

SCHEDULE 14A INFORMATION

PROXY STATEMENT PURSUANT TO SECTION 14(a) OF THE SECURITIES EXCHANGE ACT OF 1934 (AMENDMENT NO.)

FILED BY THE REGISTRANT [X] FILED BY A PARTY OTHER THAN THE REGISTRANT []

Check the appropriate box:

- Preliminary Proxy Statement
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to sec.240.14a-11(c) or sec.240.14a-12
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))

MERCURY COMPUTER SYSTEMS, INC.
(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement)

PAYMENT OF FILING FEE (CHECK THE APPROPRIATE BOX):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(4) and 0-11.

- 1) Title of each class of securities to which transaction applies:
- 2) Aggregate number of securities to which transaction applies:
- 3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (Set forth the amount on which the filing fee is calculated and state how it was determined):
- 4) Proposed maximum aggregate value of transaction:
- 5) Total fee paid:

Fee paid previously with preliminary materials.

Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

- 1) Amount Previously Paid:
- 2) Form, Schedule or Registration Statement No.:
- 3) Filing Party:
- 4) Date Filed:

MERCURY COMPUTER SYSTEMS, INC.
199 RIVERNECK ROAD
CHELMSFORD, MA 01824
(978) 256-1300

October 18, 1999

Dear Stockholder:

Mercury Computer Systems, Inc. (the "Corporation") will hold a Special Meeting of Stockholders (the "Meeting") in lieu of the 1999 Annual Meeting of Stockholders on November 18, 1999 at the offices of Hutchins, Wheeler & Dittmar, A Professional Corporation, 101 Federal Street, Boston, Massachusetts. We look forward to your attending either in person or by proxy. The Notice of Meeting, the Proxy Statement and the Proxy Card from the Board of Directors are enclosed. These materials provide further information concerning the Meeting.

At this year's Meeting, the agenda includes (i) election of Class II Directors, (ii) approval of an amendment to the Corporation's Articles of Organization increasing the number of shares of Common Stock which the Corporation has the authority to issue from 25,000,000 shares to 40,000,000 shares, and (iii) authorization of an increase in the number of shares issuable pursuant to the Corporation's 1997 Stock Option Plan (the "1997 Plan"). The Board of Directors recommends that you vote FOR the election of the slate of nominees for directors, FOR the amendment to the Corporation's Articles of Organization, and FOR the authorization of the increase in the number of shares issuable pursuant to the 1997 Plan.

Please refer to the enclosed Proxy Statement for detailed information on each of these proposals. If you have any further questions concerning the Meeting or any of the proposals, please feel free to contact the Corporation at (978) 256-1300.

Sincerely yours,

/s/ James R. Bertelli

JAMES R. BERTELLI
President and Chief Executive Officer

MERCURY COMPUTER SYSTEMS, INC.

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS IN LIEU OF THE
1999 ANNUAL MEETING OF STOCKHOLDERS

NOVEMBER 18, 1999

To the Stockholders:

A Special Meeting of the Stockholders of MERCURY COMPUTER SYSTEMS, INC. in lieu of the 1999 Annual Meeting of Stockholders will be held on Thursday, November 18, 1999 at 10:00 a.m. at the offices of Hutchins, Wheeler & Dittmar, A Professional Corporation, Suite 3101, 101 Federal Street, Boston, Massachusetts, for the following purposes:

1. To elect Dr. Gordon Baty as a Director for a term of three years, as more fully described in the accompanying Proxy Statement.
2. To elect Mr. Sherman Mullin as a Director for a term of three years, as more fully described in the accompanying Proxy Statement.
3. To approve an amendment to the Corporation's Articles of Organization to increase the number of shares of Common Stock which the Corporation has the authority to issue from 25,000,000 shares to 40,000,000 shares.
4. To authorize an increase in the number of shares issuable pursuant to the Corporation's 1997 Stock Option Plan.
5. To consider and act upon any other business which may properly come before the meeting.

The Board of Directors has fixed the close of business on October 8, 1999, as the record date for the meeting. All stockholders of record on that date are entitled to notice of and to vote at the meeting.

PLEASE COMPLETE AND RETURN THE ENCLOSED PROXY IN THE ENVELOPE PROVIDED WHETHER OR NOT YOU INTEND TO BE PRESENT AT THE MEETING IN PERSON.

By order of the Board of Directors

/s/ Anthony J. Medaglia, Jr.

ANTHONY J. MEDAGLIA, JR., Clerk

Chelmsford, Massachusetts
October 18, 1999

MERCURY COMPUTER SYSTEMS, INC.

PROXY STATEMENT

This Proxy Statement is furnished in connection with the solicitation of proxies by the Board of Directors of Mercury Computer Systems, Inc. (the "Corporation") for use at the Special Meeting of Stockholders in lieu of the 1999 Annual Meeting of Stockholders to be held on Thursday, November 18, 1999, at the time and place set forth in the notice of the meeting, and at any adjournments thereof (the "Meeting"). The approximate date on which this Proxy Statement and form of proxy are first being sent to stockholders is October 18, 1999.

VOTING AND REVOCABILITY OF PROXIES

If the enclosed proxy is properly executed and is received prior to the Meeting, it will be voted in the manner directed by the stockholder. If no instructions are specified with respect to any particular matter to be acted upon, proxies will be voted in favor thereof. Any person giving the enclosed form of proxy has the power to revoke it by voting in person at the meeting, or by giving written notice of revocation to the Clerk of the Corporation any time before the proxy is exercised.

The holders of a majority in interest of all Common Stock issued, outstanding and entitled to vote are required to be present in person or to be represented by proxy at the meeting in order to constitute a quorum for the transaction of business. The election of the nominees for Director will be decided by plurality vote. Additionally, the affirmative vote of at least a majority of shares of Common Stock issued, outstanding and entitled to vote is required to approve an increase in the number of shares of Common Stock that the Corporation has authority to issue and the affirmative vote in person or by proxy of holders of at least a majority of shares of Common Stock entitled to vote at the Meeting is required to approve an increase in the number of shares of Common Stock issuable pursuant to the Corporation's 1997 Stock Option Plan. Both abstentions and broker "non-votes" are counted as present for the purposes of determining the existence of a quorum for the transaction of business. However, for purposes of determining the number of shares voting on a particular proposal, abstentions and broker "non-votes" are not counted as votes cast or shares voting.

The Corporation will bear the cost of the solicitation. It is expected that the solicitation will be made primarily by mail, but regular employees or representatives of the Corporation (none of whom will receive any extra compensation for their activities) may also solicit proxies by telephone, telegraph and in person and arrange for brokerage houses and other custodians, nominees, and fiduciaries to send proxies and proxy materials to their principals at the expense of the Corporation.

The Corporation's principal executive offices are located at 199 Riverneck Road, Chelmsford, Massachusetts 01824, telephone number (978) 256-1300.

RECORD DATE AND VOTING SECURITIES

Only stockholders of record at the close of business on October 8, 1999 are entitled to notice of and to vote at the meeting. On that date the Corporation had outstanding and entitled to vote 10,390,137 shares of Common Stock, par value \$.01 per share. Each outstanding share of the Corporation's Common Stock entitles the record holder to one vote.

ELECTION OF DIRECTORS

Pursuant to Massachusetts law, the Board of Directors is divided into three classes, with each class as nearly equal in number as possible. Presently, the Board of Directors consists of six members, with Dr. Albert

Belle Isle and Mr. Melvin Sallen serving as Class I Directors; Dr. Gordon Baty and Mr. Sherman Mullin serving as Class II Directors; and Mr. James Bertelli and Mr. R. Schorr Berman serving as Class III Directors. The terms of the Class I, Class II, and Class III Directors expire in 2001, 1999, and 2000, respectively. Following expiration of its respective current term, each class is then elected for a subsequent three-year term.

It is proposed that the Class II nominees listed below, whose terms expire at this meeting, be elected to serve a term of three years and until their successors are duly elected and qualified or until they sooner die, resign or are removed.

The persons named in the accompanying proxy will vote, unless authority is withheld, for the election of the nominees named below. If such nominees should become unavailable for election, which is not anticipated, the persons named in the accompanying proxy will vote for such substitute as the Board of Directors may recommend. The nominees are not related to any Executive Officer of the Corporation or its subsidiaries.

NAME OF NOMINEE	AGE	YEAR FIRST ELECTED A DIRECTOR	POSITION WITH THE CORPORATION OR PRINCIPAL OCCUPATION DURING PAST FIVE YEARS
NOMINATED FOR A TERM ENDING IN 2002:			
Dr. Gordon B. Baty.....	60	1983	Dr. Baty has been a partner of Zero Stage Capital Co., Inc., a venture capital firm, since 1986. Dr. Baty was the founder and Chief Executive Officer of Icon Corporation, Context Corporation, and Wormser Engineering, Inc. Dr. Baty is also a Director of nine private companies.
Sherman N. Mullin.....	63	1994	Mr. Mullin served as President of Lockheed Advanced Development Co., a defense contractor, from 1990 through 1994. Mr. Mullin currently serves as an ad-hoc advisor to the U.S. Air Force Scientific Advisory Board.
SERVING A TERM ENDING IN 2000:			
James R. Bertelli.....	59	1981	Mr. Bertelli co-founded the Corporation in 1981, and has served as the Corporation's President, Chief Executive Officer, and a Director since that time. Prior to founding the Corporation, Mr. Bertelli founded a manufacturer's representative organization after a brief period at Analogic Corporation in sales management positions. Prior to that, Mr. Bertelli served as a marketing manager for Digital Equipment Corporation's telephone industry products group. After a tour of duty in the Army Signal Corps, Mr. Bertelli began his high-tech career with RCA Corporation as a computer systems analyst, and later moved into computer sales with RCA and Univac.

NAME OF NOMINEE	AGE	YEAR FIRST ELECTED A DIRECTOR	POSITION WITH THE CORPORATION OR PRINCIPAL OCCUPATION DURING PAST FIVE YEARS
R. Schorr Berman.....	51	1993	Mr. Berman is President and Chief Executive Officer of MDT Advisers, Inc., a money management firm. Mr. Berman is also a director of Arch Communications Group, Inc. and numerous private companies.
SERVING A TERM ENDING IN 2001:			
Dr. Albert P. Belle Isle.....	56	1986	Dr. Belle Isle is an independent investor in technology-based companies, was President of Custom Silicon, Inc., a semiconductor company, and has also served as a Vice President of Wang Laboratories, Inc. and in various technical and business management positions during fifteen years with the General Electric Company.
Melvin Sallen.....	71	1990	Since 1991, Mr. Sallen has served as a consultant to the Corporation in the area of Japanese Strategies and Sales. Mr. Sallen served as Senior Vice President of Analog Devices, Inc. from 1966 through 1992. Since 1992, Mr. Sallen has served as President of Komon International, Inc., an international consulting company. Mr. Sallen is also a director of Tech On Line, Inc. and Copley Controls Corporation.

INFORMATION CONCERNING THE BOARD OF DIRECTORS

During fiscal year 1999, there were nine (9) meetings of the Board of Directors of the Corporation, two (2) meetings of the Audit Committee (see below) and eight (8) meetings of the Compensation Committee (see below). All of the Directors attended at least 85% of the aggregate of (i) the total number of meetings of the Board of Directors and (ii) the total number of meetings held by committees of the Board of Directors on which they served. The Board of Directors does not have a nominating committee. Effective July 1, 1998, each Director receives cash compensation in the amount of \$9,000 for the fiscal year, paid quarterly, plus an additional \$2,000 for each meeting attended, as well as reimbursement for reasonable expenses incurred in connection with attendance at Board and committee meetings. In addition, committee members and the committee chairman receive an annual retainer of \$1,000 and \$1,750, respectively, paid quarterly, as well as an additional \$300 for attending a meeting not held on the same day as a meeting of the Board of Directors. The cash compensation paid to Directors in their capacity as such during fiscal year 1999 was as follows:

DIRECTOR	CASH COMPENSATION
Gordon B. Baty.....	\$28,650
Albert P. Belle Isle.....	\$26,600
R. Schorr Berman.....	\$26,200
James R. Bertelli.....	\$ 0
Sherman N. Mullin.....	\$26,050
Melvin Sallen.....	\$27,350

In addition to cash compensation, Directors are also granted options pursuant to the 1998 Stock Option Plan for Non-Employee Directors.

The Board of Directors has a standing Audit Committee and Compensation Committee. The members of the Audit Committee are Dr. Baty, Dr. Belle Isle and Mr. Berman. The Audit Committee reviews the scope of the Corporation's engagement of its independent public accountant and their reports. The Audit Committee also meets with the financial staff of the Corporation to review accounting procedures and reports. The Compensation Committee is currently comprised of Messrs. Berman, Mullin and Sallen. Mr. Mullin replaced Dr. Baty on the Compensation Committee effective October 27, 1998. The Compensation Committee is authorized to review and make recommendations to the Board of Directors regarding the salaries and bonuses to be paid executive officers and to administer the Corporation's various stock option and stock purchase plans.

PROPOSED AMENDMENT INCREASING THE NUMBER OF SHARES OF COMMON STOCK
WHICH THE CORPORATION HAS THE AUTHORITY TO ISSUE FROM
25,000,000 SHARES TO 40,000,000 SHARES

On September 13, 1999, the Board of Directors adopted the following resolution:

RESOLVED: That this Board of Directors deems it advisable that the Articles of Organization of this Corporation be amended so as to increase the total number of shares of Common Stock which this Corporation shall have authority to issue from 25,000,000 shares, par value \$.01 per share, to 40,000,000 shares, par value \$.01 per share.

The Board of Directors also directed that the proposed amendment (the "Amendment") be submitted for action at the Special Meeting of Stockholders in Lieu of the 1999 Annual Meeting of Stockholders to be held on November 18, 1999. The affirmative vote of at least a majority of shares of Common Stock entitled to vote at the Meeting is required to approve the Amendment.

Increase in Number of Shares of Common Stock. If approved by the stockholders, the Amendment will authorize the Company to issue an additional 15,000,000 shares of the Corporation's Common Stock, par value \$.01 per share. As of September 13, 1999, there were 25,000,000 shares of Common Stock authorized, of which 10,362,637 shares were outstanding, 384,224 shares remained reserved and 279,006 shares were available for issuance pursuant to the Corporation's stock option plans, and 221,766 shares remained reserved for issuance pursuant to the Corporation's 1997 Employee Stock Purchase Plan. The Board of Directors is empowered under the Articles of Organization of the Corporation to issue shares of authorized stock without further stockholder approval. The holders of the Corporation's Common Stock do not have preemptive rights.

Appraisal Rights in Respect of the Proposed Amendment. Under the applicable provisions of the Massachusetts Business Corporation Law, the Corporation's stockholders have no appraisal rights with respect to the Amendment.

Recommendations of the Board of Directors. As of September 13, 1999, there were 14,031,373 shares available for issuance and not otherwise reserved of the Corporation's Common Stock. Accordingly, the Board of Directors believes that the number of authorized shares of Common Stock should be increased by 15,000,000 to provide sufficient shares for use for such corporate purposes as may be determined advisable by the Board of Directors, without further action or authorization by the stockholders. Such corporate purposes might include the acquisition of capital funds through the sale of stock, the acquisition of other corporations or properties, or the declaration of stock dividends in the nature of a stock split. There are no current plans, agreements, arrangements, or understandings with respect to the issuance of any of the shares of Common Stock which would be authorized by the Amendment; however, the Board of Directors believes that the availability of shares would afford the Corporation flexibility in considering and implementing any of the

corporate transactions enumerated above. Accordingly, the Board of Directors recommends a vote for the Amendment.

Possible Effects of the Amendment. If the stockholders approve the Amendment, the Corporation will have additional authorized but unissued shares of Common Stock that may be issued without further action or authorization of the stockholders (except as required by law or the rules of the Nasdaq Stock Market or other stock exchange on which the Corporation's securities may then be listed). The issuance of additional shares of Common Stock would have a dilutive effect on earnings per share. In addition, the issuance of additional shares of Common Stock could have a dilutive effect on the voting power of the current stockholders because they do not have preemptive rights. Finally, the Amendment could, under certain circumstances, have an anti-takeover effect, because it would enable the Board of Directors to issue shares of Common Stock to persons who are opposed to a takeover bid. This could deter transactions that may result in a change of control of the Corporation, including transactions in which stockholders may receive a premium for their shares over the current market prices. The Board of Directors, however, has presented the Amendment for the purposes described above and not with the intent that it be utilized as a type of anti-takeover device.

APPROVAL OF AMENDMENT OF THE MERCURY COMPUTER SYSTEMS, INC.
1997 STOCK OPTION PLAN

There will be presented at the meeting a proposal to approve an amendment to the Mercury Computer Systems, Inc. 1997 Stock Option Plan (the "Plan") which was adopted by the Board of Directors of the Corporation on September 13, 1999. The Plan provides for the granting of both incentive stock options meeting the requirements of Section 422 of the Internal Revenue Code of 1986, as amended (the "Code") and non-qualified options which are not intended to meet the requirements of the Code. The amendment increases the number of shares reserved for issuance under the Plan from 1,325,000 shares of Common Stock to 2,325,000 shares of Common Stock.

The Plan is intended to encourage ownership of the stock of the Corporation by key employees of, and other key individuals engaged to provide services to, the Corporation and its subsidiaries, to induce qualified personnel to enter and remain in the employ of, or otherwise provide services to, the Corporation or its subsidiaries and provide additional incentive for optionees to promote the success of its business. The Plan is administered by a Committee (the "Committee"), consisting of two or more members of the Corporation's Board of Directors, each of whom is a disinterested person as defined in Rule 16b-3, promulgated under the Securities Exchange Act of 1934 (the "1934 Act"). The members of the Committee are appointed by the Board of Directors and the Board may from time to time appoint a member or members of the Committee in substitution for or in addition to the member or members then in office, and may fill vacancies on the Committee, however caused. The present members of the Committee are R. Schorr Berman, Sherman Mullin and Melvin Sallen, c/o Mercury Computer Systems, Inc., 199 Riverneck Road, Chelmsford, Massachusetts, 01824.

The amendment increased the number of shares reserved for issuance under the Plan from 1,325,000 shares of Common Stock to 2,325,000 shares of Common Stock. The maximum number of shares of the Corporation's Common Stock for which options may be granted under the Plan is subject to adjustments for capital changes. Shares issued under the Plan may be authorized but unissued shares of Common Stock or shares of Common Stock held in the treasury. As of September 13, 1999, options for the purchase of 982,321 shares of Common Stock were outstanding under the Plan and 342,679 shares were available for new grants under the Plan.

Set forth below is a summary of other principal provisions of the Plan, a copy of which may be obtained from the Clerk of the Corporation upon request. The Board of Directors recommends that the stockholders

approve the amendment to the Plan. The affirmative vote of the holders of at least a majority of the shares of Common Stock voting in person or by proxy at the Meeting will be required for approval of the amendment to the Plan.

Options. The Plan provides that options designated as incentive stock options may be granted only to employees (including officers and directors who are also employees) of the Corporation or any subsidiary. Options designated as non-qualified options may be granted to officers, directors, employees, consultants and advisors of the Corporation or any of its subsidiaries.

In determining the eligibility of an individual to be granted an option, as well as in determining the number of shares to be optioned to any individual, the Committee takes into account the position and responsibilities of the individual being considered, the nature and value to the Corporation or its subsidiaries of the individual's service and accomplishments, his or her present and potential contribution to the success of the Corporation or its subsidiaries and such other factors as the Committee deems relevant.

The maximum number of shares with respect to which an option or options may be granted to any employee in any one taxable year of the Corporation shall not exceed 100,000, taking into account shares granted during such taxable period under options that have terminated.

Terms and Provisions of Options. Options granted under the Plan are exercisable at such times and during such period as is set forth in the option agreement, but no option granted under the Plan can have a term in excess of 10 years from the date of grant. The option agreement may contain such provisions and conditions as may be determined by the Committee. The option exercise price for options designated as non-qualified stock options granted under the Plan is determined by the Committee, but in no event shall be less than 50% of the fair market value of the underlying Common Stock at the time such option is granted. The option exercise price for incentive stock options granted under the Plan shall be no less than fair market value of the Common Stock of the Corporation at the time the option is granted. Options granted under the Plan may provide for the payment of the exercise price by delivery of cash or shares of Common Stock of the Corporation owned by the optionee having a fair market value equal in amount to the exercise price of the options being exercised, or any combination thereof; provided, however, that the payment of the exercise price by delivery of shares of Common Stock of the Corporation owned by the optionee may be made only if the payment does not result in a charge to earnings for financial accounting purposes, as determined by the Committee.

The right of any optionee to exercise an option granted under the Plan is not assignable or transferable by such optionee otherwise than by will or the laws of descent and distribution, and any such option shall be exercisable during the lifetime of such optionee by him or her; provided, however, that in the case of a non-qualified stock option, the Committee may permit transferability of such options on such terms and conditions as determined by the Committee and set forth in an Option Agreement.

An option granted to any employee or consultant optionee who ceases to be an employee or consultant of the Corporation or one of its subsidiaries shall terminate ten (10) days after the date such optionee ceases to be an employee or consultant of the Corporation or one of its subsidiaries. If such termination of employment or consultancy is because of dismissal for cause or because the employee or consultant is in breach of any employment or consultant agreement, such an option will terminate immediately on the date the optionee ceases to be an employee or consultant of the Corporation or one of its subsidiaries. If such termination of employment or consultancy is because the optionee has become permanently disabled, the option shall terminate on the last day of the twelfth month from the date such optionee ceases to be an employee or consultant. In the event of the death of the optionee, the option shall terminate on the last day of the twelfth month from the date of death. In no event shall an option be exercisable after the date upon which it expires

by its terms. The Committee has the authority to extend the expiration date of any outstanding option in circumstances in which it deems such action to be appropriate.

An option granted to an employee optionee who ceases to be an employee of the Corporation or one of its subsidiaries shall be exercisable only to the extent that the right to purchase shares under such option has accrued and is in effect on the date such optionee ceases to be an employee of the Corporation or one of its subsidiaries. In the event of the death of any optionee, the option granted to such optionee may be exercised by the estate of such optionee, or by any person or persons who acquired the right to exercise such option by bequest or inheritance or by reason of the death of such optionee.

Recapitalization; Reorganization; Change of Control. The Plan provides that the number and kind of shares as to which options may be granted thereunder and as to which outstanding options then unexercised shall be exercisable shall be adjusted to prevent dilution in the event of any reorganization, merger, consolidation, recapitalization, reclassification, stock split-up, combination of shares or dividends payable in capital stock. In addition, unless otherwise determined by the Committee in its sole discretion, in the case of any sale or conveyance to another entity of all or substantially all of the property and assets of the Corporation or a Change of Control as defined in the Plan, the purchaser of the Corporation's assets or stock may deliver to the optionee the same kind of consideration that is delivered to the shareholders of the Corporation as a result of the sale, conveyance or Change of Control or the Committee may cancel all outstanding options in exchange for consideration in cash or in kind, which consideration shall be equal in value to the value of those shares of stock or other securities the optionee would have received had the option been exercised (to the extent then exercisable) and no disposition of the shares acquired upon such exercise has been made prior to such sale, conveyance or Change of Control, less the option price therefor.

The Committee shall also have the power to accelerate the exercisability of any options, notwithstanding any limitations in the Plan or in the option agreement, upon such a sale, conveyance or Change of Control. Change of Control is defined in the Plan as having occurred if any of the following conditions have occurred: (1) the merger or consolidation of the Corporation with another entity where the Corporation is not the surviving entity and where after the merger or consolidation (i) its stockholders prior to the merger or consolidation hold less than 50% of the voting stock of the surviving entity and (ii) its Directors prior to the merger or consolidation are less than a majority of the Board of the surviving entity; (2) the sale of all or substantially all of the Corporation's assets to a third party and subsequent to the transaction (i) its stockholders hold less than 50% of the stock of said third party and (ii) its Directors are less than a majority of the Board of said third party; (3) a transaction or series of related transactions, including a merger of the Corporation with another entity where the Corporation is the surviving entity, whereby 50% or more of the voting stock of the Corporation is transferred to parties who are not prior thereto stockholders or affiliates of the Corporation; or (4) the Continuing Directors shall not constitute a majority of the Board of Directors of the Corporation. The term "Continuing Directors" shall mean a member of the Board of Directors of the Corporation who either was a member of the Board of Directors of the Corporation on the date the Plan was adopted by the Board of Directors or who subsequently became a director of the Corporation and whose initial appointment, initial election or initial nomination for election by the Corporation's shareholders subsequent to such date was approved by a vote of a majority of the Continuing Directors then on the Board of Directors of the Corporation.

Upon dissolution or liquidation of the Corporation, all options granted under the Plan shall terminate, but each optionee shall have the right, immediately prior to such dissolution or liquidation, to exercise his or her option to the extent then exercisable. The Committee shall have the right to accelerate the vesting of any award or take such other action with respect thereto as the Committee shall in its sole discretion determine in the event of any contemplated dissolution or liquidation of the Corporation.

Termination and Amendment. Unless sooner terminated, the Plan shall terminate ten (10) years from June 5, 1997, the date upon which it was adopted by the Board of Directors. The Board of Directors may at any time terminate the Plan or make such modification or amendment as it deems advisable; provided, however, that the Board of Directors may not, without stockholder approval, increase the maximum number of shares for which options may be granted or change the designation of the class of persons eligible to receive options under the Plan or make any other change in the Plan which requires stockholder approval under applicable law or regulations, including any approval requirement which is a prerequisite for exemptive relief under Section 16 of the 1934 Act. The Committee may terminate, amend or modify any outstanding option without the consent of the optionholder; provided, however, that without the consent of the optionee, the Committee shall not change the number of shares subject to an option nor the exercise price thereof, nor extend the term of such option.

TAX EFFECTS OF PLAN PARTICIPATION

Options granted under the Plan are intended to be either incentive stock options, as defined in Section 422 of the Code, or non-qualified stock options.

Incentive Stock Options. Except as provided below with respect to the alternative minimum tax, the optionee will not recognize taxable income upon the grant or exercise of an incentive stock option. If the optionee holds the shares received pursuant to the exercise of the option for at least one year after the date of exercise and for at least two years after the option is granted, the optionee will recognize long-term capital gain or loss upon the disposition of the stock measured by the difference between the option exercise price (the stock's basis) and the amount received for such shares upon disposition.

In the event that the optionee disposes of the stock prior to the expiration of the required holding periods (a "disqualifying disposition"), the optionee generally will realize ordinary income equal to the difference between the exercise price and the lower of the fair market value of the stock at the date of the option exercise or the sale price of the stock. The basis in the stock acquired upon exercise of the option will equal the amount of income recognized by the optionee plus the option exercise price. Upon eventual disposition of the stock, the optionee will recognize long-term or short-term capital gain or loss, depending on the holding period of the stock and the difference between the amount realized by the optionee upon disposition of the stock and the optionee's basis in the stock.

For alternative minimum tax purposes, the excess of the fair market value of stock on the date of the exercise of the incentive stock option over the exercise price of the option is included in alternative minimum taxable income for alternative minimum tax purposes. If the alternative minimum tax applies to the optionee, an alternative minimum tax credit may reduce the regular tax upon eventual disposition of the stock.

The Corporation will not be allowed an income tax deduction upon the grant or exercise of an incentive stock option. Upon a disqualifying disposition by the optionee of shares acquired upon exercise of the incentive stock option, the Corporation will be allowed a deduction in an amount equal to the ordinary income recognized by the optionee.

Under proposed regulations issued by the Internal Revenue Service, the exercise of an option with previously acquired stock of the Company will be treated as, in effect, two separate transactions. Pursuant to Section 1036 of the Code, the first transaction will be a tax-free exchange of the previously acquired shares for the same number of new shares. The new shares will retain the basis and, except, as provided below, the holding periods of the previously acquired shares. The second transaction will be the issuance of additional new shares having a value equal to the difference between the aggregate fair market value of all of the new shares being acquired and the aggregate option exercise price for those shares. Because the exercise of an incentive stock option does not result in the recognition by the optionee of income, this issuance will also be tax-free (unless the alternative minimum tax applies, as described above). The optionee's basis in these

additional shares will be zero and the optionee's holding period for these shares will commence on the date on which the shares are transferred. For purposes of the one and two-year holding period requirements which must be met for favorable incentive stock option tax treatment to apply, the holding periods of previously acquired shares are disregarded.

Non-qualified Stock Options. As in the case of incentive stock options, no income is recognized by the optionee on the grant of a non-qualified stock option. On the exercise by an optionee of a non-qualified option, generally the excess of the fair market value of the stock when the option is exercised over its cost to the optionee will be (a) taxable to the optionee as ordinary income and (b) deductible for income tax purposes by the Corporation. The optionee's tax basis in his stock will equal his cost for the stock plus the amount of ordinary income the optionee had to recognize with respect to the non-qualified stock option.

The Internal Revenue Service will treat the exercise of a non-qualified stock option with already owned stock of the Company as two transactions. First, there will be a tax-free exchange of the old shares for a like number of shares under Section 1036 of the Code, with such exchanged shares retaining the basis and holding period of the old shares. Second, there will be an issuance of additional new shares having a value equal to the difference between the fair market value of all new shares being acquired (including the exchanged shares and the additional new shares) and the aggregate option price for those shares. The employee will recognize ordinary income under Section 83 of the Code, in an amount equal to the fair market value of the additional new shares (i.e., the spread on the option). The additional new shares will have a basis equal to the fair market value of the additional new shares.

Accordingly, upon a subsequent disposition of stock acquired upon the exercise of a non-qualified stock option, the optionee will recognize short-term or long-term capital gain or loss, depending upon the holding period of the stock equal to the difference between the amount realized upon disposition of the stock by the optionee and the optionee's basis in the stock.

For all options, different tax rules may apply if the optionee is subject to Section 16 of the Securities Exchange Act of 1934.

NEW PLAN BENEFITS

It is not possible to state the persons who will receive options or awards under the 1997 Plan in the future, nor the amount of options or awards which will be granted thereunder. The following table provides information with respect to options granted since the beginning of fiscal 1999 under the 1997 Plan. See "Approval of Amendment of the Mercury Computer Systems, Inc. 1997 Stock Option Plan" for a description of the options which are provided for under the 1997 Plan.

NAME AND POSITION -----	DOLLAR VALUE -----	1997 PLAN STOCK OPTIONS -----
James R. Bertelli, President and CEO.....	(1)	15,052
G. Mead Wyman, Senior Vice President, Treasurer and CFO.....	(1)	5,000
Donald Barry, Vice President and Director of Medical Business Group.....	(1)	7,500
Vincent A. Mancuso, Vice President and Director of Government Electronics Group.....	(1)	2,000
All Executive Officers as a Group.....	(1)	29,552
All Non-Executive Officer Directors.....	(1)	--
Employees as a Group (excluding Executive Officers).....	(1)	576,650

(1) The dollar value of the options is equal to the difference between the exercise price of the options granted and the fair market value of the Company's Common Stock at the date of exercise.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

During fiscal year 1999, Messrs. Berman and Sallen served on the Compensation Committee of the Corporation's Board of Directors for the entire year, Dr. Baty served on the Compensation Committee through October 27, 1998 and Mr. Mullin served on the Compensation Committee from October 27, 1998 through the remainder of the fiscal year. At the commencement of fiscal year 1999, the Corporation had outstanding loans of (i) \$125,000 to Dr. Albert Belle Isle, a Director of the Corporation, and (ii) \$200,000 to James R. Bertelli, President and CEO of the Corporation, both of which loans were non-recourse and bore interest at two percentage points above the prime rate per annum. Both loans were paid in full as of October, 1998.

PRINCIPAL HOLDERS OF VOTING SECURITIES

The following table shows, as of September 1, 1999, any person who is known by the Corporation to be the beneficial owner of more than five percent of any class of voting securities of the Corporation. For purposes of this Proxy Statement, beneficial ownership is defined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934 and means generally the power to vote or dispose of the securities, regardless of any economic interest therein.

NAME AND ADDRESS OF BENEFICIAL OWNER -----	AMOUNT AND NATURE OF BENEFICIAL OWNERSHIP -----	PERCENT OF CLASS -----
Memorial Drive Trust(1).....	1,930,686	18.6%
R. Schorr Berman(2).....	1,939,577	18.6%
Scudder Kemper Investments(3).....	904,400	8.7%
Peter B. Cannell & Co., Inc.(4).....	711,425	6.9%

(1) The address of this beneficial owner is MDT Advisers, Inc., 125 Cambridge Park Drive, Cambridge, MA, attention: R. Schorr Berman. Shares are held of record by MD Co., a partnership organized by Memorial Drive Trust to hold securities on behalf of Memorial Drive Trust.

(2) Includes options to purchase 8,891 shares exercisable within sixty days of September 1, 1999. Includes 1,930,686 shares owned by MD Co., as to which Mr. Berman may be deemed beneficial owner and as to which Mr. Berman disclaims beneficial ownership except to the extent of his direct pecuniary interest. Mr. Berman is President of MDT Advisers, Inc., which manages the investments of MD Co. See note (1) above.

(3) The address of this beneficial owner is Two International Place, Boston, MA 02111.

(4) The address of this beneficial owner is 645 Madison Avenue, New York, NY 10022.

SECURITY OWNERSHIP OF DIRECTORS AND EXECUTIVE OFFICERS

The following information is furnished as of September 1, 1999, with respect to Common Stock of the Corporation beneficially owned within the meaning of Rule 13d-3 by all Directors of the Corporation and nominees, and by all Directors and Executive Officers as a group. Unless otherwise indicated, the individuals named held sole voting and investment power over the shares listed below.

NAME AND ADDRESS OF BENEFICIAL OWNER -----	AMOUNT AND NATURE OF BENEFICIAL OWNERSHIP -----	PERCENT OF CLASS -----
James R. Bertelli(1).....	490,011	4.7%
Donald Barry(2).....	19,380	*
Vincent A. Mancuso(3).....	10,400	*
G. Mead Wyman(4).....	73,000	*
Gordon B. Baty(5).....	117,316	1.1%
Albert P. Belle Isle(5).....	49,891	*
R. Schorr Berman(5)(6).....	1,939,577	18.7%
Sherman N. Mullin(7).....	1,250	*
Melvin Sallen(8).....	28,112	*
All Directors and Executive Officers As a Group (9 persons)(9).....	2,728,937	26.3%

- -----
* Less than 1.0%.

- (1) Includes options to purchase 70,211 shares exercisable within sixty days of September 1, 1999.
- (2) Includes options to purchase 8,380 shares exercisable within sixty days of September 1, 1999.
- (3) Includes options to purchase 10,400 shares exercisable within sixty days of September 1, 1999.
- (4) Includes options to purchase 1,000 shares exercisable within sixty days of September 1, 1999.
- (5) Includes options to purchase 8,891 shares exercisable within sixty days of September 1, 1999.
- (6) Includes 1,930,686 shares owned by MD Co., as to which Mr. Berman may be deemed beneficial owner and as to which Mr. Berman disclaims beneficial ownership except to the extent of his direct pecuniary interest. Mr. Berman is President of MDT Advisers, Inc., which manages the investments of MD Co. See footnote (1) in "Principal Holders of Voting Securities" above.
- (7) Includes options to purchase 19,062 shares exercisable within sixty days of September 1, 1999.
- (8) Includes options to purchase 7,062 shares exercisable within sixty days of September 1, 1999 and 2,800 shares owned by the Lois S. Sallen Trust, of which Mr. Sallen is a co-trustee and beneficiary.
- (9) Includes 142,788 shares which certain Directors and Executive Officers have the right to acquire upon the exercise of outstanding options, exercisable presently or within sixty days.

NOTWITHSTANDING ANYTHING TO THE CONTRARY SET FORTH IN ANY OF THE CORPORATION'S PREVIOUS FILINGS UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED, THAT MIGHT INCORPORATE FUTURE FILINGS, INCLUDING THIS PROXY STATEMENT, IN WHOLE OR IN PART, THE FOLLOWING REPORT AND THE PERFORMANCE GRAPH ON PAGE 19 SHALL NOT BE INCORPORATED BY REFERENCE INTO ANY SUCH FILING.

COMPENSATION COMMITTEE REPORT ON EXECUTIVE COMPENSATION

The Compensation Committee (the "Committee") of the Board of Directors has furnished the following report on executive compensation.

The Committee administers the Corporation's stock option plans, makes annual recommendations to the full Board of Directors regarding the chief executive officer's salary, bonus, and equity-based compensation, and oversees the executive compensation program for the Corporation's other employees, including its executive officers. The Committee is composed of three independent directors who are not employees of the Corporation.

COMPENSATION PHILOSOPHY

The Corporation's compensation policies for executive officers are based on the belief that the interests of executives should be closely aligned with those of the Corporation's shareholders. The compensation policies are designed to achieve the following objectives:

- Offer compensation opportunities that attract highly qualified executives, reward outstanding initiative and achievement, and retain the leadership and skills necessary to build long-term shareholder value.
- Maintain a significant portion of executives' total compensation at risk, tied to both the annual and long-term financial performance of the Corporation and the creation of shareholder value.
- Further the Corporation's short and long-term strategic goals and values by aligning compensation with business objectives and individual performance.

EXECUTIVE COMPENSATION

Compensation of executive officers other than the chief executive officer is determined by the chief executive officer and is subject to review by the Committee. The Committee historically has obtained outside survey data regarding executive and senior level compensation and provided this data to the chief executive officer to assist him in making compensation decisions. Compensation for executive officers is comprised of base salary, annual cash bonuses and periodic stock option grants.

Base Salary. Annual determinations of base salaries are made based in part on the competitive pay practices of companies in the same industry of similar size and market capitalization, the skills, performance level, and contribution to the business of the individual executives, and the needs of the Corporation.

Annual Cash Incentive Awards. The Corporation's executive officers are eligible to receive annual cash bonus awards designed to motivate executives to attain short-term and longer-term corporate and individual management goals. Award levels vary depending upon the achievement of performance criteria established by the chief executive officer. The bonus criteria for each executive officer are tailored to the achievement of financial and operational goals specifically developed for that officer's area or responsibility, as well as overall corporate performance and the attainment of other individual objectives. Consequently, there is a direct link between the compensation of the executive officers and the Corporation's performance.

Long-Term Incentives. The Committee believes that stock options are an excellent vehicle for compensating its officers and employees. The Corporation provides long-term incentives through its stock option plans, a purpose of which is to create a direct link between executive compensation and increases in shareholder value. Stock options are granted at fair market value and vest in installments, generally over five years. When determining option awards for an executive officer, the Committee considers the executive's current contribution to Corporation performance, the anticipated contribution to meeting the Corporation's long-term strategic performance goals, and industry practices and norms. Long-term incentives granted in prior years and existing levels of stock ownership are also taken into consideration. Because the receipt of value by an executive officer under a stock option is dependent upon an increase in the price of the Corporation's Common Stock, this portion of the executive's compensation is directly aligned with an increase in shareholder value.

CHIEF EXECUTIVE COMPENSATION

The chief executive officer's compensation is comprised of base salary, annual cash incentive awards and stock option grants.

In determining the base salary paid to Mr. Bertelli for the year ended June 30, 1999, the Committee considered his level of responsibility, salary increases awarded to him in the past, his experience, his potential, and compensation programs of other companies of similar size and characteristics.

Annual cash bonuses and stock option grants to Mr. Bertelli are based on the attainment of individual and corporate performance targets established at the beginning of the fiscal year. The annual cash bonus and option grants to Mr. Bertelli for the fiscal year ended June 30, 1999 reflect the achievement of predetermined targets based on the Corporation's revenue, pre-tax income, and certain non-financial goals.

Mr. Bertelli's base compensation increased 10%, from \$275,000 during the fiscal year ended June 30, 1998 to \$302,500 during the fiscal year ended June 30, 1999. Mr. Bertelli's cash bonus of \$136,730 and grant of options to purchase 15,052 shares of common stock in respect of the fiscal year ended June 30, 1999, were based upon achievement of a significant portion of the pre-determined targets described above. Mr. Bertelli's cash bonus and stock option grant reflect increases in the Corporation's revenues and pre-tax profits of 25% and 42% respectively, from fiscal 1998 to fiscal 1999.

In 1993, the Internal Revenue Code was amended to limit the deduction a public company is permitted for compensation paid in 1994 and thereafter to the chief executive officer and to the four most highly compensated executive officers, other than the chief executive officer. Generally, amounts paid in excess of \$1,000,000 to a covered executive, other than performance-based compensation, cannot be deducted. In order to qualify as performance-based compensation under the new tax law, certain requirements must be met, including approval of the performance measures by the stockholders. The Committee intends to consider ways to maximize deductibility of executive compensation, while retaining the discretion the Committee considers appropriate to compensate executive officers at levels commensurate with their responsibilities and achievements.

The foregoing report has been approved by all members of the Committee.

COMPENSATION COMMITTEE
Melvin J. Sallen, Chairman
R. Schorr Berman
Sherman Mullin

PERFORMANCE GRAPH

Set forth below is a line graph comparing the cumulative total stockholder return of the Corporation's Common Stock against the cumulative total return of the MS Group 810 Diversified Computer Systems Index (consisting of 14 companies) and the NASDAQ Market Index for the period 1/31/98 through 6/30/99. The graph and table assume that \$100 was invested on 1/31/98 in each of the Corporation's Common Stock, the MG Group 810 Diversified Computer Systems Index, and the NASDAQ Market Index and that all dividends were reinvested. This data was furnished by Media General Financial Services, Richmond, Virginia.

COMPANY/ INDEX/MARKET -----	1/31/98 -----	3/31/98 -----	6/30/98 -----	9/30/98 -----	12/31/98 -----	3/31/99 -----	6/30/99 -----
Mercury Computer Systems, Inc.	100.00	164.29	138.10	148.81	267.86	171.43	307.14
MG Group Index	100.00	103.25	108.24	111.72	158.92	164.34	229.07
NASDAQ Market Index	100.00	112.72	115.63	104.22	135.48	151.36	164.70

EXECUTIVE OFFICERS

NAME ----	AGE ---	POSITION -----
James R. Bertelli.....	59	President, Chief Executive Officer, Director and Co-founder
G. Mead Wyman.....	59	Senior Vice President, Chief Financial Officer and Treasurer
Donald Barry.....	54	Vice President and Director of Medical Business Group
Vincent A. Mancuso.....	52	Vice President and Director of Government Electronics Group

MR. BERTELLI co-founded the Corporation in 1981, and has served as the Corporation's President, Chief Executive Officer and a Director since that time. For further information, see "Election of Directors."

MR. WYMAN has been Senior Vice President, Chief Financial Officer and Treasurer of the Corporation since September 1998. From November 1996 until September 1998, he served as Vice President, Chief Financial Officer and Treasurer. Prior to joining Mercury, Mr. Wyman was Chief Financial Officer at Dataware Technologies, Inc., a software design firm, from 1992 to 1996. Previously, he was a general partner at Hambrecht and Quist Venture Partners, and was the first Chief Financial Officer at Lotus Development Corporation. Mr. Wyman also has held senior financial management positions at Prime Computer Inc. and Millipore Corporation.

DR. BARRY has been Vice President and Director of Medical Business Group of the Corporation since 1992. Prior to that he served as General Manager at Picker International, Inc., Chief Operating Officer at ESA, Inc., and Director of International Marketing at American Motors Corp.

MR. MANCUSO joined the Corporation in January 1997 as Vice President and Director of Government Electronics Group. Before joining Mercury, Mr. Mancuso was Director of Federal Sales at Siemens Pyramid Information Systems, Inc. from 1995 to 1996. From 1993 to 1995, he was Vice President of consulting at Federal Sources, Inc., an information services company. From 1991 to 1992, he was Vice President and General Manager at Government Technology Services, Inc., Advanced Systems Division. Mr. Mancuso served nineteen years at Hewlett Packard in various sales and marketing positions.

EXECUTIVE COMPENSATION

The following table sets forth all compensation awarded to, earned by or paid to the Corporation's Chief Executive Officer and each of the Corporation's three other most highly compensated executive officers (the "Named Executive Officers") for the Corporation's three most recent fiscal years ended June 30, 1999.

SUMMARY COMPENSATION TABLE

NAME AND PRINCIPAL POSITION	YEAR	ANNUAL COMPENSATION			LONG-TERM COMPENSATION	
		SALARY (\$)	BONUS (\$)	OTHER ANNUAL COMPENSATION (\$)	SECURITIES UNDERLYING OPTIONS/SARS (#)	ALL OTHER COMPENSATION
James R. Bertelli, President and CEO.....	1999	\$302,500	\$136,730	\$6,000 (1)	15,052	\$23,537 (4)
	1998	\$275,000	\$116,600	\$6,000 (1)	53,601	\$28,194 (2)
	1997	\$260,000	\$112,300	\$6,000 (1)	22,290	\$32,869 (3)
G. Mead Wyman, Senior Vice President, Treasurer and CFO(5).....	1999	\$185,000	\$ 41,847	--	5,000	\$14,895 (13)
	1998	\$175,000	\$ 50,620	--	--	\$ 4,652 (6)
	1997	\$100,000	\$ 56,434	--	80,000	\$ 3,529 (7)
Donald Barry, Vice President and Director of Medical Business Group.....	1999	\$165,000	\$ 75,493	--	7,500	\$ 4,393 (14)
	1998	\$120,000	\$ 65,090	--	--	\$ 3,200 (8)
	1997	\$111,000	\$ 64,020	--	2,000	\$ 2,160 (9)
Vincent A. Mancuso, Vice President and Director of Government Electronics Group(10).....	1999	\$170,000	\$125,000	--	2,000	\$ 4,200 (15)
	1998	\$120,000	\$147,000	--	--	\$ 3,200 (11)
	1997	\$ 55,000	\$ 75,000	--	25,000	\$ 1,400 (12)

(1) Represents automobile allowance.

(2) Represents \$3,200 matching contribution by the Corporation into Mr. Bertelli's 401(k) plan for the benefit of Mr. Bertelli, and a premium of \$24,994 paid by the Corporation for a split dollar life insurance policy for the benefit of Mr. Bertelli.

(3) Represents \$3,150 matching contribution by the Corporation into Mr. Bertelli's 401(k) plan for the benefit of Mr. Bertelli, and a premium of \$29,719 paid by the Corporation for a split dollar life insurance policy for the benefit of Mr. Bertelli.

(4) Represents \$3,200 matching contribution by the Corporation into Mr. Bertelli's 401(k) plan for the benefit of Mr. Bertelli, and a premium of \$20,337 paid by the Corporation for a split dollar life insurance policy for the benefit of Mr. Bertelli.

(5) 1997 salary was earned from November 1996, when the Corporation hired Mr. Wyman, through June 30, 1997.

(6) Represents \$3,200 matching contribution by the Corporation into Mr. Wyman's 401(k) plan for the benefit of Mr. Wyman, and a premium of \$1,452 paid by the Corporation for a split dollar life insurance policy for the benefit of Mr. Wyman.

(7) Represents \$2,519 matching contribution by the Corporation into Mr. Wyman's 401(k) plan for the benefit of Mr. Wyman, and a premium of \$1,010 paid by the Corporation for a split dollar life insurance policy for the benefit of Mr. Wyman.

(8) Represents \$3,200 matching contribution by the Corporation into Mr. Barry's 401(k) plan for the benefit of Mr. Barry.

(9) Represents \$2,160 matching contribution by the Corporation into Mr. Barry's 401(k) plan for the benefit of Mr. Barry.

(10) 1997 salary was earned from January 1997, when the Corporation hired Mr. Mancuso, through June 30, 1997.

(11) Represents \$3,200 matching contribution by the Corporation into Mr. Mancuso's 401(k) plan for the benefit of Mr. Mancuso.

- (12) Represents \$1,400 matching contribution by the Corporation into Mr. Mancuso's 401(k) plan for the benefit of Mr. Mancuso.
- (13) Represents \$3,200 matching contribution by the Corporation into Mr. Wyman's 401(k) plan for the benefit of Mr. Wyman, and a premium of \$11,695 paid by the Corporation for a split dollar life insurance policy for the benefit of Mr. Wyman.
- (14) Represents \$3,200 matching contribution by the Corporation into Mr. Barry's 401(k) plan for the benefit of Mr. Barry, and a premium of \$1,193 paid by the Corporation for a split dollar life insurance policy for the benefit of Mr. Barry.
- (15) Represents \$3,200 matching contribution by the Corporation into Mr. Mancuso's 401(k) plan for the benefit of Mr. Mancuso, and a premium of \$1,020 paid by the Corporation for a split dollar life insurance policy for the benefit of Mr. Mancuso.

STOCK OPTION AND STOCK PURCHASE PLANS

The Corporation has in effect its 1998 Stock Option Plan for Non-Employee Directors, 1997 Employee Stock Purchase Plan, 1997 Stock Option Plan, 1993 Stock Option Plan for Non-Employee Directors, 1991 Stock Option Plan, and 1982 Stock Option Plan (together, the "Stock Option and Purchase Plans"). The Corporation is no longer permitted to grant options under either its 1982 Stock Option Plan or its 1993 Stock Option Plan for Non-Employee Directors; however, certain persons continue to hold options to purchase shares of common stock granted under such plans. The Compensation Committee of the Board of Directors is responsible for the administration and interpretation of the Stock Option and Purchase Plans. Copies of the Stock Option and Purchase Plans are available from the Clerk of the Corporation upon request.

OPTION GRANTS, EXERCISES AND HOLDINGS

Option Grants. The following table sets forth certain information regarding options granted to the Named Executive Officers during the year ended June 30, 1999. The Corporation did not issue any stock appreciation rights ("SARs") during the three most recent fiscal years ended June 30, 1999.

OPTION/SAR GRANTS IN LAST FISCAL YEAR

NAME	INDIVIDUAL GRANTS				POTENTIAL REALIZABLE VALUE AT ASSUMED ANNUAL RATES OF STOCK PRICE APPRECIATION FOR OPTION TERM (1)	
	NUMBER OF SECURITIES UNDERLYING OPTION/SARS GRANTED (#)	PERCENT OF TOTAL OPTION/SARS GRANTED TO EMPLOYEES IN FISCAL YEAR (%)	EXERCISE PRICE (\$/SHARE)	DATE	5% (\$)	10% (\$)
James R. Bertelli (2)	15,052	2.4%	\$13.00	9/14/98	123,060	311,857
G. Mead Wyman (3)	5,000	.8%	\$15.25	9/28/98	47,953	121,523
Donald Barry (4)	7,500	1.2%	\$15.25	9/28/98	71,930	182,284
Vincent A. Mancuso (5)	2,000	.3%	\$15.25	8/28/98	19,181	48,609

(1) In accordance with the rules of the Securities and Exchange Commission (the "Commission"), shown are the gains or "option spreads" that would exist for the respective options granted. These gains are based on the assumed rates of annual compound stock price appreciation of 5% and 10% from the date the option was granted over the full option term. These assumed annual compound rates of stock price appreciation are mandated by the rules of the Commission and do not represent the Corporation's estimate or projection of future Common Stock prices.

(2) Options to purchase 7,060 shares were exercisable at June 30, 1999. The remaining options vest on September 14, 1999.

- (3) No options were exercisable at June 30, 1999. The remaining options vest as to 5,000 shares in increments of 1,000 shares on September 28 in each of 1999, 2000, 2001, 2002, and 2003 so long as Mr. Wyman's employment with the Corporation has not been terminated.
- (4) No options were exercisable at June 30, 1999. The remaining options vest as to 7,500 shares in increments of 1,500 shares on September 28 in each of 1999, 2000, 2001, 2002 and 2003 so long as Mr. Barry's employment with the Corporation has not been terminated.
- (5) No options were exercisable at June 30, 1999. The remaining options vest as to 2,000 shares in increments of 400 shares on September 28 in each of 1999, 2000, 2001, 2002 and 2003 so long as Mr. Mancuso's employment with the Corporation has not been terminated.

AGGREGATED OPTION EXERCISES IN LAST
FISCAL YEAR AND 6/30/99 OPTION VALUES

The following table provides information on option exercises and on the value of the named Executive Officers' unexercised options at June 30, 1999.

NAME	SHARES ACQUIRED ON EXERCISE (#)	VALUE REALIZED (\$) (2)	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS AT FISCAL YEAR-END		VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT FISCAL YEAR-END (\$) (1)	
			EXERCISABLE	UNEXERCISABLE	EXERCISABLE	UNEXERCISABLE
James R. Bertelli.....	0	0	51,901	43,610	\$1,357,663	\$1,033,443
G. Mead Wyman.....	28,000	413,000	0	44,000	0	1,243,000
Donald Barry.....	1,000	10,250	13,260	15,240	369,095	316,155
Vincent A. Mancuso.....	0	0	10,000	17,000	282,500	457,750

- (1) Value of unexercised in-the-money stock options represents the difference between the exercise prices of the stock options and the closing price of the Corporation's Common Stock on The Nasdaq National Market on June 30, 1999.
- (2) Value realized on exercise represents the difference between the exercise prices of stock options exercised and the trading price of the Corporation's Common Stock on The Nasdaq National Market on the date of such exercise.

OTHER MATTERS

Independent Public Accountants. The Board of Directors has appointed PriceWaterhouseCoopers LLP as independent auditors to examine the consolidated financial statements of the Corporation and its subsidiaries for the fiscal year ended June 30, 2000.

A representative of PriceWaterhouseCoopers LLP is expected to be present at the Meeting and will have the opportunity to make a statement if he or she so desires and to respond to appropriate questions. The engagement of PriceWaterhouseCoopers LLP was approved by the Board of Directors at the recommendation of the Audit Committee of the Board of Directors.

Section 16(a) Beneficial Ownership Reporting Compliance. Section 16(a) of the Securities Exchange Act of 1934 requires the Corporation's officers and Directors and persons beneficially owning more than 10% of the outstanding Common Stock of the Corporation to file reports of beneficial ownership and changes in beneficial ownership with the Securities and Exchange Commission ("SEC"). Officers, Directors, and greater than 10% beneficial owners of Common Stock are required by SEC regulation to furnish the Corporation with copies of all Section 16(a) forms they file.

Based solely on copies of such forms furnished as provided above, or written representations that no Forms 5 were required, the Corporation believes that during the fiscal year ended June 30, 1999, all Section 16(a) filing requirements applicable to its officers, Directors, and beneficial owners of greater than 10% of its Common Stock were complied with, except that: (i) through inadvertence, two reports relating in the aggregate to eight transactions by James R. Bertelli were not reported on a timely basis; (ii) through inadvertence, one report relating to three transactions by Donald Berry was not reported on a timely basis; (iii) through inadvertence, four reports relating to eight transactions by G. Mead Wyman were not reported on a timely basis; and (iv) through inadvertence, one report relating to one transaction by Vincent A. Mancuso was not reported on a timely basis.

Deadlines for Submission of Stockholder Proposals. Under regulations adopted by the Securities and Exchange Commission, any proposal submitted for inclusion in the Corporation's Proxy Statement relating to the Annual Meeting of Stockholders to be held in 2000 must be received at the Corporation's principal executive offices in Chelmsford, Massachusetts on or before June 17, 2000. Receipt by the Corporation of any such proposal from a qualified stockholder in a timely manner will not ensure its inclusion in the proxy material because there are other requirements in the proxy rules for such inclusion. Stockholders interested in submitting such a proposal are advised to contact knowledgeable counsel with regards to the detailed requirements of such securities rules. In accordance with the provisions of Rule 14a-4(c) promulgated under the Securities Exchange Act of 1934, if the Corporation does not receive notice of a stockholder proposal to be raised at its 2000 Annual Meeting of Stockholders on or before June 17, 2000, then in such event, the proxies shall be allowed to use their discretionary voting authority when the proposal is raised at the 2000 Annual Meeting of Stockholders.

In addition to the Securities and Exchange Commission requirements regarding stockholder proposals, the Corporation's By-Laws contain provisions regarding matters to be brought before stockholder meetings. If stockholder proposals, including proposals regarding the election of Director, are to be considered at the 2000 Annual Meeting of Stockholders, notice of them whether or not they are included in the Corporation's proxy statement and form of proxy, must be given by personal delivery or by United States mail, postage prepaid, to the Clerk of the Corporation on or before August 5, 2000.

Other Matters. Management knows of no matters which may properly be and are likely to be brought before the meeting other than the matters discussed herein. However, if any other matters properly come before the meeting, the persons named in the enclosed proxy will vote in accordance with their best judgment.

The cost of this solicitation will be borne by the Corporation. It is expected that the solicitation will be made primarily by mail, but regular employees or representatives of the Corporation (none of whom will receive any extra compensation for their activities) may also solicit proxies by telephone, telegraph and in person and arrange for brokerage houses and other custodians, nominees and fiduciaries to send proxies and proxy material to their principals at the expense of the Corporation.

10-K REPORT. THE CORPORATION WILL PROVIDE EACH BENEFICIAL OWNER OF ITS SECURITIES WITH A COPY OF AN ANNUAL REPORT ON FORM 10-K, INCLUDING THE FINANCIAL STATEMENTS AND SCHEDULES THERETO, REQUIRED TO BE FILED WITH THE SECURITIES AND EXCHANGE COMMISSION FOR THE CORPORATION'S MOST RECENT FISCAL YEAR, WITHOUT CHARGE, UPON RECEIPT OF A WRITTEN REQUEST FROM SUCH PERSON. SUCH REQUEST SHOULD BE SENT TO MR. G. MEAD WYMAN, CHIEF FINANCIAL OFFICER, MERCURY COMPUTER SYSTEMS, INC., 199 RIVERNECK ROAD, CHELMSFORD, MASSACHUSETTS 01824.

VOTING PROXIES

The Board of Directors recommends an affirmative vote on all proposals specified. Proxies will be voted as specified. If signed proxies are returned without specifying an affirmative or negative vote on any proposal, the shares represented by such proxies will be voted in favor of the Board of Directors' recommendations.

By order of the Board of Directors

/s/ Anthony J. Medaglia, Jr.

ANTHONY J. MEDAGLIA, JR., Clerk

Chelmsford, Massachusetts
October 18, 1999

MERCURY COMPUTER SYSTEMS, INC.
SPECIAL MEETING IN LIEU OF
ANNUAL MEETING OF STOCKHOLDERS
NOVEMBER 18, 1999

The undersigned hereby appoints James R. Bertelli and Anthony J. Medaglia, Jr., and each of them, with full power of substitution, proxies to represent the undersigned at the Special Meeting in Lieu of the 1999 Annual Meeting of Stockholders of Mercury Computer Systems, Inc. to be held on November 18, 1999 at 10:00 a.m. at the offices of Hutchins, Wheeler & Dittmar, A Professional Corporation, 101 Federal Street, Suite 3101, Boston, Massachusetts, and at any adjournment or adjournments thereof, to vote in the name and place of the undersigned, with all powers which the undersigned would possess if personally present, upon such business as may properly come before the meeting including the proposals as set forth on the reverse side of this Proxy Card.

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS. THE BOARD RECOMMENDS AN AFFIRMATIVE VOTE ON ALL PROPOSALS SPECIFIED. SHARES WILL BE VOTED AS SPECIFIED. IF NO SPECIFICATION IS MADE, THE SHARES REPRESENTED WILL BE VOTED IN FAVOR OF THE PROPOSALS.

PLEASE VOTE, DATE, AND SIGN THIS PROXY IN THE SPACE PROVIDED AND RETURN IN THE ENCLOSED ENVELOPE, WHETHER OR NOT YOU EXPECT TO ATTEND THE MEETING IN PERSON.

Please sign exactly as your name(s) appear(s) on the Proxy. When shares are held by joint tenants, both should sign. When signing as attorney, executor, administrator, trustee or guardian, please give full title as such. If a corporation, please sign in full corporate name by President or other authorized officer. If a partnership, please sign in partnership name by authorized person.

HAS YOUR ADDRESS CHANGED?

DO YOU HAVE ANY COMMENTS?

{TOP HALF OF PROXY CARD}

0 PLEASE MARK VOTES AS IN THIS EXAMPLE.

MERCURY COMPUTER SYSTEMS, INC.

Mark box at right if you plan to attend the Meeting. 0

Mark box at right if an address change or comment has
been noted on the reverse side of this card. 0

RECORD DATE SHARES: _____

1. Election of Directors:

	FOR	WITHHELD
Dr. Gordon Baty	0	0

	FOR	WITHHELD
Mr. Sherman Mullin	0	0

2. Approval of the amendment to the Mercury Computer Systems, Inc.

Articles of Organization increasing the number of authorized shares of Common Stock.

FOR	AGAINST	ABSTAIN
0	0	0

3. Authorization of increase in the number of shares of Common Stock
issuable pursuant to the Mercury Computer Systems, Inc. 1997 Stock Option Plan.

FOR	AGAINST	ABSTAIN
0	0	0

4. In their discretion, the proxies are authorized to vote upon such other
business as may properly come before the Meeting.

PLEASE BE SURE TO DATE AND SIGN THIS PROXY.

DATE: _____

SHAREHOLDER SIGN HERE: _____

CO-OWNER SIGN HERE: _____

DETACH CARD

DETACH CARD

DETACH CARD

{BOTTOM HALF OF PROXY CARD}

MERCURY COMPUTER SYSTEMS, INC.

Dear Stockholder:

Please take note of the important information enclosed with this Proxy Card. There are a number of issues related to the management of your company that require your immediate attention and approval. These are discussed in detail in the enclosed proxy materials.

Your vote counts, and you are strongly encouraged to exercise your right to vote your shares.

Please mark the boxes on this Proxy Card to indicate how your shares will be voted. Then sign the card, detach it, and return your proxy vote in the enclosed postage paid envelope.

Your vote must be received prior to the Special Meeting of Stockholders on November 18, 1999.

Thank you in advance for your prompt consideration of these matters.

Sincerely,

Mercury Computer Systems, Inc.