

not applicable

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

351,750

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

Not applicable

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

3.5%

12 TYPE OF REPORTING PERSON *

IC (insurance company)

* SEE INSTRUCTION BEFORE FILLING OUT!

CUSIP No. 589378108

13G

Page 2 of 2 Pages

1 NAME OF REPORTING PERSON
S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

MassMutual Corporate Investors
04-2483041

2 CHECK THE APPROPRIATE BOX IF MEMBER OF A GROUP

(A) _____

(B) _____

3 SEC USE ONLY

4 CITIZENSHIP OF PLACE OF ORGANIZATION

Commonwealth of Massachusetts

5 SOLE VOTING POWER
NUMBER OF SHARES 285,750

6 SHARED VOTING POWER
BENEFICIALLY OWNED BY EACH not applicable

7 SOLE DISPOSITIVE POWER
REPORTING PERSON WITH 285,750

8 SHARED DISPOSITIVE POWER
not applicable

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

285,750

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

not applicable

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

2.8%

12 TYPE OF REPORTING PERSON *

IV (investment company)

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:

This statement is filed on behalf of Massachusetts Mutual Life Insurance Company and MassMutual Corporate Investors, which together may be regarded as a group for the purpose of this statement. This statement is signed on behalf of both the aforementioned parties, and therefore it does not include a separate agreement providing for a joint filing.

ITEM 2(b). Address of Principal Business Office:

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY
1295 State Street
Springfield, Massachusetts 01111

MASSMUTUAL CORPORATE INVESTORS
1295 State Street
Springfield, Massachusetts 01111

ITEM 2(c). Citizenship

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY is organized under the laws of the Commonwealth of Massachusetts

MASSMUTUAL CORPORATE INVESTORS is organized under the laws of the Commonwealth of Massachusetts

ITEM 2(d). Title of Class of Securities: Common Stock

ITEM 2(e). CUSIP NUMBER: 589378108

ITEM 3. This statement is filed pursuant to Rule 13d-1(b) by Massachusetts Mutual Life Insurance Company, an insurance company as defined in Section 3(a)(19), MassMutual Corporate Investors, an investment company registered under Section 8 of the Investment Company Act of 1940 which together may be regarded as a group pursuant to Rule 13d-1(b) (ii) (H).

ITEM 4. Ownership:

This statement is filed to report information as of January 29, 1999:

(a) Amount Beneficially Owned:

Massachusetts Mutual Life Insurance Company and MassMutual Corporate Investors own respectively 351,750 and 285,750 shares of common stock.

Total shares of common stock owned directly and indirectly: 637,500

The filing of this statement shall not be construed as an admission that Massachusetts Mutual Life Insurance Company and MassMutual Corporate Investors are for the purposes of sections 13(d) and 13(g) of the Securities Exchange Act of 1934, the beneficial owners of any common stock of the issuer.

(b) Percent of Class:

Percentage of ownership is calculated as follows:

$$\frac{637,500 \text{ (shares held)}}{10,113,000 \text{ (shares outstanding)}} = 6.3\%$$

(c) Powers:

Massachusetts Mutual Life Insurance Company and MassMutual Corporate Investors each have sole power to vote or dispose of respectively 351,750 and 285,750 shares of common stock.

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:

Note applicable

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

Not applicable

ITEM 9. Notice of Dissolution of the Group:

Not applicable

ITEM 10. Certification:

By signing below, MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY, MASSMUTUAL CORPORATE INVESTORS certify to the best of their 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 purpose or effect.

After reasonable inquiry and to the best of our knowledge and belief, MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY and MASSMUTUAL CORPORATE INVESTORS certify that the information set forth in this statement is true, complete and correct.

February 1, 1999

February 1, 1999

Date

Date

MASSACHUSETTS MUTUAL
LIFE INSURANCE COMPANY

MASSMUTUAL CORPORATE
INVESTORS

By: signature

By: signature

Charles McCobb
Managing Director

Charles McCobb
Managing Director

(Print Name and Title
of Person Signing)

(Print Name and Title
of Person Signing)