FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

I. Name and Address of Reporting Person ISENSTEIN BARRY S						MERCURY COMPUTER SYSTEMS INC [MRCY]								(Che	(Check all applicable) Director Tofficer (give title Other (specify below) below)					
(Last) (First) (Middle) 93 WOODBINE ROAD						3. Date of Earliest Transaction (Month/Day/Year) 08/05/2004									VP Defense Electronics Group					
(Street) CARLISLE MA 01741				4. If A	If Amendment, Date of Original Filed (Month/Day/Year)												son			
(City) (State) (Zip)														Pers	son					
		Tab	le I - No	on-Deriv	ative	Secu	urities	s Ac	quirec	l, Di	sposed o	f, or B	enef	ficiall	y Own	ed				
1. Title of Security (Instr. 3)			2. Transaction Date (Month/Day/Year)		2A. Deemed Execution Date, if any (Month/Day/Year)		3. Transaction Code (Instr. 8)			f (D) (Ins	Acquired (A) or D) (Instr. 3, 4 and		5. Amount of Securities Beneficially Owned Following Reported		6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	Direct Indirect Istr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)			
									Code	v	Amount	(A) or (D)	Pri	ce	Transac (Instr. 3	tion(s) and 4)				
Common	Stock			08/05/2	2004				S		500	D	\$2	24.55	40	,068		I	By the Isenstein Family Investment Trust	
Common	Stock			08/05/2	2004				S		1,500	D	\$2	24.56	38	,568		I	By the Isenstein Family Investment Trust	
Common	Stock			08/05/2	2004				S		1,500	D	\$2	24.57	37	,068		I	By the Isenstein Family Investment Trust	
Common	Stock			08/05/2	2004				S		200	D	\$2	24.58	36	,868		I	By the Isenstein Family Investment Trust	
Common Stock			08/05/2004				S		800	D	\$2	24.59	9 36,068			I	By the Isenstein Family Investment Trust			
Common Stock			08/05/2004				S		2,000	D	D \$24.6		34,068			I	By the Isenstein Family Investment Trust			
Common Stock															1,	736		D		
		Ta	able II -								osed of,				Owned					
1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security		3A. Deer Execution if any (Month/I	med on Date,	4. Transac Code (Ir 8)	5. Number of		6. Date Exerc Expiration Da (Month/Day/Y		ate	7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)		8. D. S. (I	Price of erivative ecurity nstr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s (Instr. 4)	e S Illy	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	Beneficial Ownership (Instr. 4)		
					Code	v	(A)	(D)	Date Exercis	sable	Expiration Date	Title	Amou or Numb of Share	er						

Explanation of Responses:

<u>Joseph M. Hartnett, Attorney-in-fact</u>

Attorney- 08/06/2004

** Signature of Reporting Person D

Date

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

- * If the form is filed by more than one reporting person, see Instruction 4 (b)(v).
- ** 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 is insufficient, see Instruction 6 for procedure.

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