

BENEFICIALLY
OWNED BY

0

EACH
REPORTING
PERSON

7

SOLE DISPOSITIVE POWER

2,385,022

WITH

8

SHARED DISPOSITIVE POWER

0

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,385,022

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES
(See Instructions)

N/A

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

11.44%

12 TYPE OF REPORTING PERSON (See Instructions)

EP

ITEM 1(a). Name of Issuer:
Mercury Computer Systems, Inc.

ITEM 1(b). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES:
199 Riverneck Road
Chelmsford, MA 01824-2820

ITEM 2(a). Name of PERSON FILING:
Memorial Drive Trust ("MDT")

ITEM 2(b). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE:
125 CambridgePark Drive
6th Floor
Cambridge, MA 02140

ITEM 2(c). PLACE OF ORGANIZATION:
Massachusetts

ITEM 2(d). TITLE OF CLASS OF SECURITIES:
Common Stock, \$0.01 par value

ITEM 2(e). CUSIP Number:
589378-10-8

- ITEM 3. If this Statement is Filed Pursuant to Rules 13d-1(b), or 13d-2(b), Check Whether the Person Filing is a:
- (a) Broker or dealer registered under Section 15 of the Act.
 - (b) Bank as defined in Section 3(a)(6) of the Act.
 - (c) Insurance Company as defined in Section 3(a)(19) of the Act.
 - (d) Investment Company registered under Section 8 of the Investment Company Act.
 - (e) Investment Adviser registered under Section 203 of the Investment Advisers Act of 1940.
 - (f) Employee Benefit Plan, Pension Fund which is subject to the provisions of the Employee Retirement Income Security Act of 1974 or Endowment Fund; see 13d-1(b)(1)(ii)(F).
 - (g) Parent Holding Company, in accordance with Rule 13d-1(b)(1)(ii)(G); see Item 7.
 - (h) Group, in accordance with Rule 13d-1(b)(1)(ii)(H).

ITEM 4. OWNERSHIP:

- (a) Amount beneficially owned: 2,385,022 shares
- (b) Percent of class: 11.44%
- (c) Number of shares as to which such person has:
 - (i) Sole Power to vote or to direct the vote: 2,385,022 shares
 - (ii) Shared power to vote or to direct the vote: None
 - (iii) Sole power to dispose or to direct the disposition of: 2,385,022 shrs
 - (iv) Shared power to dispose or to direct the disposition of: None

ITEM 5. Ownership of Five Percent or Less of a Class:

Not applicable.

ITEM 6. Ownership of More than Five Percent on Behalf of Another Person:

Not applicable.

ITEM 7. Identification and Classification of the Subsidiary which ACQUIRED the Security Being Reported on by the Parent Holding Company:

Not applicable.

ITEM 8. Identification and Classification of Members of the Group:

Not applicable.

ITEM 9. Notice of Dissolution of Group:

Not applicable.

ITEM 10. Certification:

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purposes or effect.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

February 11, 2000

(Date)

MEMORIAL DRIVE TRUST

By: /s/ R. Schorr Berman

R. Schorr Berman
Administrator and
Chief Executive Officer