anticipating modest revenue growth in fiscal 2004.

Third Quarter Highlights

- · Mercury was presented with a "Supplier Of Choice" award certificate from the Radar Systems Division, AMS Ltd.
- · Mercury received a "2002 Silver Supplier" award under the Preferred Supplier Program of Northrop Grumman Electronic Systems.
- March 31—Mercury announced its ImpactRT[™] 3100, the first scalable, high-performance, signal and image processing system based on the open-standard RapidIO[®] interconnect architecture. The ImpactRT 3100 system more than quadruples the performance of the current ImpactRT systems while maintaining backward compatibility with existing application software.
- March 19—Mercury announced that Lockheed Martin Company had selected Mercury's real-time RACE Series[™] multicomputer systems for use in the Tactical Input Segment (TIS) of the U.S. Navy Joint Service Image Processing System–Navy (JSIPS-N) shipboard digital imagery system.
- March 5—Mercury announced its participation in the U.K. Ministry of Defence Reconnaissance Airborne Pod for TORnado (RAPTOR) program, an aerial and ground-based real-time tactical reconnaissance system that has just achieved Initial Operating Capability with the Royal Air Force.

• February 3—Mercury announced its RACE++® Series VantageRT® FCN module that provides, for the first time, a signal and image processing system that integrates both field-programmable gate arrays (FPGAs) and PowerPC™ microprocessors into a RACE++ multicomputer. Certain types of computational operations run 10 to 50 times faster on an FPGA than on a PowerPC microprocessor.

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 anticipated third quarter and full-year fiscal 2003 business performance. 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, effects of continued geo-political unrest and regional conflicts, 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, shortages in components, production delays due to performance quality issues with outsourced components, and various other factors beyond the Company's control. 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 December 31, 2002. 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 may, in its discretion, provide information in future public announcements regarding its outlook that may be of interest to the investment community. The format and extent of future outlooks may be different from the format and extent of the information contained in this release.

Conference Call Information

Mercury Computer Systems will hold a quarterly conference call with investors and analysts on Thursday, April 17, 2003, beginning at 11:00 A.M. ET to discuss the results for the quarter. The Company's president and CEO, Mr. Jay Bertelli, and Mr. Jack Alexander, Mercury's senior vice president and CFO, will review the Company's performance and will answer appropriate questions from analysts and investors.

To participate in the conference call, dial (800) 818-5264 in the U.S. and Canada, and for international, dial (913) 981-4910. Please call five to ten minutes prior to the scheduled start time. The conference code number is 359941. Or, if you prefer, you may listen to the conference call live over the World Wide Web by accessing our web site at www.mc.com/investor and clicking on the link to our webcast of the conference call.

A replay of the call will be available on Mercury Computer Systems' web site, www.mc.com/investor, beginning Friday, April 18. A replay of the call by telephone will also be available from approximately 1:00 P.M. ET on Thursday, April 17, 2003 through 12:00 midnight ET on Monday, April 21, 2003. To access the replay, please dial (888) 203-1112 in the U.S. and Canada and enter access code 359941. For international, please dial (719) 457-0820 and enter access code 359941.

About Mercury Computer Systems, Inc.

Mercury Computer Systems, Inc. (NASDAQ: MRCY) is the leading producer of high-performance embedded, real-time digital signal and image processing computer systems. Mercury's products play a critical role in a wide range of applications, transforming sensor data to information for analysis and interpretation. In military reconnaissance and surveillance platforms the Company's systems process real-time radar, sonar, and signals intelligence data. Mercury's systems are also used in state-of-the-art medical diagnostic imaging devices including MRI, CT, PET, and digital X-ray, and in semiconductor imaging applications including photomask generation and wafer inspection.

Based in Chelmsford, Massachusetts, Mercury serves customers in North America, Europe and Asia through its direct sales force and a network of subsidiaries and distributors.

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Contacts:

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Visit Mercury on the Web: www.mc.com

Jack Alexander Senior Vice President & Chief Financial Officer 978-256-1300

MERCURY COMPUTER SYSTEMS, INC.

UNAUDITED CONSOLIDATED BALANCE SHEETS

(in thousands)

(in thousands)	March 31, 2003	June 30, 2002
Assets		
Current assets:		
Cash and cash equivalents	\$ 30,511	\$ 17,513
Marketable securities	42,212	37,997
Accounts receivable, net	21,102	31,797
Inventory	12,072	14,540
Deferred tax assets, net	5,621	5,621
Prepaid income taxes		3,120
Prepaid expenses and other current assets	2,690	3,950
reputa expenses and other current assets		
Total current assets	114,208	114,538
Marketable securities	38,450	15,870
Property and equipment, net	26,923	27,961
Goodwill	4,225	4,225
Acquired intangible assets, net	2,551	3,188
Deferred tax assets, net	435	435
Other assets	913	894
Total assets	\$187,705	\$ 167,111
Accounts payable	\$ 4,187	\$ 4,673
Current liabilities:	Ф. 4.107	d 4.070
Accrued expenses	4,303	5,291
Accrued compensation	7,169	6,277
Capital lease obligations	<u> </u>	92
Notes payable	705	667
Income taxes payable	4,537	_
Deferred revenues and customer advances	2,413	1,487
Total current liabilities	23,314	18,487
NY . 11		
Notes payable	11,784	12,318
Deferred compensation	613	581
Total liabilities	35,711	31,386
Stockholders' equity:		
Common stock	224	222
Additional paid-in capital	52,221	49,863
Treasury stock, at cost	(37,408)	(34,993)
Retained earnings	136,764	120,353
Accumulated other comprehensive income	193	280
Total stockholders' equity	151,994	135,725
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Total liabilities and stockholders' equity	\$187,705	\$ 167,111

MERCURY COMPUTER SYSTEMS, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited and in thousands, except per share data)

	Three mon Marc		Nine months ended March 31,	
	2003	2002	2003	2002
Net revenues		34,864	\$135,769	\$107,160
Cost of revenues	16,804	13,448	47,123	36,937
Gross profit	31,893	21,416	88,646	70,223
Operating expenses:				
Selling, general and administrative	13,415	11,654	39,881	36,027
Research and development	9,919	8,752	28,769	25,069
Total operating expenses	23,334	20,406	68,650	61,096
Income from operations	 8,559	1,010	19,996	9,127
•				
Interest income	434	917	1,417	3,164
Interest expense	(228)	(244)	(697)	(745)
Equity loss in joint venture	_			(1,752)
Gain on sale of division, net	2,600	1,678	5,800	4,878
Other income (expense), net	32	10	196	(176)
Income before income taxes	11,397	3,371	26,712	14,496
Income tax provision	3,533	721	8,281	4,059
Net income	\$ 7,864	\$ 2,650	\$ 18,431	\$ 10,437
Net income per share:				
Basic	\$ 0.37	\$ 0.12	\$ 0.87	\$ 0.48
DdSIC	\$ 0.37	\$ 0.12	\$ 0.07	3 0.40
Diluted	\$ 0.35	\$ 0.12	\$ 0.84	\$ 0.45
Weighted average shares outstanding:				
Basic	21,188	21,804	21,165	21,884
Diluted	22,178	22,924	22,045	23,192

MERCURY COMPUTER SYSTEMS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited and in thousands)

		Three months ended March 31,		Nine months ended March 31,	
	2003	2002	2003	2002	
Cash flows from operating activities:			<u> </u>		
Net income	\$ 7,864	\$ 2,650	\$ 18,431	\$ 10,437	
Depreciation and amortization	2,098	1,446	6,119	4,751	
Other non-cash items, net	(1,749)	(1,238)	(4,250)	(1,093)	
Changes in operating assets and liabilities	(1,907)	4,615	22,649	1,786	
Net cash provided by operating activities	6,306	7,473	42,949	15,881	
Cash flows from investing activities:					
(Purchases) sales of marketable securities, net	(23,832)	15,080	(26,830)	2,140	
Purchases of property and equipment	(1,700)	(1,330)	(4,417)	(3,945)	
Other	2,600	1,600	5,800	3,800	
Net cash (used in) provided by investing activities	(22,932)	15,350	(25,447)	1,995	
Cash flows from financing activities:					
Proceeds from stock issuances	696	458	2,118	3,377	
Purchases of treasury stock	(4,193)	(17,545)	(5,746)	(17,545)	
Principal payments of debt	(168)	(220)	(588)	(721)	
Net cash used in financing activities	(3,665)	(17,307)	(4,216)	(14,889)	
Effect of exchange rate changes on cash and cash equivalents	(248)		(288)	(21)	
Net increase (decrease) in cash and cash equivalents	(20,539)	5,516	12,998	2,966	
Cash and cash equivalents at beginning of period	51,050	10,757	17,513	13,307	
Cash and cash equivalents at end of period	\$ 30,511	\$ 16,273	\$ 30,511	\$ 16,273	