

**INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF
SECURITIES**

OMB APPROVAL

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

1. Name and Address of Reporting Person* BARROWS CRAIG	2. Date of Event Requiring Statement (Month/Day/Year) 09/14/2005	3. Issuer Name and Ticker or Trading Symbol MERCURY COMPUTER SYSTEMS INC [MRCY]	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director _____ 10% Owner _____ <input checked="" type="checkbox"/> Officer (give title below) VP, General Counsel	5. If Amendment, Date of Original Filed (Month/Day/Year)
(Last) (First) (Middle) 199 RIVERNECK ROAD		6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person	
(Street) CHELMSFORD MA 01824			
(City) (State) (Zip)			

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
No Securities Beneficially Owned	0	D	

**Table II - Derivative Securities Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)	4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date				
NQ Stock Option (Right to buy)	(1)	08/29/2015	Common	30,000	25.8	D

Explanation of Responses:

1. This option vests in four equal installments beginning August 29, 2006.

Craig Barrows

09/14/2005

** Signature of Reporting Person

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 5 (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.