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 OMB APPROVAL  
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U.S. SECURITIES AND EXCHANGE COMMISSION  
 Washington, D.C. 20549

FORM 4

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934,  
 Section 17(a) of the Public Utility Holding Company Act of 1935 or  
 Section 30(f) of the Investment Company Act of 1940

[ ] Check this box if no longer subject of Section 16. Form 4 or Form 5  
 obligations may continue. See Instruction 1(b).

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1. Name and Address of Reporting Person

Mancuso, Vincent A.

(Last) (First) (Middle)

9213 Vendome Drive

(Street)

Bethesda, Maryland 20817

(City) (State) (Zip)

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2. Issuer Name and Ticker or Trading Symbol

Mercury Computer Systems, Inc. ("MRCY")

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3. IRS or Social Security Number of Reporting Person (Voluntary)

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4. Statement for Month/Year

December 2000

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5. If Amendment, Date of Original (Month/Year)

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6. Relationship of Reporting Person to Issuer

(Check all applicable)

[ ] Director [ ] 10% Owner  
 [ X ] Officer (give title below) [ ] Other (specify below)

Vice President and Director of Government Electronics Group

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7. Individual or Joint/Group Filing (Check Applicable Line)

[ X ] Form filed by One Reporting Person  
 [ ] Form filed by More than One Reporting Person

Table I -- Non-Derivative Securities Acquired, Disposed of,  
 or Beneficially Owned

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1. Title of Security (Instr. 3)	2. Transaction Date (mm/dd/yy)	3. Transaction Code (Instr. 8) ----- Code V	4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		5. Amount of Securities Beneficially Owned at End of Month (Instr. 3 and 4)	6. Owner- ship Form: Direct (D) or Indirect (I) (Instr.4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Amount	(A) or (D) Price			
Common Stock	12/7/00	M	1,000	D 36.375	23,170	D	
Common Stock	12/11/00	M	1,500	D 40.875		D	
Common Stock	12/31/98	P	2,666	A 5.95		D	
Common Stock	06/30/99	P	944	A 11.475		D	

Common Stock	12/31/99	P	483	A	13.388	D
Common Stock	06/30/00	P	376	A	27.466	D
Common Stock	12/29/00	P	401	A	27.041	D

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly

FORM 4 (continued)

Table II -- Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion of Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	4. Transaction Code (Instr. 8) Code V	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) (A) (D)	6. Date Exercisable and Expiration Date (Month/Day/Year) Date Expirable Date	7. Title and Amount of Underlying Securities (Instr. 3 and 4) Amount or Number of Shares	8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned at End of Month (Instr. 4)	10. Ownership of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Ownership (Instr. 4)
Stock Option (Right to Buy)	\$2.00			(1)	1/27/07	Common 30,000		58,200	D	
Stock Option (Right to Buy)	\$7.625			(2)	9/28/08	Common 3,200			D	
Stock Option (Right to Buy)	\$23.438			(3)	11/2/09	Common 13,462			D	
Stock Option (Right to Buy)	\$23.438			(4)	11/2/09	Common 4,538			D	
Stock Option (Right to Buy)	\$30.063			(5)	10/10/10	Common 5,250			D	
Stock Option (Right to Buy)	\$30.063			(6)	10/10/10	Common 1,750			D	
Stock Option (Right to Buy)	\$2.00	12/9/99	M	10,000	(7) 1/27/07	Common 10,000			D	
Stock Option (Right to Buy)	\$7.625	9/28/99	M	800	(8) 9/28/08	Common 800			D	
Stock Option (Right to Buy)	\$2.00	2/17/00	M	5,000	(9) 1/27/07	Common 5,000			D	
Stock Option (Right to Buy)	\$2.00	6/22/00	M	5,000	(9) 1/27/07	Common 5,000			D	

Explanation of Responses:

- (1) The option became exercisable as to 10,000 shares on January 27, 2000, and becomes exercisable as to an additional 10,000 shares on each of January 27, 2001 and January 27, 2002.
- (2) The option became exercisable as to 800 shares on September 28, 2000, and becomes exercisable as to an additional 800 shares on each of September 28, 2001, September 28, 2002 and September 28, 2003.
- (3) The option became exercisable as to 3,152 shares on November 2, 2000, becomes exercisable as to 3,152 shares on each of November 2, 2001 and November 2, 2002, and becomes exercisable as to 4,006 shares on November 2, 2003.
- (4) The option became exercisable as to 1,348 shares on November 2, 2000, becomes exercisable as to 1,348 shares on each of November 2, 2001 and November 2, 2002, and becomes exercisable as to 494 shares on November 2, 2003.
- (5) The option becomes exercisable as to 1,750 shares on each of October 10, 2001, October 10, 2002 and October 10, 2003.
- (6) The option becomes exercisable as to 1,750 shares on October 10, 2004.
- (7) Option vested on October 27, 1999.
- (8) Option vested on September 28, 1999.
- (9) Option vested on January 27, 1999.

/s/Vincent A. Mancuso

January 11, 2001

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\*\*Signature of Reporting Person

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Date

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations.

See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed.  
If space provided is insufficient, see Instruction 6 for procedures.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.