

REGISTRATION NO. 333-41139

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

AMENDMENT NO. 1

TO

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

MERCURY COMPUTER SYSTEMS, INC.

(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

MASSACHUSETTS
(STATE OR OTHER JURISDICTION OF
INCORPORATION OR ORGANIZATION)

3670
(PRIMARY STANDARD INDUSTRIAL
CLASSIFICATION CODE NUMBER)

04-2741391
(I.R.S. EMPLOYER
IDENTIFICATION NO.)

199 RIVERNECK ROAD

CHELMSFORD, MA 01824
(978) 256-1300

(ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER,
INCLUDING AREA CODE, OF REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES)

JAMES R. BERTELLI
PRESIDENT AND CHIEF EXECUTIVE OFFICER
MERCURY COMPUTER SYSTEMS, INC.
199 RIVERNECK ROAD
CHELMSFORD, MASSACHUSETTS 01824

(978) 256-1300
(NAME, ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE,
OF AGENT FOR SERVICE)

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APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. []

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of earlier effective registration statement for the same offering. []

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act

registration number of the earlier effective registration statement for the same offering. []

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the earlier registration statement number of the earlier effective registration statement for the same offering. []

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. []

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(a) OF THE SECURITIES ACT OF 1933, AS AMENDED, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(a), MAY DETERMINE.
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INFORMATION CONTAINED HEREIN IS SUBJECT TO COMPLETION OR AMENDMENT. A REGISTRATION STATEMENT RELATING TO THESE SECURITIES HAS BEEN FILED WITH THE SECURITIES AND EXCHANGE COMMISSION. THESE SECURITIES MAY NOT BE SOLD NOR MAY OFFERS TO BUY BE ACCEPTED PRIOR TO THE TIME THE REGISTRATION STATEMENT BECOMES EFFECTIVE. THIS PROSPECTUS SHALL NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY NOR SHALL THERE BE ANY SALE OF THESE SECURITIES IN ANY STATE IN WHICH SUCH OFFER, SOLICITATION OR SALE WOULD BE UNLAWFUL PRIOR TO REGISTRATION OR QUALIFICATION UNDER THE SECURITIES LAWS OF ANY SUCH STATE.

SUBJECT TO COMPLETION -- DATED JANUARY 7, 1998

PROSPECTUS

3,500,000 Shares

[LOGO: MERCURY COMPUTER SYSTEMS, INC.-- The Ultimate Performance Machine]

Common Stock

Of the 3,500,000 shares of common stock, par value \$.01 per share (the "Common Stock"), offered hereby, 2,000,000 shares are being sold by Mercury Computer Systems, Inc. ("Mercury" or the "Company") and 1,500,000 shares are being sold by certain stockholders of the Company (the "Selling Stockholders"). The Company will not receive any of the proceeds from the sale of shares of Common Stock by the Selling Stockholders. See "Principal and Selling Stockholders."

Prior to this offering (the "Offering"), there has been no public market for the Common Stock of the Company. It is currently anticipated that the initial public offering price of the Common Stock will be between \$12.00 and \$14.00 per share. See "Underwriting" for a discussion of the factors to be considered in determining the initial public offering price. The Common Stock has been approved for inclusion in The Nasdaq Stock Market's National Market (the "Nasdaq National Market") under the symbol "MRCY."

SEE "RISK FACTORS" ON PAGES 6 TO 14 FOR A DISCUSSION OF CERTAIN MATERIAL FACTORS THAT SHOULD BE CONSIDERED IN CONNECTION WITH AN INVESTMENT IN THE COMMON STOCK OFFERED HEREBY.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

	Price to Public	Underwriting Discounts and Commissions(1)	Proceeds to Company(2)	Proceeds to Selling Stockholders
Per Share.....	\$	\$	\$	\$
Total(3).....	\$	\$	\$	\$

- (1) The Company and the Selling Stockholders have agreed to indemnify the several Underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended. See "Underwriting."
- (2) Before deducting expenses payable by the Company, estimated to be \$750,000.
- (3) The Company and certain Selling Stockholders have granted to the several Underwriters 30-day over-allotment options to purchase, in the aggregate, up to 525,000 additional shares of the Common Stock on the same terms and conditions as set forth above. If all such additional shares are purchased by the Underwriters, the total Price to Public will be \$, the total Underwriting Discounts and Commissions will be \$, the total Proceeds to Company will be \$ and the total Proceeds to Selling Stockholders will be \$. See "Underwriting."

The shares of Common Stock are offered by the several Underwriters, subject to delivery by the Company and the Selling Stockholders and acceptance by the Underwriters, to prior sale and to withdrawal, cancellation or modification of the offer without notice. Delivery of the shares of Common Stock to the Underwriters is expected to be made through the facilities of The Depository Trust Company, New York, New York, on or about January , 1998.

MERCURY designs, manufactures and markets high performance real-time digital signal processing computer systems that transform sensor generated data into information which can be displayed as images for human interpretation or subjected to additional computer analysis. The applications served by Mercury's products typically are computation intensive and require I/O capacity and interprocessor bandwidth which are not available on a general purpose PC or workstation.

DEFENSE ELECTRONICS

MEDICAL IMAGING

SHARED STORAGE

[Photos of Mercury products, applications and users thereof and output generated thereby.]

[LOGO: MERCURY COMPUTER SYSTEMS, INC.-- The Ultimate Performance Machine]

CERTAIN PERSONS PARTICIPATING IN THE OFFERING MAY ENGAGE IN TRANSACTIONS THAT STABILIZE, MAINTAIN OR OTHERWISE AFFECT THE PRICE OF THE COMMON STOCK, INCLUDING PURCHASES OF THE COMMON STOCK TO STABILIZE ITS MARKET PRICE, PURCHASES OF THE COMMON STOCK TO COVER SOME OR ALL OF A SHORT POSITION IN THE COMMON STOCK MAINTAINED BY THE UNDERWRITERS AND THE IMPOSITION OF PENALTY BIDS. FOR A DESCRIPTION OF THESE ACTIVITIES, SEE "UNDERWRITING."

DEFENSE ELECTRONICS

[PICTURE OF AIRPLANE]

MERCURY'S systems are embedded into air, sea and land-based platforms for processing radar, sonar and signal intelligence applications. These applications allow a military commander to "see" the battle space through natural barriers such as clouds, darkness, water or foliage, so that the position and strength of the enemy can be determined.

Due to the environmental constraints of these applications, MERCURY'S systems are frequently confined in limited spaces, and they are designed to generate a minimum amount of heat.

[PICTURE OF MERCURY
COMPUTER SYSTEM][AERIAL
PHOTOGRAPH]

MERCURY provides high performance embedded computer systems to the defense electronics market, and works closely with defense contractors to complete a design which matches the specified requirements of a military application.

MERCURY'S systems are embedded within several modalities of diagnostic medical imaging devices, including magnetic resonance imaging, computed tomography and positron emission tomography. These machines are used to allow a physician to "see" within the human body instead of performing invasive surgery.

[DRAWING OF
MRI MACHINE]

[PICTURE OF MERCURY
COMPUTER SYSTEM]

MERCURY'S systems provide the medical imaging industry with a customized solution using an architecture that accommodates upgrades as new technology becomes available. Medical imaging machine suppliers are able to design systems that satisfy a broad range of price/performance requirements and meet the needs of global markets, all with the same Mercury architecture.

MERCURY'S experienced team of system and application engineers works closely with its customers to meet their design requirements. The Company believes that this collaboration leads to faster time-to-market and competitive advantages for Mercury's customers.

[MEDICAL DIAGNOSTIC
IMAGES]

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PROSPECTUS SUMMARY

The following summary is qualified in its entirety by the more detailed information, including the financial statements and notes thereto, appearing elsewhere in this Prospectus. Unless otherwise indicated, the information in this Prospectus assumes that (i) the Underwriters' over-allotment options will not be exercised, (ii) all outstanding shares of Series A Convertible Preferred Stock, par value \$.01 per share, will be converted into Common Stock upon the closing of this Offering and (iii) the Company's Restated Articles of Organization will be amended upon the closing of this Offering to reduce the number of authorized shares of Preferred Stock, par value \$.01 per share, from 2,000,000 to 1,000,000 shares and to eliminate all shares of Series A Convertible Preferred Stock. The Company's fiscal year begins on July 1 and ends on June 30 of each year. See "Description of Capital Stock" and "Underwriting."

Mercury designs, manufactures and markets high performance, real-time digital signal processing computer systems that transform sensor generated data into information which can be displayed as images for human interpretation or subjected to additional computer analysis. These multicomputer systems are heterogeneous and scalable, allowing them to accommodate several microprocessor types and to scale from a few to hundreds of microprocessors within a single system. Mercury's system architecture is specifically designed for digital signal processing applications which are typically computation intensive and require I/O capacity and interprocessor bandwidth not available on a general purpose PC or workstation. The two primary markets for Mercury's products are defense electronics and medical diagnostic imaging. Both of these markets have computing needs which benefit from the unique system architecture developed by the Company. Mercury's computer systems are generally used on real world signal data to enable a military commander to "see" the battle space through natural barriers such as clouds, darkness, water or foliage, so that the position and strength of the enemy can be determined, or to enable a physician to "see" within the body instead of performing invasive surgery.

During the past three fiscal years, the majority of the Company's revenues has been generated from sales of its products to the defense electronics market, generally for use in intelligence gathering electronic warfare systems. The Company's activities in this area have focused on the proof of concept, development and deployment of advanced military applications in radar, sonar and airborne surveillance. The Company has established relationships with many of the major prime contractors to the worldwide defense industry, including Lockheed Martin Corporation, Hughes Aircraft Company, Raytheon/E-Systems, Inc., Raytheon/TI Systems, Inc., Northrop Grumman Corporation, MIT/Lincoln Laboratory, GEC Marconi Limited, Ericsson Microwave Systems AB, MATRA Systemes & Information, Mitsubishi Heavy Industries, Ltd. and a prime contractor owned by the Israeli Ministry of Defense.

Medical diagnostic imaging is the other primary market currently served by the Company. Mercury's computer systems are embedded in magnetic resonance imaging ("MRI"), computed tomography ("CT") and positron emission tomography ("PET") machines. Mercury has supplied computer systems for use in several of General Electric Medical Systems, Inc.'s medical diagnostic imaging systems since 1987, and has established relationships with Siemens Medical Systems, Inc., Toshiba Corp. and Elscint, Inc. The major medical imaging manufacturers are currently developing the next generation of MRI, CT and digital x-ray machines, which are expected to provide better performance at lower cost. Mercury has recently secured design wins on programs with certain of the major medical imaging manufacturers for their next generation MRI, CT and digital x-ray machines. The Company believes that the available market in 1998 for digital signal processing systems and upgrades for the MRI, CT and digital x-ray markets is expected to be an aggregate of approximately \$123 million.

Mercury's computer systems are designed to process continuous streams of data from sensors attached to radar, sonar, medical imaging equipment and other devices. The resulting image is transmitted to the battlefield commander, pilot, technician or physician in order to assist in the decision making or diagnostic process. Due to the nature of the applications in which many of Mercury's computer systems are embedded, they are frequently confined in limited spaces and therefore are designed to generate a minimum amount of heat. The Company employs the RACEway Interconnect, an industry standard system area network

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developed by Mercury which allows for high interprocessor bandwidth and I/O capacity. The Company uses its proprietary application specific integrated circuits ("ASICs") to integrate microprocessors, memory and related components into the RACEway Interconnect to provide optimum system performance. The Company uses industry standard microprocessors, such as Intel Corporation's i860, Motorola, Inc.'s PowerPC, Texas Instruments Incorporated's C80 and Analog Devices, Inc.'s SHARC, in the same system. The Company believes that the RACEway Interconnect and its proprietary ASICs, working together with a group of mixed microprocessors in the same system, allow the most efficient use of space and power with an optimal price/performance ratio.

Since July 1996, Mercury has targeted the shared storage market for introduction of a new product which draws on the Company's core competencies in systems engineering and the development of real-time software. In fiscal 1997, Mercury introduced SuiteFusion, its first shared storage product designed to meet the needs of the broadcast and post-production industry. SuiteFusion is an open, scalable software application that allows work groups to share commodity, fibre channel attached disk arrays, eliminating the need for an expensive, intermediate file server. Early end users include Turner Broadcasting Systems Inc.'s CNN Interactive, Nickelodeon's Blue's Clues television show and Hughes Aircraft (through a subsidiary) for use at the U.S. Army National Training Center. The Company believes that the shared storage market includes a number of distinct applications, such as digital video editing, electronic computer aided design, webcasting, cable advertising insertion and pre-press.

The Company's executive offices are located at 199 Riverneck Road, Chelmsford, Massachusetts 01824, and its telephone number is (978) 256-1300. The Company was incorporated in Massachusetts in 1981.

THE OFFERING

Common Stock Offered by the Company.....	2,000,000 shares
Common Stock Offered by the Selling Stockholders.....	1,500,000 shares
Common Stock to be Outstanding after the Offering.....	9,864,023 shares(1)
Use of Proceeds by the Company.....	For working capital and other general corporate purposes, including construction of additional office space. See "Use of Proceeds."
Proposed Nasdaq National Market Symbol..	MRCY
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(1) Excludes 1,096,373 shares of Common Stock issuable upon exercise of outstanding stock options under the Company's stock option plans at October 31, 1997, with a weighted average exercise price of \$4.85 per share, of which 463,517 shares were exercisable as of such date at a weighted average exercise price of \$3.37 per share. See "Management -- Stock Option and Stock Purchase Plans."

RISK FACTORS

Investors should consider the risk factors involved in connection with an investment in the Common Stock and the impact to investors from various events that could adversely affect the Company's business. See "Risk Factors."

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SUMMARY CONSOLIDATED FINANCIAL INFORMATION
(IN THOUSANDS, EXCEPT PER SHARE DATA)

	FISCAL YEAR ENDED JUNE 30,					THREE MONTHS ENDED SEPTEMBER 30,	
	1993	1994	1995	1996	1997	1996	1997
STATEMENT OF OPERATIONS DATA:							
Revenues.....	\$38,632	\$41,727	\$54,323	\$58,300	\$64,574	\$13,038	\$19,039
Cost of revenues.....	11,972	16,285	21,221	24,688	22,034	4,538	6,661
Gross profit.....	26,660	25,442	33,102	33,612	42,540	8,500	12,378
Operating expenses:							
Selling, general and administrative.....	10,785	12,911	15,798	16,927	22,631	4,726	6,645
Research and development.....	5,619	7,254	8,586	9,776	12,837	2,405	3,381
Total operating expenses.....	16,404	20,165	24,384	26,703	35,468	7,131	10,026
Income from operations.....	10,256	5,277	8,718	6,909	7,072	1,369	2,352
Interest income (expense), net...	(94)	55	240	548	560	136	231
Other income (expense), net.....	(44)	(64)	22	(77)	(88)	(23)	83
Income before income taxes.....	10,118	5,268	8,980	7,380	7,544	1,482	2,666
Provision for income taxes.....	2,487	1,153	2,636	2,952	2,933	576	1,060
Net income.....	\$ 7,631	\$ 4,115	\$ 6,344	\$ 4,428	\$ 4,611	\$ 906	\$ 1,606
Net income per common share.....	\$ 1.02	\$ 0.50	\$ 0.77	\$ 0.54	\$ 0.57	\$ 0.11	\$ 0.20
Weighted average number of common and common equivalent shares outstanding(1).....	7,492	8,295	8,256	8,264	8,157	8,191	8,174

SEPTEMBER 30, 1997

ACTUAL AS ADJUSTED(2)

BALANCE SHEET DATA:		
Working capital.....	\$28,653	\$ 52,083
Total assets.....	47,905	71,335
Convertible preferred stock.....	1,200	--
Total stockholders' equity.....	35,111	58,541

(1) See Note B of Notes to Consolidated Financial Statements for an explanation of the determination of the weighted average common and common equivalent shares used to compute net income per common share.

(2) Reflects (i) the conversion of all outstanding shares of the Company's Series A Convertible Preferred Stock into 2,556,792 shares of Common Stock upon completion of this Offering and (ii) the sale by the Company of 2,000,000 shares of Common Stock offered hereby at an assumed initial public offering price of \$13.00 per share, after deducting the underwriting discounts and commissions and estimated offering expenses.

RISK FACTORS

An investment in the Common Stock offered hereby involves a high degree of risk. Prospective investors should carefully consider the following risk factors, in addition to the other information set forth in this Prospectus, in connection with an investment in the shares of Common Stock offered hereby.

When used in this Prospectus, the words "may," "will," "expect," "anticipate," "continue," "estimate," "project," "intend" and similar expressions are intended to identify forward-looking statements regarding events, conditions and financial trends that may affect the Company's future plans of operations, business strategy, results of operations and financial position. Prospective investors are cautioned that any forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties and that actual results may differ materially from those included within the forward-looking statements as a result of various factors. Factors that could cause or contribute to such differences include, but are not limited to, those described below, under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this Prospectus.

DEPENDENCE ON DEFENSE ELECTRONICS BUSINESS; UNCERTAINTY ASSOCIATED WITH GOVERNMENT CONTRACTS. Sales of the Company's computer systems to the defense electronics market accounted for approximately 81% of the Company's revenues in fiscal 1997, compared to approximately 72% of the Company's revenues in fiscal 1996. Reductions in government spending on programs that incorporate the Company's products could have a material adverse effect on the Company's business, financial condition and results of operations. Moreover, the Company's government contracts and subcontracts are subject to special risks, such as: delays in funding; ability of the government agency to unilaterally terminate the prime contract; reduction or modification in the event of changes in government policies or as the result of budgetary constraints or political changes; increased or unexpected costs under fixed price contracts; and other factors that are not under the control of the Company. In addition, consolidation among defense industry contractors has resulted in fewer contractors with increased bargaining power relative to the Company. No assurance can be given that such increased bargaining power will not adversely affect the Company's business, financial condition or results of operations in the future.

The Company's contracts with the U.S. and foreign governments and their prime and subcontractors are subject to termination either upon default by the Company or at the convenience of the government. Termination for convenience provisions generally entitle the Company to recover costs incurred, settlement expenses and profit on work completed prior to termination. In addition to the right of the government to terminate, government contracts are generally conditioned upon the continuing availability of legislative appropriations. Funds are usually appropriated for a given program each fiscal year even though contract performance may take more than one fiscal year. Consequently, at the outset of a major program, the contract is usually partially funded, and additional monies normally are incrementally committed to the contract by the procuring agency from appropriations made for future fiscal years. No assurance can be given that the Company will realize the revenue expected from performing under such contracts. Because the Company contracts to supply goods and services to U.S. and foreign governments it is also subject to other risks, including contract suspensions, protests by disappointed bidders of contract awards which can result in the reopening of the bidding process, changes in governmental policies or regulations or other political factors.

DEPENDENCE ON KEY CUSTOMERS. The Company is dependent on a small number of customers for a large portion of its revenues. In fiscal 1997, Lockheed Martin and Hughes Aircraft accounted for 22% and 10%, respectively, of the Company's revenues, and sales to 20 customers accounted for more than 80% of the Company's fiscal 1997 revenues. In fiscal 1996, Lockheed Martin, GE Medical and Hughes Aircraft accounted for 19%, 16% and 12%, respectively, of the Company's revenues, and sales to 20 customers accounted for more than 80% of the Company's fiscal 1996 revenues. The Company's largest customer in the medical imaging market is GE Medical, which accounted for 72% of the Company's aggregate sales to the medical imaging market in fiscal 1997, compared to 69% of sales to the medical imaging market in fiscal 1996. Customers in the defense electronics market generally purchase the Company's products in connection with government programs that have a limited duration, leading to fluctuating sales to any particular customer in the defense electronics market from year to year. By contrast, many customers in the medical imaging market

historically have purchased the Company's products over a number of years for use in successive generations of medical imaging devices, although there can be no assurance that such past behavior will continue in the future. A significant diminution in the sales to or loss of any of the Company's major customers would have a material adverse effect on the Company's business, financial condition and results of operations. In addition, the Company's revenues are largely dependent upon the ability of its customers to develop and sell products that incorporate the Company's products. No assurance can be given that the Company's customers will not experience financial or other difficulties that could adversely affect their operations and, in turn, the results of operations of the Company. See "Business -- Markets and Customers."

FLUCTUATIONS IN OPERATING RESULTS. The Company has experienced fluctuations in its results of operations in large part due to the sale by the Company of its computer systems in relatively large dollar amounts to a relatively small number of customers. Operating results also have fluctuated due to competitive pricing programs and volume discounts, the loss of customers, market acceptance of the Company's products, product obsolescence and general economic conditions. In addition, the Company, from time to time, has entered into contracts to engineer a specific solution based on modifications to the Company's standard products (a "development contract"). The Company's gross margins from development contract revenues are typically lower than the Company's gross margins from standard product revenues. The Company intends to continue to enter into development contracts and anticipates that the gross margins associated with development contract revenues will continue to be lower than its gross margins on standard product revenues. The Company expects research and development expenses to continue to increase as the Company continues to develop products to serve its markets, all of which are subject to rapidly changing technology, frequent product performance improvements and evolving industry standards. The ability to deliver superior technological performance on a timely and cost effective basis is a critical factor in securing design wins for future generations of defense electronics and medical imaging systems. Significant research and development spending by the Company does not ensure that the Company's computer systems will be designed into a customer's system. Because future production orders are usually contingent upon securing a design win, the Company's operating results may fluctuate due to either obtaining or failing to obtain design wins for significant customer systems.

The Company's quarterly results may be subject to fluctuations resulting from the foregoing factors, as well as a number of other factors, including the timing of significant orders, delays in completion of internal product development projects, delays in shipping the Company's computer systems and software programs, delays in acceptance testing by customers, a change in the mix of products sold to the defense electronics and medical imaging markets, production delays due to quality problems with outsourced components, shortages of components, the timing of product line transitions and declines in quarterly revenues from old generations of products following announcement of replacement products containing more advanced technology. Another factor contributing to fluctuations in quarterly results is the fixed nature of the Company's expenditures on personnel, facilities and marketing programs. The Company's expense levels for personnel, facilities and marketing programs are based, in significant part, on the Company's expectations of future revenues on a quarterly basis. If actual quarterly revenues are below management's expectations, results of operations likely will be adversely affected. As a result of the foregoing factors, the Company's operating results, from time to time, may be below the expectations of public market analysts and investors, which could have a material adverse effect on the price of the Company's Common Stock. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

DEPENDENCE ON SUPPLIERS. Several components used in the Company's products are currently obtained from sole source suppliers. Mercury is dependent on LSI Logic Corporation for four custom designed ASICs, on Analog Devices for its SHARC processors, on International Business Machines Corporation for ball grid array packaging, on Motorola for its PowerPC processors and on Intel for its i860 processors. IBM may terminate its contract with the Company without cause upon thirty days notice and may cease offering products to the Company upon sixty days notice. Analog Devices may discontinue or modify any product upon 180 days notice and LSI Logic may discontinue any product upon 180 days notice. If LSI Logic, Analog Devices, IBM, Motorola or Intel were to limit or reduce the sale of such components to the Company, or if these or other suppliers to the Company were to experience financial difficulties or other problems which

prevented them from supplying the Company with the necessary components, such events could have a material adverse effect on the Company's business, financial condition and results of operations. These sole source suppliers are subject to quality and performance issues, materials shortages, excess demand, reduction in capacity and other factors that may disrupt the flow of goods to the Company or its customers and thereby adversely affect the Company's business and customer relationships. The Company has no guaranteed supply arrangements with its suppliers and there can be no assurance that its suppliers will continue to meet the Company's requirements. If the Company's supply arrangements are interrupted, there can be no assurance that the Company would be able to find another supplier on a timely or satisfactory basis. Any shortage or interruption in the supply of any of the components used in the Company's products, or the inability of the Company to procure these components from alternate sources on acceptable terms could have a material adverse effect on the Company's business, financial condition and results of operations. There can be no assurance that severe shortages of components will not occur in the future. Such shortages could increase the cost or delay the shipment of the Company's products, which could have a material adverse effect on the Company's business, financial condition and results of operations. Significant increases in the prices of these components would also materially adversely affect the Company's financial performance since the Company may not be able to adjust product pricing to reflect the increase in component costs. The Company could incur set-up costs and delays in manufacturing should it become necessary to replace any key vendors due to work stoppages, shipping delays, financial difficulties or other factors and, under certain circumstances, these costs and delays could have a material adverse effect on the Company's business, financial condition and results of operations. See "Business -- Manufacturing and Testing."

DEPENDENCE UPON KEY PERSONNEL AND SKILLED EMPLOYEES. The Company is largely dependent upon the skills and efforts of its senior management, particularly James R. Bertelli, its President and Chief Executive Officer, as well as its managerial, sales and technical employees. None of the senior management or other key employees of the Company is subject to any employment contract or noncompetition agreement. The Company maintains key-man life insurance on Mr. Bertelli and certain other senior managers. The loss of services of any of its executives or other key personnel could have a material adverse effect on the Company's business, financial condition and results of operations. The Company's future success will depend to a significant extent on its ability to attract, train, motivate and retain highly skilled technical professionals, particularly project managers, engineers and other senior technical personnel. The Company believes that there is a shortage of, and significant competition for, technical development professionals with the skills and experience necessary to perform the services offered by the Company. The Company's ability to maintain and renew existing engagements and obtain new business depends, in large part, on its ability to hire and retain technical personnel with the skills that keep pace with continuing changes in industry standards, technologies and client preferences. The inability to hire additional qualified personnel could impair the Company's ability to satisfy its growing client base, requiring an increase in the level of responsibility for both existing and new personnel. There can be no assurance that the Company will be successful in retaining current or future employees.

DEPENDENCE ON MEDICAL IMAGING MARKET; POTENTIAL ADVERSE EFFECT OF HEALTH CARE REFORM. Sales of the Company's computer systems to the medical imaging market accounted for approximately 11% of the Company's revenues in fiscal 1997, compared to approximately 23% of revenues in fiscal 1996. These customers are original equipment manufacturers ("OEMs") of medical imaging devices and, as a result, any change in the demand for such devices which renders any of the Company's products unnecessary or obsolete, or any change in the technology in such devices, could have a material adverse effect on the Company's business, financial condition and results of operations. Such OEM customers, the end-users of their products and the health care industry generally are subject to extensive federal, state and local regulation in the U.S. as well as in other countries. Changes in applicable health care laws and regulations or new interpretations of existing laws and regulations could have a material adverse effect on such customers or end-users. There can be no assurance that future health care or budgetary legislation or other changes in the administration or interpretation of governmental health care programs both in the U.S. and abroad will not have a material adverse effect on the Company's business, financial condition or results of operations.

RISK OF ENTRY INTO NEW MARKETS. The Company's expansion strategy includes developing new products and entering new markets. The Company's ability to compete in new markets will depend upon a number of factors including, without limitation, the Company's ability to create demand for its products in such markets, its ability to manage its growth effectively, the quality of its products, its ability to respond to changes in its customers' businesses by updating existing products and introducing, in a timely fashion, products which meet the needs of its customers and the ability of the Company to respond rapidly to technological change. The failure of the Company to do any of the foregoing could result in a material adverse effect on its business, financial condition and results of operations. In addition, the Company may face competition in these new markets from various companies which may have substantially greater research and development resources, marketing and financial resources, manufacturing capability and customer support organizations than those of the Company.

The Company has recently expanded into the shared storage market and has invested, and continues to invest, significant resources in the development of products geared towards that market. The Company has initially focused on providing software products tailored for the post-production and broadcast segments of the entertainment industry, introducing in fiscal 1997 SuiteFusion, a middleware application that enables workgroups to share files. The market for providing digital and other products to the entertainment industry includes competitors with greater financial and other resources than the Company. No assurance can be given that the Company will be able to successfully compete in this market, or that it will be able to meet the technical specifications imposed by its customers or potential customers. In addition, the success of the Company's shared storage software product depends, in large part, on the post-production and broadcast industry shifting from traditional linear, tape-based technologies toward newer non-linear, disk-based digital technologies. Linear, tape-based technologies remain pervasive in this industry and there can be no assurance that its participants will adopt non-linear, disk-based digital technologies, or that, if adopted, the Company's products will not be obsolete, uncompetitive or incompatible. The occurrence of any of the foregoing could adversely affect the Company's business, financial condition and results of operations. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

RISKS ASSOCIATED WITH INTERNATIONAL OPERATIONS. The Company markets and sells its products in certain international markets, and the Company has established offices in the United Kingdom, the Netherlands, Japan and France. The Company's international revenues, which are comprised of export sales to foreign markets from the United States and sales by foreign subsidiaries, were approximately 12% of the Company's revenues in fiscal 1997, as compared to approximately 20% in fiscal 1996. If revenues generated by foreign activities are not adequate to offset the expense of establishing and maintaining these foreign subsidiaries and activities, the Company's business, financial condition and results of operations could be materially adversely affected. In addition, there are certain risks inherent in transacting business internationally, such as changes in applicable laws and regulatory requirements, export and import restrictions, export controls relating to technology, tariffs and other trade barriers, less favorable intellectual property laws, difficulties in staffing and managing foreign operations, longer payment cycles, problems in collecting accounts receivable, political instability, fluctuations in currency exchange rates, expatriation controls and potential adverse tax consequences, any of which could adversely impact the success of the Company's international activities. In the recent past, the financial markets in Asia have experienced significant turmoil. There can be no assurance that such turmoil in the Asian financial markets will not negatively affect the sales by the Company to that region. A portion of the Company's revenues from sales to foreign entities, including foreign governments, is in the form of foreign currencies. The Company has no hedging or similar foreign currency contracts, and fluctuations in the value of foreign currencies could adversely impact the profitability of the Company's foreign operations. There can be no assurance that one or more of such factors will not have a material adverse effect on the Company's future international activities and, consequently, on the Company's business, financial condition or results of operations.

TECHNOLOGICAL CHANGES; RISK OF DESIGN-IN PROCESS. The Company's future success will depend in part on its ability to enhance its current products and to develop new products on a timely and cost-effective basis in order to respond to technological developments and changing customer needs. The defense electronics market, in particular, demands constant technological improvements as a means of gaining military advantage.

Military planners historically have funded significantly more design projects than actual deployments of new equipment, and those systems which are deployed tend to contain the components of the subcontractors selected to participate in the design process. In order to participate in the design of new defense electronics systems, the Company must be able to demonstrate its ability to deliver superior technological performance on a timely and cost-effective basis. There can be no assurance that the Company will be able to secure an adequate number of defense electronics design wins in the future, that the equipment in which the Company's products are intended to function eventually will be deployed in the field, or that the Company's products will be included in such equipment if it eventually is deployed.

Customers in the medical imaging market also seek technological improvements through product enhancements and new generations of products. The Company believes that medical imaging machines in which the Company's computers are installed have a long product life cycle. Medical equipment OEMs historically have selected certain suppliers whose products have been included in the OEMs' machines for a significant portion of the products' life cycle. There can be no assurance that the Company will be selected to participate in the future design of any medical imaging equipment, or that, if selected, the Company will generate any revenues for such design work. Failure to participate in future designs of medical imaging equipment could have a material adverse effect on the Company's business, financial condition and results of operations.

The design-in process is typically lengthy and expensive, and there can be no assurance that the Company will be able to continue to meet the product specifications of its customers in a timely and adequate manner. In addition, any failure by the Company to anticipate or respond adequately to changes in technology and customer preferences, or any significant delay in product developments or introductions, could have a material adverse effect on the Company's business, financial condition and results of operations. Because of the complexity of its products, the Company has experienced delays from time to time in completing products on a timely basis. If the Company is unable to design, develop or introduce competitive new products on a timely basis, its future operating results would be adversely affected. There can be no assurance that the Company will be successful in developing new products or enhancing its existing products on a timely or cost-effective basis, or that such new products or product enhancements will achieve market acceptance.

COMPETITION. The markets for the Company's products are highly competitive and are characterized by rapidly changing technology, frequent product performance improvements and evolving industry standards. Competition typically occurs at the design stage, where the customer evaluates alternative design approaches, including those from internal development organizations. A design win usually ensures a customer will purchase the product until their next generation system is developed. Occasionally, the Company's computer systems compete with computer systems from workstation vendors, all of whom have substantially greater research and development resources, long term guaranteed supply capacity, marketing and financial resources, manufacturing capability and customer support organizations than those of the Company. The Company believes that its future ability to compete effectively will depend, in part, upon its ability to continue to improve product and process technologies and develop new technologies in order to maintain the performance advantages of products and processes relative to competitors, to adapt products and processes to technological changes, to identify and adopt emerging industry standards and to adapt to customer needs.

The principal bases for selection in sales of digital signal processing systems to the defense electronics industry are performance (measured primarily in terms of processing speed, I/O capacity and interprocessor bandwidth, processing density per cubic foot, power consumption and heat dissipation), systems engineering support, overall quality of products and associated services, use of industry standards, ease of use and price. Competitors in the defense electronics industry include a relatively small number of companies that design, manufacture and market digital signal processor ("DSP") board level products and in-house design teams employed by prime defense contractors. In-house design efforts historically have provided a significant amount of competition to the Company. However, competition from in-house design teams has diminished in significance in recent years due to the increasing use of commercial off-the-shelf ("COTS") products and the trend toward greater use of outsourcing. Despite this recent change, there can be no assurance that in-house developments will not re-emerge as a major competitive force in the future. Prime contractors are much larger than Mercury and have substantially more resources to invest in research and development. Increased use of

in-house design teams by defense contractors in the future may have a material adverse effect on the Company's business, financial condition and results of operations.

In the medical imaging industry the principal bases for selection are performance (measured primarily in terms of processing speed, I/O capacity and interprocessor bandwidth and power consumption), price, systems engineering support, overall quality of products and associated services, use of industry standards and ease of use. Competitors in the medical imaging market include in-house design teams, a small number of companies that design, manufacture and market DSP board level products and workstation manufacturers. Workstations have become a competitive factor primarily in the market for low-end MRI and CT machines and, to date, have not been a significant factor in the high-performance market, Mercury's primary focus. There can be no assurance that workstation manufacturers will not attempt to penetrate the high-performance market for medical imaging machines. Workstation manufacturers typically have greater resources than Mercury and their entry into markets historically targeted by Mercury may have a material adverse effect on the Company's business, financial condition and results of operations.

Due to the emerging nature of the markets for the Company's shared storage technology, its competitive factors are not yet clearly defined. The Company currently is focusing its efforts in this area on the broadcast and post-production industry, where the Company believes there is currently only one directly competitive product. As this market develops, the Company anticipates that other companies will begin offering additional competitive products. New competitors may have significantly greater marketing and financial resources, better access to individuals making purchasing decisions, superior products and superior services than those offered by the Company. The Company believes that the primary impediment to future sales of shared storage products to the post-production and broadcast industry is the need to transform entrenched operating modes, such as those associated with linear tape based technologies, to accommodate new modes of operation such as those associated with non-linear, disk-based digital technology. However, there can be no assurance that industry participants will adopt such new technologies or that, if adopted, the Company's products will not be obsolete, uncompetitive or incompatible.

Some of the Company's competitors have greater financial and other resources than the Company, and the Company may be operating at a cost disadvantage compared to manufacturers who have greater direct buying power from component suppliers or who have lower cost structures. There can be no assurance that the Company will be able to compete successfully in the future with any of these sources of competition. In addition, there can be no assurance that competitive pressures will not result in price erosion, reduced margins, loss of market share or other factors, any of which could have a material adverse effect on the Company's business, financial condition and results of operations. See "Business -- Competition."

LIMITED PROTECTION OF PROPRIETARY RIGHTS; POTENTIAL INFRINGEMENT OF THIRD PARTY RIGHTS. The Company relies on a combination of patent, copyright, trademark and trade secret laws to establish and protect its rights in its products and proprietary technology. In addition, the Company currently requires its employees and consultants to enter into nondisclosure and assignment of invention agreements to limit use of, access to and distribution of its proprietary information. There can be no assurance that the Company's means of protecting its proprietary rights in the U.S. or abroad will be adequate. The laws of some foreign countries may not protect the Company's proprietary rights as fully or in the same manner as do the laws of the U.S. Also, despite the steps taken by the Company to protect its proprietary rights, it may be possible for unauthorized third parties to copy aspects of the Company's products, reverse engineer, develop similar technology independently or otherwise obtain and use information that the Company regards as proprietary. There can be no assurance that others will not develop technologies similar or superior to the Company's technology or design around the proprietary rights owned by the Company. In addition, there can be no assurance that others will not assert claims of infringement in the future or that, if made, such claims will not be successful. Litigation to determine the validity of any claims, whether or not such litigation is determined in favor of the Company, could result in significant expense to the Company and divert the efforts of the Company's technical and management personnel from daily operations. In the event of any adverse ruling in any litigation regarding intellectual property, the Company may be required to pay substantial damages, discontinue the sale of infringing products, expend significant resources to develop non-infringing technology or obtain licenses to infringing or substituted technology. The failure to develop, or license on acceptable

terms, a substitute technology could have a material adverse effect on the Company's business, financial condition and results of operations. See "Business -- Intellectual Property."

POTENTIAL ACQUISITIONS. In the normal course of its business, the Company evaluates potential acquisitions of businesses, products and technologies that could complement or expand the Company's business. In the event the Company were to identify an appropriate acquisition candidate, there is no assurance that the Company would be able to successfully negotiate the terms of any such acquisition, finance such acquisition and integrate such acquired business, products or technologies into the Company's existing business and operations. Furthermore, the integration of an acquired business could cause a diversion of management time and resources. In addition, there can be no assurance that any acquisition of new technology will lead to the successful development of new products, or that any such new products, if developed, will achieve market acceptance or prove to be profitable. There can be no assurance that a given acquisition, when consummated, would not materially adversely affect the Company's business, financial condition or results of operations. If the Company proceeds with one or more significant acquisitions in which the consideration consists of cash, a substantial portion of the Company's available cash (including the net proceeds of the Offering) could be used to consummate the acquisitions. If the Company consummates one or more significant acquisitions in which the consideration consists of stock, or is financed with the net proceeds of the issuance of stock, stockholders of the Company could suffer a significant dilution of their interests in the Company. See "Use of Proceeds."

TAX AUDIT. On December 12, 1997, the Internal Revenue Service ("IRS") concluded an audit of the Company's tax returns for the years ended June 30, 1992 through June 30, 1995, and issued a formal report reflecting proposed adjustments with respect to the years under audit. The proposed IRS adjustments primarily relate to the disallowance of research and experimental tax credits claimed by the Company, as well as the treatment of certain other items. The total deficiency attributable to the proposed adjustments is \$4.2 million, including penalties and interest of \$1.6 million through the date of the report. The Company is in the process of responding to this report by appealing the proposed adjustments to the Appeals Division of the IRS. While the Company does not believe that the final outcome of the IRS audit will have a material adverse effect on the Company's financial condition or results of operations, no assurance can be given as to the final outcome of the audit, the amount of any final adjustments or the potential impact of such adjustments on the Company's financial condition or results of operations.

YEAR 2000 COMPLIANCE. The Company uses a significant number of computer software programs and operating systems in its internal operations, including applications used in manufacturing, product development, financial business systems and various administrative functions. To the extent that these software applications contain source code that is unable to appropriately interpret the upcoming calendar year "2000," some level of modification or even possibly replacement of such source code or applications will be necessary. The Company is still in the preliminary stages of analyzing its software applications and, to the extent they are not fully "Year 2000" compliant, there can be no assurance that the costs necessary to update software, or potential systems interruptions, would not have a material adverse effect on the Company's business, financial condition or results of operations.

SIGNIFICANT INFLUENCE BY EXISTING STOCKHOLDERS. Upon completion of the Offering, the current officers, directors and their affiliates and five percent beneficial owners will beneficially own approximately 32.3% of the outstanding shares of the Common Stock of the Company (30.9% if the Underwriters' over-allotment options are exercised in full). Accordingly, such persons, if they act together, likely will have significant influence over the Company through their ability to control the election of directors and all other matters that require action by the Company's stockholders, irrespective of how other stockholders may vote. Such persons will have the ability to exert significant influence over the business, policies and affairs of the Company and could prevent or delay a change in control of the Company, which may be favored by a majority of the remaining stockholders. The ability to prevent or delay a change in control of the Company also may have an adverse effect on the market price of the Common Stock. Under the Massachusetts General Laws, the current officers, directors and their affiliates and five percent beneficial owners will not have the ability to block a business combination. More specifically, such persons will not have the requisite percentage of shares of the Company, acting alone as a group, to (i) give a bidder the power to vote its shares at any stockholders' meeting, including a meeting

to consider a bid, in accordance with Chapter 110D of the Massachusetts General Laws, or (ii) to approve or ratify a business combination with an interested stockholder in accordance with Chapter 110F of the Massachusetts General Laws (as such terms are defined therein). See "Management -- Executive Officers and Directors," "Principal and Selling Stockholders" and "Description of Capital Stock."

NO PRIOR PUBLIC MARKET; POSSIBLE VOLATILITY OF STOCK PRICE. Prior to the Offering, there has been no public market for the Common Stock, and there can be no assurance that an active trading market for the Common Stock will develop or, if developed, be sustained upon completion of the Offering. The initial public offering price will be determined by negotiations between the Company and the representatives of the Underwriters based on a number of factors, including prevailing market conditions, market valuations of other companies engaged in activities similar to those of the Company, estimates of the business potential and prospects of the Company, the present state of the Company's business operations, the Company's management and other factors deemed relevant. The trading price of the Common Stock could also be subject to significant fluctuations in response to variations in quarterly results of operations, announcements of new products by the Company or its competitors, developments or disputes with respect to proprietary rights, general trends in the industry, overall market conditions, changes in earnings estimates by analysts and other factors. In addition, the stock market historically has experienced extreme price and volume fluctuations, which have particularly affected the market price of securities of many high technology companies and which at times have been unrelated or disproportionate to the operating performance of such companies. These market fluctuations may adversely affect the market price of the Common Stock. See "Underwriting."

SHARES ELIGIBLE FOR FUTURE SALE. Upon completion of the Offering, the Company will have a total of 9,864,023 shares of Common Stock outstanding. Of these shares, the 3,500,000 shares of Common Stock offered hereby (4,025,000 shares if the Underwriters' over-allotment options are exercised in full) will be freely tradeable without restriction or registration under the Securities Act by persons other than "affiliates" of the Company, as defined under the Securities Act of 1933, as amended (the "Securities Act"). The remaining shares of Common Stock outstanding will be "restricted securities" as defined by Rule 144 promulgated under the Securities Act. Upon completion of the Offering, the Company will have options outstanding to purchase 1,102,124 shares of Common Stock. In addition, options for the purchase of 244,166 shares will remain available for issuance under the Company's Stock Option Plans, assuming no exercise of options after October 31, 1997. See "Management -- Stock Option Plans" and "Shares Eligible for Future Sale."

Under Rule 144 (and subject to the conditions thereof, including volume limitations) all 6,364,023 restricted shares (6,069,673 restricted shares if the Underwriters' over-allotment options are exercised in full) will become eligible for sale after the Offering. The Company, its executive officers and directors, the Selling Stockholders and certain other stockholders have agreed that they will not, without the prior written consent of Prudential Securities Incorporated, on behalf of the Underwriters, directly or indirectly, offer, sell, offer to sell, contract to sell, pledge, grant any option to purchase or otherwise sell or dispose (or announce any offer, sale, offer of sale, contract of sale, pledge, grant of any option to purchase or other sale or disposition) of any shares of Common Stock or any other securities convertible into, or exercisable or exchangeable for, shares of Common Stock or other similar securities of the Company for a period of 180 days from the date of this Prospectus. After such 180-day period, this restriction will expire and shares permitted to be sold under Rule 144 would be eligible for sale, provided that the Company shall have been subject to the reporting requirements of the Exchange Act for at least 90 days and the relevant holding period under Rule 144 shall have expired. Prudential Securities Incorporated may, in its sole discretion, at any time and without prior notice, release all or any portion of the shares of Common Stock subject to such agreements. No predictions can be made of the effect, if any, that the sale or availability for sale of additional shares of Common Stock will have on the market price of the Common Stock. Nevertheless, sales of substantial amounts of such shares in the public market, or the perception that such sales could occur, could materially and adversely affect the market price of the Common Stock and could impair the Company's future ability to raise capital through an offering of its equity securities. See "Shares Eligible for Future Sale."

ANTI-TAKEOVER PROVISIONS; POSSIBLE ISSUANCE OF PREFERRED STOCK. Certain provisions of the Company's Restated Articles of Organization (the "Charter") and Amended and Restated Bylaws (the "Bylaws") and certain provisions of Massachusetts law could have the effect of making it more difficult for a third party to

acquire, or of discouraging a third party from attempting to acquire, control of the Company. Such provisions could limit the price that investors might be willing to pay in the future for the Company's Common Stock. These provisions permit the issuance of "blank check" preferred stock by the Board of Directors without stockholder approval, require super-majority approval to amend certain provisions in the Charter and Bylaws and impose various procedural and other requirements that could make it more difficult for Stockholders to effect certain corporate actions. In addition, the Company is subject to Chapters 110D and 110F of the Massachusetts General Laws, which prohibit the Company from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder unless either (i) the interested stockholder obtains the approval of the board of directors prior to becoming an interested stockholder, (ii) the interested stockholder acquires 90% of the outstanding voting stock of the Company at the time he becomes an interested stockholder or (iii) the business combination is approved by both the Company's board of directors and two-thirds of the outstanding voting stock of the Company (excluding shares held by the interested stockholder) at an annual or special meeting of stockholders, and not by written consent. The application of such provisions also could have the effect of delaying or preventing a change of control in the Company. The Board of Directors is divided into three "staggered" classes, with each class serving for a term of three years. Dividing the Board of Directors in this manner increases the difficulty of removing incumbent members and could discourage a proxy contest or the acquisition of a substantial block of the Company's Common Stock. See "Description of Capital Stock -- Certain Articles of Organization, Bylaws and Statutory Provisions Affecting Stockholders" and "Management."

IMMEDIATE AND SUBSTANTIAL DILUTION. Purchasers of Common Stock in the Offering will experience an immediate and substantial dilution in the net tangible book value of the Common Stock of \$7.20 per share based upon an assumed initial public offering price of \$13.00, the mid-point of the filing range. To the extent outstanding options to purchase shares of the Company's Common Stock are exercised, there will be further dilution. See "Dilution."

NO PRESENT INTENTION TO PAY DIVIDENDS; RESTRICTION ON PAYMENT OF DIVIDENDS. The Company has never declared or paid cash dividends on its Common Stock and intends to retain any earnings for future growth. The Company therefore does not anticipate that any cash dividends will be declared or paid in the foreseeable future. In addition, the Company's credit facility limits the payment of cash dividends without the consent of the lender to fifty percent of the Company's year-to-date net income during any fiscal year. See "Dividend Policy."

USE OF PROCEEDS

The net proceeds to the Company from the sale of the 2,000,000 shares of Common Stock offered by the Company hereby are estimated to be \$23,430,000, assuming an initial public offering price of \$13.00 per share, the mid-point of the filing range, and after deducting the underwriting discounts and commissions and estimated offering expenses. The Company intends to use a portion of the net proceeds of the Offering to fund construction of an additional 91,000 square feet of office space on vacant land adjacent to its headquarters. The Company used internally generated funds to acquire this parcel in November 1997. The Company anticipates that construction and development of the additional office space will cost approximately \$9.0 million, that it will break ground in April 1998 and that it will complete construction in approximately 12 months after construction begins. Once the new office space is completed, the Company plans to transfer the building and the underlying real estate to an unaffiliated third party pursuant to a sale and leaseback transaction. No assurance can be made that the cost of construction and development will not exceed such estimate, or that the Company will be able to consummate a sale and leaseback transaction with respect to such property. Mercury intends to use the balance of the net proceeds for working capital and general corporate purposes. In addition, the Company may use a portion of the net proceeds of this Offering for acquisitions of complementary businesses, technologies or products, although there are currently no commitments or agreements with respect to any material acquisition. Pending such uses, the Company intends to invest the net proceeds in short term, investment grade, interest-bearing securities. The Company will not receive any proceeds from the sale of shares of Common Stock by the Selling Stockholders. See "Business -- Facilities" and "Principal and Selling Stockholders."

DIVIDEND POLICY

The Company has never declared or paid cash dividends on shares of its Common Stock and does not expect to declare or pay cash dividends on its Common Stock in the foreseeable future. The Company currently intends to retain any earnings for future growth. In addition, the Company's credit facility limits the payment of cash dividends without the consent of its lender to fifty percent of the Company's year-to-date net income in any fiscal year. See "Risk Factors -- No Present Intention to Pay Dividends; Restriction on Payment of Dividends," "Management's Discussion and Analysis of Financial Condition and Results of Operations -- Liquidity and Capital Resources," and Note E of Notes to Consolidated Financial Statements.

CAPITALIZATION

The following table sets forth as of September 30, 1997: (i) the actual capitalization of the Company, (ii) the pro forma capitalization of the Company reflecting the conversion of all outstanding shares of Series A Convertible Preferred Stock into 2,556,792 shares of Common Stock and (iii) the pro forma capitalization of the Company as adjusted to give effect to the sale of the 2,000,000 shares of Common Stock offered by the Company hereby at the assumed initial public offering price of \$13.00 per share, after deducting the underwriting discounts and commissions and estimated offering expenses.

	SEPTEMBER 30, 1997		
	ACTUAL	PRO FORMA	AS ADJUSTED
	(IN THOUSANDS)		
Stockholders' equity:			
Preferred Stock, \$.01 par value; 2,000,000 shares authorized actual, 1,000,000 shares authorized pro forma and as adjusted; 1,000,000 shares designated Series A Convertible Preferred Stock actual, no shares designated pro forma and as adjusted; 852,264 shares of Series A Convertible Preferred Stock issued and outstanding actual, no shares issued or outstanding pro forma and as adjusted.....	\$ 1,200	--	--
Common Stock, \$.01 par value; 25,000,000 shares authorized; 5,269,181 shares issued and outstanding actual, 7,825,973 shares issued and outstanding pro forma and 9,825,973 shares issued and outstanding as adjusted(1).....	53	\$ 78	\$ 98
Additional paid-in capital.....	5,846	7,021	30,431
Retained earnings.....	28,358	28,358	28,358
Cumulative translation adjustment.....	(21)	(21)	(21)
Subscriptions and related parties notes receivable.....	(325)	(325)	(325)
Total stockholders' equity.....	35,111	35,111	58,541
Total capitalization.....	\$35,111	\$35,111	\$58,541
	=====	=====	=====

(1) Excludes 1,096,373 shares of Common Stock issuable upon exercise of outstanding stock options under the Company's stock option plans at October 31, 1997, with a weighted average exercise price of \$4.85 per share, of which 463,517 shares were exercisable as of such date at a weighted average exercise price of \$3.37 per share. See "Management -- Stock Option and Stock Purchase Plans."

DILUTION

Purchasers of the Common Stock offered hereby will experience an immediate and substantial dilution in the pro forma net tangible book value of the Common Stock from the assumed initial public offering price. The pro forma net tangible book value of the Company as of September 30, 1997 was \$36.3 million or \$4.37 per share. Pro forma net tangible book value per share is determined by dividing the net tangible book value of the Company (tangible assets less liabilities) by the pro forma number of shares of the Company's Common Stock outstanding and adjusting for stock options exercisable as of September 30, 1997. Without taking into account any changes in net tangible book value subsequent to September 30, 1997, other than to give effect to the receipt of the estimated net proceeds of the sale of the 2,000,000 shares of Common Stock offered hereby at an assumed initial public offering price of \$13.00 per share, the mid-point of the filing range, after deducting the underwriting discounts and commissions and estimated offering expenses, and the application of the estimated net proceeds therefrom, the pro forma net tangible book value of the Common Stock as of September 30, 1997 would have been \$59.7 million, or \$5.80 per share. This represents an immediate and substantial dilution in pro forma net tangible book value of \$7.20 per share to new investors purchasing shares in the Offering. The following table illustrates the per share dilution as of September 30, 1997:

Assumed initial public offering price.....		\$13.00
Pro forma net tangible book value at September 30, 1997.....	\$4.37	
Increase attributable to new investors.....	1.43	

Pro forma net tangible book value after the Offering.....		5.80

Dilution per share to new investors.....		\$ 7.20
		=====

The following table sets forth, on an as adjusted basis as of September 30, 1997, after giving effect to the conversion of all outstanding shares of Series A Convertible Preferred Stock into Common Stock, the differences between existing Stockholders and purchasers of Common Stock in the Offering at an assumed initial public offering price of \$13.00 per share, the mid-point of the filing range, and before the deduction of underwriting discounts and commissions and estimated offering expenses with respect to the number of shares of Common Stock purchased from the Company, the total consideration paid and the average price per share paid:

	SHARES PURCHASED		TOTAL CONSIDERATION		AVERAGE PRICE PER SHARE
	NUMBER	PERCENT	AMOUNT	PERCENT	
Existing stockholders(1)(2).....	7,825,973	79.6%	\$ 6,099,000	19.0%	\$ 0.78
New investors(1).....	2,000,000	20.4	26,000,000	81.0	13.00
	-----	-----	-----	-----	-----
Total.....	9,825,973	100.0%	\$32,099,000	100.0%	
	=====	=====	=====	=====	

(1) Does not reflect the sale of 1,500,000 shares of Common Stock by the Selling Stockholders in the Offering and does not include 1,102,124 shares of Common Stock issuable upon the exercise of outstanding stock options as of October 31, 1997. See "Management -- Stock Option and Stock Purchase Plans."

(2) The total consideration excludes a \$1,000,000 contingent liability associated with the Series B Convertible Preferred Stock which was reclassified to additional paid-in capital when the obligation expired during the fiscal year ended June 30, 1995. See Note G to Notes to Consolidated Financial Statements.

The foregoing tables assume no exercise of the Underwriters' over-allotment options or stock options outstanding at October 31, 1997. At October 31, 1997, there were 1,096,373 shares of Common Stock issuable upon exercise of outstanding stock options at a weighted average exercise price of \$4.85 per share. To the extent that outstanding options are exercised in the future, there will be further dilution to new investors. See "Management-Stock Option and Stock Purchase Plans" and Note G of Notes to Consolidated Financial Statements.

SELECTED CONSOLIDATED FINANCIAL DATA

The selected consolidated financial data set forth below as of and for the years ended June 30, 1995, 1996 and 1997 are derived from the consolidated financial statements of the Company included elsewhere in this Prospectus which have been audited by Coopers & Lybrand L.L.P., independent accountants. The selected consolidated financial data as of and for the years ended June 30, 1993 and 1994 are derived from financial statements of the Company, also audited by Coopers & Lybrand L.L.P., not included in this prospectus. The selected consolidated financial data as of and for the three months ended September 30, 1996 and September 30, 1997, are derived from unaudited financial statements that have been prepared on the same basis as the audited financial statements and which, in the opinion of management, include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the Company's financial position and results of operations. The financial data for the three months ended September 30, 1997, are not necessarily indicative of the results for the full year. The historical results are not necessarily indicative of the results of operations to be expected in the future. The following financial data is qualified in its entirety by, and should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and notes thereto included elsewhere in this Prospectus.

	FISCAL YEAR ENDED JUNE 30,					THREE MONTHS ENDED SEPTEMBER 30,	
	1993	1994	1995	1996	1997	1996	1997
	(IN THOUSANDS, EXCEPT PER SHARE DATA)						
STATEMENT OF OPERATIONS DATA:							
Revenues.....	\$38,632	\$41,727	\$54,323	\$58,300	\$64,574	\$13,038	\$19,039
Cost of revenues.....	11,972	16,285	21,221	24,688	22,034	4,538	6,661
Gross profit.....	26,660	25,442	33,102	33,612	42,540	8,500	12,378
Operating expenses:							
Selling, general and administrative.....	10,785	12,911	15,798	16,927	22,631	4,726	6,645
Research and development.....	5,619	7,254	8,586	9,776	12,837	2,405	3,381
Total operating expenses.....	16,404	20,165	24,384	26,703	35,468	7,131	10,026
Income from operations.....	10,256	5,277	8,718	6,909	7,072	1,369	2,352
Interest income.....	105	69	278	561	582	136	233
Interest expense.....	(199)	(14)	(38)	(13)	(22)	--	(2)
Other income (expense), net.....	(44)	(64)	22	(77)	(88)	(23)	83
Income before income taxes.....	10,118	5,268	8,980	7,380	7,544	1,482	2,666
Provision for income taxes.....	2,487	1,153	2,636	2,952	2,933	576	1,060
Net income.....	\$ 7,631	\$ 4,115	\$ 6,344	\$ 4,428	\$ 4,611	\$ 906	\$ 1,606
Net income per common share.....	\$ 1.02	\$ 0.50	\$ 0.77	\$ 0.54	\$ 0.57	\$ 0.11	\$ 0.20
Weighted average number of common and common equivalent shares outstanding.....	7,492	8,295	8,256	8,264	8,157	8,191	8,174

	JUNE 30,					SEPTEMBER 30,	
	1993	1994	1995	1996	1997	1997	
	(IN THOUSANDS)						
BALANCE SHEET DATA:							
Working capital.....	\$11,258	\$14,454	\$20,156	\$23,554	\$27,547	\$28,653	
Total assets.....	17,185	22,926	33,543	33,264	44,848	47,905	
Convertible preferred stock.....	1,200	1,200	1,200	1,200	1,200	1,200	
Total stockholders' equity.....	12,682	16,690	24,003	28,529	33,322	35,111	

(1) See Note B of Notes to Consolidated Financial Statements for an explanation of the determination of the weighted average common and common equivalent shares used to compute net income per common share.

(2) Gives effect to the conversion of all outstanding shares of the Company's Series A Convertible Preferred Stock into 2,556,792 shares of Common Stock upon completion of this Offering.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF
FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with "Selected Consolidated Financial Data" and the Company's Consolidated Financial Statements and Notes thereto included elsewhere in this Prospectus. Except for the historical information contained herein, the discussions in this Prospectus contain forward-looking statements that involve risks and uncertainties. The Company's actual results could differ materially from those discussed herein. Factors that could cause or contribute to such differences include, but are not limited to, those discussed below and in the section entitled "Risk Factors" as well as those discussed elsewhere in this Prospectus.

OVERVIEW

Mercury designs, manufactures and markets high performance, real-time digital signal processing computer systems that transform sensor generated data into information which can be displayed as images for human interpretation or subjected to additional computer analysis. These multicomputer systems are heterogeneous and scalable, allowing them to accommodate several microprocessor types and to scale from a few to hundreds of microprocessors within a single system.

During the past three fiscal years, the majority of the Company's revenues has been generated from sales of its products to the defense electronics market, generally for use in intelligence gathering electronic warfare systems. The Company's activities in this area have focused on the proof of concept, development and deployment of advanced military applications in radar, sonar and airborne surveillance. Medical diagnostic imaging is the other primary market currently served by the Company. Mercury's computer systems are embedded in MRI, CT and PET machines. The remaining component of revenues is derived from computer systems used in such commercial applications as baggage scanning, seismic analysis and automatic testing equipment, and from sales of Mercury's recently introduced SuiteFusion shared storage product and related products and services.

Mercury uses a direct sales force to sell its computer systems to the defense electronics markets in the U.S., Japan, the United Kingdom and France. Defense electronics sales to other countries are achieved through distributors. The Company also uses a direct sales force to sell its computer systems to the U.S. and international medical imaging markets. The Company uses various distribution channels for sales of shared storage products to the broadcast and post-production industry. The Company sells these products to OEMs, value added re-sellers and end-users. Over the past three fiscal years, the Company has expanded its sales force to support growing revenues and has made significant expenditures to recruit additional technical and professional staff, to invest in information technology and to improve the Company's financial, administrative and management infrastructure.

Revenues include amounts attributable to both products, which include development contracts, and services such as maintenance, training and engineering consulting. Revenues from maintenance, training and engineering consulting services generally have not constituted a material portion of total revenues. The Company generally records product revenues upon shipment to the customer, provided that no significant vendor obligation exists, and accrues for associated warranty costs at the same time. For certain development contracts, revenues are recognized using the percentage-of-completion accounting method. Revenues from maintenance, training and engineering consulting services are recognized ratably over the applicable contract period or as the services are performed.

Cost of revenues includes the cost of materials, component assembly, internal labor and related overhead. Cost of revenues also can include engineering and other technical labor and related overhead incurred in development and engineering consulting contracts.

Gross profit as a percentage of revenues ("gross margin") varies from period to period depending upon numerous variables including the mix of revenues from hardware, software, development and engineering consulting contracts; the mix of revenues among the markets served by the Company; the cost of raw materials; the cost of outsourced services and labor costs; operational efficiencies; actual production volume

compared to planned volume; and the mix of applications for which the Company's computer systems are sold. Historically, the Company's gross margins on service revenues have been lower than on product revenues. In addition, the Company's gross margins from development contract revenues are typically lower than the Company's gross margins from standard product revenues. The Company intends to continue to enter into development contracts and anticipates that the gross margins associated with development contract revenues will continue to be lower than its gross margins on standard product revenues.

Mercury has made significant investments in research and development in an effort to maintain its technology leadership in digital signal processing and to create new software products for the shared storage market. Mercury invested \$8.6 million, \$9.8 million and \$12.8 million in fiscal years 1995, 1996 and 1997, respectively, in development activities associated with the Company's key technology competencies as well as in activities that are targeted at developing new technologies and products. The Company expects research and development expenses to continue to increase as the Company continues to develop products to serve its markets, all of which are subject to rapidly changing technology, frequent product performance improvements and evolving industry standards. The ability to deliver superior technological performance on a timely and cost effective basis is a critical factor in securing design wins for future generations of defense electronics and medical imaging systems. Significant research and development spending by the Company does not ensure that the Company's computer systems will be designed into a customer's system. Because future production orders are usually contingent upon securing a design win, the Company's operating results may fluctuate due to either obtaining or failing to obtain design wins for significant customer systems.

On December 12, 1997, the IRS concluded an audit of the Company's tax returns for the years ended June 30, 1992 through June 30, 1995, and issued a formal report reflecting proposed adjustments with respect to the years under audit. The proposed IRS adjustments primarily relate to the disallowance of research and experimental tax credits claimed by the Company, as well as the treatment of certain other items. The total deficiency attributable to the proposed adjustments is \$4.2 million, including penalties and interest of \$1.6 million through the date of the report. The Company is in the process of responding to this report by appealing the proposed adjustments to the Appeals Division of the IRS. While the Company does not believe that the final outcome of the IRS audit will have a material adverse effect on the Company's financial condition or results of operations, no assurance can be given as to the final outcome of the audit, the amount of any final adjustments or the potential impact of such adjustments on the Company's financial condition or results of operations.

RESULTS OF OPERATIONS

The following table sets forth, for the periods indicated, certain financial data as a percentage of total revenues.

	YEAR ENDED JUNE 30,			THREE MONTHS ENDED SEPTEMBER 30,	
	1995	1996	1997	1996	1997
Revenues.....	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenues.....	39.1	42.3	34.1	34.8	35.0
Gross profit.....	60.9	57.7	65.9	65.2	65.0
Operating expenses:					
Selling, general and administrative.....	29.1	29.0	35.0	36.3	34.8
Research and development.....	15.8	16.8	19.9	18.4	17.8
Total operating expenses.....	44.9	45.8	54.9	54.7	52.6
Income from operations.....	16.0	11.9	11.0	10.5	12.4
Other income (expense), net.....	0.5	0.8	0.7	0.9	1.6
Income before income taxes.....	16.5	12.7	11.7	11.4	14.0
Provision for income taxes.....	4.8	5.1	4.6	4.5	5.6
Net income.....	11.7%	7.6%	7.1%	6.9%	8.4%

Three Months Ended September 30, 1997 Compared to Three Months Ended September 30, 1996

Revenues

Total revenues increased 46% from \$13.0 million during the three months ended September 30, 1996 to \$19.0 million during the three months ended September 30, 1997. Revenues from defense electronics, medical imaging and other commercial markets increased, as described below.

Defense electronics revenues increased 37% from \$11.0 million or 84.9% of total revenues during the three months ended September 30, 1996 to \$15.1 million or 79.6% of total revenues during the three months ended September 30, 1997. The increase in revenues was due primarily to increased unit demand for defense electronics products.

Medical imaging revenues increased 58% from \$1.4 million or 10.8% of total revenues during the three months ended September 30, 1996 to \$2.2 million or 11.7% of total revenues during the three months ended September 30, 1997. The increase in revenues was due primarily to the doubling of sales to the largest medical imaging customer.

Other revenues increased 190% from \$569,000 or 4.4% of total revenues during the three months ended September 30, 1996 to \$1.7 million or 8.7% of total revenues during the three months ended September 30, 1997. This increase in other revenues was due primarily to an increase in unit demand from new and existing customers.

Cost of Revenues

Cost of revenues increased 47% from \$4.5 million during the three months ended September 30, 1996 to \$6.7 million during the three months ended September 30, 1997 but was consistent as a percentage of total revenues at approximately 35.0%. A decline in material costs was offset by increases in manufacturing quality costs and costs related to development contracts.

Selling, General and Administrative

Selling, general and administrative expenses increased 41% from \$4.7 million during the three months ended September 30, 1996 to \$6.6 million during the three months ended September 30, 1997. Selling, general and administrative expenses as a percentage of total revenues were 36.3% during the three months ended September 30, 1996 and 34.8% during the three months ended September 30, 1997. The increase reflects the hiring of additional sales and administrative personnel, increased commissions and the development of the Company's financial, administrative and management systems to support the Company's growth.

Research and Development

Research and development expenses, excluding capitalized software expenditures, increased 41% from \$2.4 million during the three months ended September 30, 1996 to \$3.4 million during the three months ended September 30, 1997. Research and development expenses as a percentage of total revenues were 18.4% during the three months ended September 30, 1996 and 17.8% during the three months ended September 30, 1997. The increase in research and development expenses reflects increased investments in the Company's core technological competencies, as well as in new medical and shared storage technologies and products.

Income from Operations

Income from operations increased 72% from \$1.4 million during the three months ended September 30, 1996 to \$2.4 million during the three months ended September 30, 1997. Included in income from operations during the three months ended September 30, 1997 were \$38,000 in revenues and approximately \$700,000 in direct expenses related to the shared storage business. These include direct expenses from marketing and engineering activities primarily related to compensation, trade shows and prototype development. There were no revenues or expenses related to the shared storage business during the three months ended September 30, 1996.

Interest Income

The Company earned \$136,000 in interest income during the three months ended September 30, 1996 and \$233,000 during the three months ended September 30, 1997. The increase was due primarily to the significant increase in average balances of cash and investments.

Provision for Income Taxes

The Company's provision for income taxes was \$576,000 during the three months ended September 30, 1996 and \$1.1 million during the three months ended September 30, 1997. The Company's effective tax rate increased slightly from 39% during the three months ended September 30, 1996 to 40% during the three months ended September 30, 1997.

Year Ended June 30, 1997 Compared to Year Ended June 30, 1996

Revenues

Total revenues increased 11% from \$58.3 million during the year ended June 30, 1996 to \$64.6 million during the year ended June 30, 1997. The increase was due primarily to increased unit demand in the defense electronics business and the introduction of shared storage hardware and software during the year ended June 30, 1997.

Defense electronics revenues increased 25% from \$41.8 million or 71.7% of total revenues during the year ended June 30, 1996 to \$52.2 million or 80.9% of total revenues during the year ended June 30, 1997. The increase was due primarily to increased unit demand for defense electronics products.

Medical imaging revenues decreased 48% from \$13.3 million or 22.7% of total revenues during the year ended June 30, 1996 to \$6.9 million or 10.7% of total revenues during the year ended June 30, 1997. The decrease in revenues was due primarily to a reduction in product prices, discontinuation of certain products by one customer and the acceleration of purchasing at the end of the year ended June 30, 1996 by two of the Company's medical imaging customers.

Other revenues increased 67% from \$3.2 million or 5.6% of total revenues during the year ended June 30, 1996 to \$5.4 million or 8.4% of total revenues during the year ended June 30, 1997. The increase in revenues was due primarily to the introduction of shared storage hardware and software during the year ended June 30, 1997.

Cost of Revenues

Cost of revenues declined 11% from \$24.7 million during the year ended June 30, 1996 to \$22.0 million during the year ended June 30, 1997. Cost of revenues as a percentage of total revenues decreased from 42.3% during the year ended June 30, 1996 to 34.1% during the year ended June 30, 1997. This decrease was due primarily to the inclusion in the year ended June 30, 1996, of a domestic defense electronics development contract which yielded significantly lower gross margins than the gross margins historically achieved by the Company.

Selling, General and Administrative

Selling, general and administrative expenses increased 34% from \$16.9 million during the year ended June 30, 1996 to \$22.6 million during the year ended June 30, 1997. Selling, general and administrative expenses as a percentage of total revenues were 29.0% during the year ended June 30, 1996 and 35.0% during the year ended June 30, 1997. The increase reflects the hiring of additional sales and administrative personnel, increased commissions and the development of the Company's financial and administrative systems to support the Company's growth.

Research and Development

Research and development expenses, excluding capitalized software expenditures, increased 31% from \$9.8 million during the year ended June 30, 1996 to \$12.8 million during the year ended June 30, 1997. Research and development expenses as a percentage of total revenues were 16.8% during the year ended

June 30, 1996 and 19.9% during the year ended June 30, 1997. The increase reflects greater investment in the Company's core competencies, as well as in new medical and shared storage technologies and products.

Income from Operations

Income from operations increased 2% from \$6.9 million during the year ended June 30, 1996 to \$7.1 million during the year ended June 30, 1997. Included in income from operations during the year ended June 30, 1997 were \$2.1 million in hardware and software revenues and \$3.6 million in direct expenses related to the shared storage business. These include direct expenses from marketing and engineering activities, primarily related to compensation, trade shows and prototype development and direct costs related to the sale of the product, including certain hardware costs. There were no revenues or expenses related to the shared storage business during the year ended June 30, 1996.

Interest Income

The Company earned \$561,000 in interest income during the year ended June 30, 1996 and \$582,000 during the year ended June 30, 1997. This increase in interest income was due to the increase in average balances of cash and investments, partially offset by a decrease in average interest rates.

Provision for Income Taxes

The Company's provision for income taxes was \$3.0 million during the year ended June 30, 1996 and \$2.9 million during the year ended June 30, 1997. The Company's effective tax rate was 40% during the year ended June 30, 1996 and 39% during the year ended June 30, 1997.

Year Ended June 30, 1996 Compared to Year Ended June 30, 1995

Revenues

Total revenues increased 7% from \$54.3 million during the year ended June 30, 1995 to \$58.3 million during the year ended June 30, 1996. The increase in revenues was due primarily to the increase in unit demand for both the defense electronics and medical imaging products.

Defense electronics revenues increased 2% from \$40.9 million or 75.3% of total revenues during the year ended June 30, 1995 to \$41.8 million or 71.7% of total revenues during the year ended June 30, 1996. The relatively modest increase in defense electronics revenues was due primarily to a large international contract fulfilled in 1995.

Medical imaging revenues increased 41% from \$9.4 million or 17.3% of total revenues during the year ended June 30, 1995 to \$13.3 million or 22.7% of total revenues during the year ended June 30, 1996. The increase was primarily due to the acceleration of purchasing at the end of the year ended June 30, 1996 by two of the Company's medical imaging customers.

Other revenues decreased 20% from \$4.0 million or 7.4% of total revenues during the year ended June 30, 1995 to \$3.2 million or 5.6% of total revenues during the year ended June 30, 1996. The decrease was primarily due to lower demand associated with the Company's other commercial products and services.

Cost of Revenues

Cost of revenues increased 16% from \$21.2 million during the year ended June 30, 1995 to \$24.7 million during the year ended June 30, 1996. Cost of revenues as a percentage of total revenues, increased from 39.1% during the year ended June 30, 1995 to 42.3% during the year ended June 30, 1996. The increase was due primarily to the inclusion in the year ended June 30, 1996 of a domestic defense electronics development contract which yielded significantly lower gross margins than the gross margins historically achieved by the Company.

Selling, General and Administrative

Selling, general and administrative expenses increased 7% from \$15.8 million during the year ended June 30, 1995 to \$16.9 million during the year ended June 30, 1996. Selling, general and administrative expenses as a percentage of total revenues were 29.1% during the year ended June 30, 1995 and 29.0% during the year ended June 30, 1996. The increase was due primarily to the hiring of additional sales and administrative personnel to support the Company's growth.

Research and Development

Research and development expenses, excluding capitalized software expenditures, increased 14% from \$8.6 million during the year ended June 30, 1995 to \$9.8 million during the year ended June 30, 1996. Research and development expenses as a percentage of total revenues were 15.8% during the year ended June 30, 1995 and 16.8% during the year ended June 30, 1996. The increase was due primarily to the hiring of additional software and hardware engineers to develop and enhance the features and functionality of the Company's products.

Income from Operations

Income from operations decreased 21% from \$8.7 million during the year ended June 30, 1995 to \$6.9 million during the year ended June 30, 1996.

Interest Income

The Company earned \$278,000 in interest income during the year ended June 30, 1995 and \$561,000 during the year ended June 30, 1996. The increase was primarily due to the significant increase in average balances of cash and investments.

Provision for Income Taxes

The Company's provision for income taxes was \$2.6 million during the year ended June 30, 1995 and \$3.0 million during the year ended June 30, 1996. The Company's effective tax rate was 29% during the year ended June 30, 1995 and 40% during the year ended June 30, 1996. The significantly lower tax rate during the year ended June 30, 1995 was due primarily to the utilization of tax credits during that year.

QUARTERLY RESULTS OF OPERATIONS

The following table presents selected consolidated financial information for each of the Company's last nine fiscal quarters. However, in the opinion of the Company's management, this information reflects all adjustments, consisting only of normal recurring adjustments, necessary to fairly present this information when read in conjunction with the Consolidated Financial Statements and Notes thereto appearing elsewhere in this Prospectus.

	QUARTERS ENDED								
	SEPT. 30, 1995	DEC. 31, 1995	MAR. 31, 1996	JUNE 30, 1996	SEPT. 30, 1996	DEC. 31, 1996	MAR. 31, 1997	JUNE 30, 1997	SEPT. 30, 1997
	(IN THOUSANDS, EXCEPT PER SHARE DATA)								
Revenues.....	\$13,501	\$14,521	\$15,175	\$15,103	\$13,038	\$15,106	\$17,154	\$19,276	\$19,039
Cost of revenues.....	5,723	7,117	5,991	5,857	4,538	5,128	5,356	7,012	6,661
Gross profit.....	7,778	7,404	9,184	9,246	8,500	9,978	11,798	12,264	12,378
Operating expenses:									
Selling, general and administrative.....	3,776	4,249	4,191	4,711	4,726	5,577	5,737	6,591	6,645
Research and development...	2,143	2,352	2,473	2,808	2,405	3,420	3,759	3,253	3,381
Total operating expenses.....	5,919	6,601	6,664	7,519	7,131	8,997	9,496	9,844	10,026
Income from operations.....	1,859	803	2,520	1,727	1,369	981	2,302	2,420	2,352
Other income (expense), net.....	137	145	68	121	113	144	23	192	314
Income before income taxes.....	1,996	948	2,588	1,848	1,482	1,125	2,325	2,612	2,666
Provision for income taxes.....	798	379	1,035	740	576	437	904	1,016	1,060
Net income.....	\$ 1,198	\$ 569	\$ 1,553	\$ 1,108	\$ 906	\$ 688	\$ 1,421	\$ 1,596	\$ 1,606
Net income per common share.....	\$ 0.15	\$ 0.07	\$ 0.19	\$ 0.13	\$ 0.11	\$ 0.08	\$ 0.17	\$ 0.20	\$ 0.20
Weighted average number of common and common equivalent shares outstanding.....	8,257	8,261	8,263	8,266	8,191	8,140	8,148	8,162	8,174

The following table sets forth selected consolidated financial information as a percentage of total revenues for each of the Company's last nine fiscal quarters.

	QUARTERS ENDED								
	SEPT. 30, 1995	DEC. 31, 1995	MAR. 31, 1996	JUNE 30, 1996	SEPT. 30, 1996	DEC. 31, 1996	MAR. 31, 1997	JUNE 30, 1997	SEPT. 30, 1997
Revenues.....	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenues.....	42.4	49.0	39.5	38.8	34.8	33.9	31.2	36.4	35.0
Gross profit.....	57.6	51.0	60.5	61.2	65.2	66.1	68.8	63.6	65.0
Operating expenses:									
Selling, general and administrative.....	28.0	29.3	27.6	31.2	36.3	37.0	33.5	34.1	34.8
Research and development...	15.8	16.2	16.3	18.6	18.4	22.6	21.9	16.9	17.8
Total operating expenses.....	43.8	45.5	43.9	49.8	54.7	59.6	55.4	51.0	52.6
Income from operations.....	13.8	5.5	16.6	11.4	10.5	6.5	13.4	12.6	12.4
Other income (expense), net.....	1.0	1.0	0.4	0.8	0.9	0.9	0.2	1.0	1.6
Income before income taxes.....	14.8	6.5	17.0	12.2	11.4	7.4	13.6	13.6	14.0
Provision for income taxes.....	5.9	2.6	6.8	4.9	4.5	2.8	5.3	5.3	5.6
Net income.....	8.9%	3.9%	10.2%	7.3%	6.9%	4.6%	8.3%	8.3%	8.4%

The Company has experienced fluctuations in its results of operations in large part due to the sale by the Company of its computer systems in relatively large dollar amounts to a relatively small number of customers. Operating results also have fluctuated due to competitive pricing programs and volume discounts, the loss of customers, market acceptance of the Company's products, product obsolescence and general economic conditions. In addition, the Company,

from time to time, has entered into development contracts. The Company's gross margins from development contract revenues are typically lower than the Company's gross margins from standard product revenues. The Company intends to continue to enter into development

contracts and anticipates that its gross margins associated with development contract revenues will continue to be lower than its gross margins on standard product revenues.

The Company's quarterly results may be subject to fluctuations resulting from the foregoing factors, as well as a number of other factors, including the timing of significant orders, delays in completion of internal product development projects, delays in shipping the Company's computer systems and software programs, delays in acceptance testing by customers, a change in the mix of products sold to the defense electronics and medical imaging markets, production delays due to quality problems with outsourced components, shortages of components, the timing of product line transitions and declines in quarterly revenues from old generations of products following announcement of replacement products containing more advanced technology. Another factor contributing to fluctuations in quarterly results is the fixed nature of the Company's expenditures on personnel, facilities and marketing programs. The Company's expense levels for personnel, facilities and marketing programs are based, in significant part, on the Company's expectations of future revenues on a quarterly basis. If actual quarterly revenues are below management's expectations, results of operations likely will be adversely affected. As a result of the foregoing factors, the Company's operating results, from time to time, may be below the expectations of public market analysts and investors, which could have a material adverse effect on the price of the Company's Common Stock.

LIQUIDITY AND CAPITAL RESOURCES

During the past five fiscal years, the Company has funded its operations to date primarily from cash generated from operations. As of September 30, 1997, the Company had cash and cash equivalents of approximately \$16.0 million and working capital of \$28.7 million. During the three months ended September 30, 1996, the Company generated approximately \$843,000 in cash from operations compared to \$2.0 million generated during the three months ended September 30, 1997. During the year ended June 30, 1996, the Company generated approximately \$4.3 million in cash from operations compared to \$9.2 million generated during the year ended June 30, 1997. The increases in cash generated from operations were due to improved operating results, higher percentage of non-cash expenses within total expenses and better management of the Company's inventory and receivables. The Company's days sales outstanding was 71 days and 58 days at June 30, 1997 and September 30, 1997, respectively.

The Company has a line of credit agreement with a commercial bank on which the Company can borrow up to \$6.0 million at an interest rate equal to the prime rate or, at the election of the Company, two and one quarter percentage points above the London InterBank Offered Rate. As of September 30, 1997, there was no outstanding borrowing on this line of credit.

The Company used approximately \$1.4 million in investing activities for computers, furniture and equipment during the three months ended September 30, 1997, compared to \$567,000 during the three months ended September 30, 1996. During the year ended June 30, 1997, the Company invested approximately \$4.0 million, which consisted primarily of \$3.5 million for the investment in computers, furniture and equipment and \$550,000 for capitalized software, compared to \$3.3 million during the year ended June 30, 1996, which consisted of \$2.9 million for computers, furniture and equipment and \$371,000 for capitalized software. No software development costs were capitalized during the three months ended September 30, 1997.

The Company intends to use a portion of the net proceeds of the Offering to fund construction of additional 91,000 square feet of office space on vacant land adjacent to its headquarters. The Company used internally generated funds to acquire this parcel in November, 1997. The Company anticipates that construction and development of the additional office space will cost approximately \$9.0 million, that it will break ground in April 1998 and that it will complete construction and development in approximately 12 months after construction begins. Once the new office space is completed, the Company plans to transfer this parcel to an unaffiliated third party pursuant to a sale leaseback transaction. No assurances can be made that the cost of construction will not exceed such estimate, or that the Company will be able to consummate a sale and leaseback transaction with respect to such property. The Company does not expect to realize a profit or loss from sale of the finished building. See "Use of Proceeds" and "Business -- Facilities."

Mercury believes that the net proceeds of the Offering, together with available cash, cash generated from operations and the Company's line of credit, will be sufficient to provide for the Company's working capital and capital expenditure requirements for the foreseeable future and any final adjustments resulting from the

IRS audit described above. If the Company acquires one or more businesses or products, the Company's capital requirements could increase substantially. In the event of such an acquisition or in the event that any unanticipated circumstances arise which significantly increase the Company's capital requirements, there can be no assurance that necessary additional capital will be available on terms acceptable to the Company, if at all.

RECENT ACCOUNTING PRONOUNCEMENTS

See Notes B and G to the Company's Consolidated Financial Statements for a description of the impact on the Company of recent accounting pronouncements.

BUSINESS

OVERVIEW

Mercury designs, manufactures and markets high performance, real-time digital signal processing computer systems that transform sensor generated data into information which can be displayed as images for human interpretation or subjected to additional computer analysis. These multicomputer systems are heterogeneous and scalable, allowing them to accommodate several different microprocessor types and to scale from a few to hundreds of microprocessors within a single system. Mercury's system architecture is specifically designed for digital signal processing applications which are typically computation intensive and require I/O capacity and interprocessor bandwidth not available on a general purpose PC or workstation. The two primary markets for Mercury's products are defense electronics and medical diagnostic imaging. Both of these markets have computing needs which benefit from the unique system architecture developed by the Company. Mercury's computer systems are generally used on real world signal data to enable a military commander to "see" the battle space through natural barriers such as clouds, darkness, water or foliage, so that the position and strength of the enemy can be determined, or to enable a physician to "see" within the body instead of performing invasive surgery.

During the past three fiscal years, the majority of the Company's revenues have been generated from sales of its products to the defense electronics market, generally for use in intelligence gathering electronic warfare systems. The Company's activities in this area have focused on the proof of concept, development and deployment of advanced military applications in radar, sonar and airborne surveillance. The Company has established relationships with many of the major prime contractors to the worldwide defense industry, including Lockheed Martin, Hughes Aircraft, Raytheon/E-Systems, Raytheon/TI Systems, Northrop Grumman, MIT/Lincoln Laboratory, GEC Marconi, Ericsson, MATRA, Mitsubishi and a prime contractor owned by the Israeli Ministry of Defense.

Medical diagnostic imaging is the other primary market currently served by the Company. Mercury's computer systems are embedded in MRI, CT and PET machines. Mercury has supplied computer systems for use in several of GE Medical's medical diagnostic imaging systems since 1987, and has established relationships with Siemens Medical, Toshiba and Elscint. The major medical imaging manufacturers are currently developing the next generation of MRI, CT and digital x-ray machines, which are expected to provide better performance at lower cost. Mercury has recently secured design wins on programs with certain of the major medical imaging manufacturers for their next generation MRI, CT and digital x-ray machines.

Mercury's computer systems are designed to process continuous streams of data from sensors attached to radar, sonar, medical imaging equipment and other devices. The resulting image is transmitted to the battlefield commander, pilot, technician or physician in order to assist in the decision making or diagnostic process. Due to the nature of the applications in which many of Mercury's computer systems are embedded, they are frequently confined in limited spaces and therefore are designed to generate a minimum amount of heat. The Company employs the RACEway Interconnect, an industry standard system area network developed by Mercury, which allows for high interprocessor bandwidth and I/O capacity. The Company uses its proprietary ASICs to integrate microprocessors, memory and related components into the RACEway Interconnect to provide optimum system performance. The Company uses industry standard processors, such as Intel's i860, Motorola's PowerPC, Texas Instruments' C80 and Analog Devices' SHARC, in the same system. The Company believes that the RACEway Interconnect and its proprietary ASICs, working together with a group of mixed microprocessors in the same system, allow the most efficient use of space and power with an optimal price/performance ratio.

Since July 1996, Mercury has targeted the emerging shared storage market for introduction of a new product which draws on the Company's core competencies in systems engineering and the development of real-time software. In fiscal 1997, Mercury introduced SuiteFusion, its first shared storage product designed to meet the needs of the broadcast and post-production industry. SuiteFusion is an open, scalable software application that allows work groups to share commodity, fibre channel attached disk arrays, eliminating the need for an expensive, intermediate file server. Early end-users include Turner Broadcasting's CNN

Interactive, Nickelodeon's Blue's Clues television show and Hughes Aircraft (through a subsidiary) for use at the U.S. Army National Training Center. The Company believes that the shared storage market includes a number of distinct applications, such as digital video editing, electronic computer aided design, webcasting, cable advertising insertion and pre-press.

INDUSTRY BACKGROUND

Defense Electronics

Digital signal processing computer systems are embedded into air, sea and land-based platforms for processing radar, sonar and signal intelligence applications. These applications allow a military commander to "see" the battle space through natural barriers such as clouds, darkness, water or foliage, so that the position and strength of the enemy can be determined. The Electronic Industry Association (the "EIA") in its October 1997 annual forecast of the defense electronics market predicted an increase in military electronics purchases over the next ten years, while predicting a decline in total defense spending over the same period. The EIA also predicted that, beginning in 1998, United States military spending on electronics and information systems will increase by \$7.4 billion from \$51.5 billion to \$58.9 billion over the next ten years. The Company believes that an important factor underlying this anticipated growth is a continuing desire by military commanders for increased battle space information, which can be obtained through radar, sonar, signal intelligence and image intelligence systems. Military commanders also need more powerful computers with similar attributes in order to conduct battle simulations and mission planning tasks utilizing today's complex weapons systems.

Another important trend in the defense electronics marketplace is the movement away from so-called "stove pipe" systems designed by prime contractors with special purpose hardware specifically for a single application, largely without regard to cost. The market is moving toward the use of systems which incorporate selected COTS hardware and software components in order to save money and development time. Recent Department of Defense ("DoD") leaders and federal regulations have mandated widespread use of COTS components in defense electronics applications. All of Mercury's computer systems are eligible for use in defense electronics applications as COTS components.

Medical Imaging

The principal modalities of medical diagnostic imaging systems include MRI, CT, digital x-ray, PET, SPECT (single photon emission computed tomography) and ultrasound devices. The Company believes that the available market in 1998 for digital signal processing computer systems in the aggregate for the MRI, CT and digital x-ray markets is expected to be an aggregate of approximately \$123.0 million. Although demand for medical imaging equipment has been sluggish in recent years due primarily to cost containment pressures and consolidation in the health care industry, the Company believes that demand for medical diagnostic imaging equipment will increase modestly over the next three years. The Company believes that this increase will be primarily due to the introduction of next generation devices, together with the anticipated future development by the major medical imaging manufacturers of new markets for their diagnostic equipment in countries located in Asia, South America and Eastern Europe. The Company believes medical imaging equipment manufacturers will continue to replace in-house designed digital signal processing systems with commercially available systems designed by the Company and others.

This industry's demand is driven in part by the need to provide physicians with rapid, sharp and clear images of areas of a patient's body suspected to be diseased or injured, while using the least intrusive means. These images provide a significant diagnostic tool for the physician, who can more readily understand the patient's malady and prescribe appropriate corrective action. In order to provide such images, medical imaging machines must be capable of processing a continuous stream of data on a real-time basis. A parallel concern in the health care industry is the need to reduce costs. Hospitals, in particular, continue to be under significant pressure to contain costs and, at the same time, maintain quality of care. Such pressures are forcing hospitals to be as technologically efficient as possible. Toward this end, hospitals seek to reduce the required period of time a patient must spend in its medical imaging machines, which has the added benefit of increasing the total number of patients who can be diagnosed with this expensive equipment during a given period of time. One

way to reduce patient time in medical imaging machines and improve image quality is to utilize more powerful signal processing computers, such as those supplied by Mercury.

STRATEGY

Mercury's objective is to be the leader in each of its markets by developing and delivering architecturally superior systems, developing and maintaining close working relationships with its customers, adopting and deploying total quality management and extending key technology competencies to new markets where Mercury can provide solutions based on its core competencies.

Develop and Deliver Architecturally Superior Systems. Mercury intends to continue to develop architecturally superior systems comprised of both hardware and software commercially available off-the-shelf components, which minimize recurring and non-recurring costs, as well as proprietary components, which enable production of standards-based, highly scalable systems. The Company's growth and leadership in its primary markets has been due in part to investments in a sustainable architecture that can rapidly evolve to take advantage of the latest developments in semiconductor technology. Rapid evolution is accomplished by defining a set of building blocks that can evolve separately. In this way the architecture can be refreshed by upgrading one hardware and/or software building block (such as a new microprocessor) with only minimal effect, if any, to the other building blocks.

Develop and Maintain Close Working Relationships with Customers. By developing close working relationships with its customers, the Company intends to continue to identify and pursue new product opportunities. To fulfill these opportunities, the Company frequently develops variations of its standard products pursuant to contracts with particular customers in order to satisfy the customers' needs on a cost effective basis.

Adopt and Deploy Total Quality Management. The Company is deploying Total Quality Management ("TQM") as an overarching managerial approach to improve and enhance business processes within the Company. An integral part of TQM is increasing the Company's ability to discover and understand customers' unique needs in the context of their environments and to set benchmarked performance targets for each customer. By implementing TQM, the Company expects to be able to enhance its development process and deliver better value by responding to customer specific needs. When fully deployed, the Company believes that TQM will significantly enhance its business processes and competitiveness.

Extend Key Technology Competencies to New Markets. The Company is constantly seeking new markets where solutions can be provided based on its core competencies. The Company's entry into the shared storage market evolved from Mercury's work in real time operating systems, and its systems engineering skill set in solving bandwidth limitations for applications requiring extremely high data throughput. The Company initially targeted its new software product, SuiteFusion, to meet the shared storage needs of the broadcast and post-production industry. Mercury is currently evaluating other opportunities in the shared storage market, such as electronic computer aided design, webcasting, cable advertising insertion and pre-press.

MARKETS AND CUSTOMERS

Defense Electronics

Mercury provides high performance embedded computer systems as standard products to the defense electronics market by using commercial and selected rugged components and by working closely with defense contractors to complete a design which matches the specified requirements of military applications. The Company engages in frequent, detailed communication with the end-users of Mercury's systems, military executives and program managers in government and defense contractors regarding the technical capabilities of Mercury's advanced signal processing computers and the successful incorporation of its computers in numerous military programs.

The chart set forth below lists certain of Mercury's customers in the defense electronics industry, including government contractors and government research laboratories and the type of applications for which Mercury believes its customers are using its products.

 SELECTED DEFENSE CUSTOMERS AND APPLICATIONS

CUSTOMER	LOCATION	APPLICATION
U.S. BASED PRIME CONTRACTORS AND GOVERNMENT LABS		
HUGHES		
- Hughes Danbury Optical.....	CA & MA	Electro-Optics, Infrared
- Missile Systems Co.....	AZ	Radar, Simulation
- Sensor & Communication Systems.....	CA	Radar, Electro-Optics, Infrared
LOCKHEED MARTIN		
- Advanced Development Co.....	CA	Mission Planning
- Electronic & Missile Co.....	FL	Infrared, Electro-Optics, Radar
- Federal Systems, Manassas.....	VA	Sonar
- Government Electronic Systems...	NJ	Radar
- Missiles & Space.....	CA	Image Intelligence
- Ocean Radar & Sonar.....	NY	Radar, Sonar
- Sanders.....	NH	Electronic Warfare, Signal Intelligence
- Tactical Defense Systems.....	AZ	Radar
NORTHROP GRUMMAN		
- ESID.....	NY	Radar
- ESSD.....	MD	Radar
- Melbourne.....	FL	Radar
- Norden Systems.....	NY & CT	Radar, Sonar
RAYTHEON		
- Electronic Systems.....	MA & RI	Radar, Sonar, Infrared
- E-Systems.....	TX	Signal Intelligence, Ground Stations
- TI Systems.....	TX	Radar, Electro-Optics
GOVERNMENT LABS		
- Air Force Defense Lab.....	NY	Radar
- Army Research Lab.....	MD	Ground Penetrating Radar
- MIT/Lincoln Labs.....	MA	Radar
- National Severe Storms Labs.....	OK	Weather Radar
- Naval Research Labs.....	DC	Radar, Sonar
- Naval Undersea Warfare Command.....	RI & WA	Sonar
- Sandia Labs.....	NM	Radar
INTERNATIONAL AGENCIES AND PRIME CONTRACTORS		
Chun San Institute.....	Taiwan	Radar
Department of National Defense...	Canada	Radar, Sonar
Elbit.....	Israel	Radar, Sonar
Ericsson.....	Sweden	Radar
FOA.....	Sweden	Foliage Penetrating Radar
GEC Marconi.....	U.K.	Radar
Israeli Ministry of Defense.....	Israel	SAR
MATRA.....	France	Radar, Sonar
Mitsubishi Heavy Industries.....	Japan	Radar, Simulation
Nippon Avionics.....	Japan	Radar
Thomson SINTRA.....	France	Sonar
TNO -- Physics and Electronics Laboratory.....	Netherlands	Acoustic Signal Processing

Mercury's computer systems have been or are being integrated into various programs in the defense electronics market. For example, Mercury is under contract to supply, or has supplied, computer systems to the following contractors:

- Northrop Grumman for use in the tactical endurance synthetic aperture radar ("SAR") systems aboard the Predator, a medium-altitude unmanned aerial vehicle ("UAV") which has been deployed in Bosnia.
- Northrop Grumman for the SAR systems on board the Dark Star high altitude UAV, which is currently under development.
- Hughes Aircraft for the SAR systems on the Global Hawk high altitude endurance UAV, which is currently under development.
- Raytheon/E-Systems for the delivery of computer systems (including development systems) for use in an electronic signal intelligence application on board the RC-135 aircraft as part of an upgrade program.
- Raytheon/TI Systems for the delivery of computer systems (including development systems) for use in the SAR on board the P3 Orion anti-submarine surveillance aircraft as part of an upgrade program.
- Lockheed Martin, the U.S. Army Research Laboratory and FOA, the Swedish defense research institute, for proof of concept in foliage and/or ground penetrating radars.
- Lockheed Martin for use in the development, integration and testing of the sonar subsystem for the New Attack Submarine and Atlantic Aerospace Electronics Corporation for the combat sonar system used in the Los Angeles Class submarine, which are currently under development.
- Northrop Grumman/ESSD and MIT/Lincoln Laboratory for use in developing algorithms for space time adaptive processing, a type of advanced radar system. The prototype computer system for this application uses approximately 1,000 microprocessors, and Mercury believes it is the most powerful commercial real-time embedded computer ever built, with peak performance in excess of 100 gigaflops.
- Ericsson for the use of Mercury's standard commercial processors in radar systems on board surveillance aircraft and to build MILSPEC versions for the radar system on the SAAB Gripen fighter aircraft.

Mercury employs industry specialist managers to monitor the defense programs of each major branch of the United States armed services and additional managers based in Europe and Japan to keep abreast of developments in their respective regions. This approach provides relevant information to Mercury regarding major military procurements worldwide. Mercury maintains sales and technical support groups to service defense industry participants in six branch offices in the United States, and through Mercury's subsidiary offices or distributors in 12 other countries. At Mercury's headquarters in Chelmsford, Massachusetts, a group of systems engineers specializing in radar, sonar and surveillance problems provides support on an as-needed basis to the remote offices to assist in securing inclusion in targeted military programs.

Medical Imaging

Mercury strives to provide a superior combination of high performance and competitively priced embedded computer systems to the medical imaging market. The Company focuses on establishing strong relationships with its customers, the medical equipment manufacturers. By maintaining frequent, in-depth communications with its customers and working closely with their engineering groups, the Company is able to understand their needs and provide appropriate solutions. In addition, the Company intends to continue its efforts to install its computer systems in place of alternative designs created by the in-house design teams employed by the medical imaging equipment manufacturers.

The Company currently is working closely with major medical equipment companies to design the next generation of MRI, CT and digital x-ray systems, which the Company believes will lead to faster time-to-market and competitive advantages for the medical equipment companies that use Mercury's computer

systems for inclusion in their imaging machines. Mercury's industrial PC class hardware system provides the medical imaging industry with increased performance densities at lower costs and an architecture that accommodates performance upgrades as new technology becomes available. Integrating the high-bandwidth RACEway Interconnect system area network within the PCI environment results in highly scalable systems. This allows medical equipment suppliers to design systems that can satisfy a broad range of price/performance requirements and meet the needs of global markets, all with the same Mercury architecture.

Mercury's medical OEM customers consist of the leading manufacturers of diagnostic imaging equipment. They include GE Medical, headquartered in Wisconsin, GE Medical Systems Europe in France, GE Yokugawa Medical Systems in Japan, Toshiba in Japan, Siemens Medical in Germany and Elscint in Israel. These companies have adopted Mercury's PCI or VME computer systems as part of their developments in either MRI, CT, PET or digital x-ray systems and, in the case of some companies, multiple types of systems. The Company has supplied GE Medical with computer systems for use in three successive generations of MRI machines from 1987 through the present, as well as for use in other GE Medical equipment, such as PET. In addition, GE Medical and Siemens Medical, the two leading global suppliers of medical imaging equipment, have recently awarded contracts to Mercury to design the signal processing system for the next generations of certain of their medical diagnostic equipment.

The Company is building a system based on Analog Devices' SHARC DSP processor to fulfill a design win in CT. The Company also is building a system based on the Texas Instruments' C80 signal processing chip to fulfill a design win in digital x-ray. The Company believes that the principal reason for its medical imaging design wins is Mercury's experienced team of systems and applications engineers who work closely with the medical equipment designers and with the Company's product development engineers. This joint design effort frequently precedes the first production orders by approximately two to three years. However, once selected, the production contracts typically continue for the life of the medical imaging system. In addition, the equipment manufacturers typically offer computer system upgrades to their customers, potentially resulting in additional sales of Mercury products.

Shared Storage

The Company believes that the shared storage market includes a number of distinct applications, such as digital video editing, electronic computer aided design, webcasting, cable advertising insertion and pre-press. In fiscal 1997, Mercury introduced SuiteFusion, its first shared storage software product designed to meet the digital video editing needs of the broadcast and post-production industry. Companies in the broadcast and post-production industry have begun to use non-linear, disk-based technology, and are becoming aware of the significant productivity gains that can be achieved by networking multiple editing stations together in a real-time, high-bandwidth, shared storage workgroup. However, these applications produce extremely large volumes of digital data that must be transmitted, stored, and manipulated in order to produce a high-quality finished product. Mercury's SuiteFusion is designed to choreograph the interactions between workstations and disks to keep files intact in such a high-performance, shared-storage environment.

Early end-users of SuiteFusion include Turner Broadcasting's CNN Interactive in Atlanta, Georgia, Hughes Aircraft (through a subsidiary), for use at the U.S. Army National Training Center in Fort Irwin, California, and Nickelodeon's Blue's Clues television show in New York, New York. CNN is using Mercury's software to improve efficiency in editing and producing features for Internet broadcasts; the U.S. Army uses SuiteFusion to help capture, edit and play back live simultaneous training exercises; and Nickelodeon's creative design artists are able to share animation and graphics files.

In addition, Mercury has signed OEM distribution agreements with several industry leaders, including Avid Technology, Inc., the worldwide leader in digital non-linear editing systems, PathLight in the serial storage architecture networking environment, and MountainGate Data Systems, Inc. in the fiber channel storage market. The Company also has approximately 10 non-exclusive distributor agreements with video-editing resellers in the United States and Canada.

KEY TECHNOLOGY COMPETENCIES

Many of Mercury's customers share a common requirement: the need to process high-volume, real-time data streams. Whether from an antenna in a defense application, a medical scanner or a video camera, the computer must have the ability to process incoming data as quickly as it is received. Data rates can range from a few to several hundreds of megabytes per second (or several billion bits per second). The ability to process this continuous flow of high-bandwidth data is a fundamental difference between the majority of computing systems in the world (such as personal computers, workstations and servers) and the computers built by Mercury.

Mercury has developed a set of core technical strengths specifically targeted to, and defined by, the application areas of signal, image and media processing. These technical strengths are pivotal to Mercury's success in the real-time market segments of the defense electronics and medical imaging industries and have resulted in the following developments and capabilities:

Heterogeneous Switched-Fabric Interconnects. Mercury connects different microprocessor types (RISC, DSP and specialized computing devices) and I/O devices in a bus-less, high-bandwidth manner based on multi-stage switches in its system area network. Among the engineering developments which distinguish Mercury's systems are the RACEway Interconnect built using the six-port RACEway crossbar chip which supports high bandwidth point-to-point data transfers and fibre channel chassis-to-chassis extensions for RACEway in large system configurations.

Heterogeneous Processor Integration. Mercury has developed several ASICs which integrate standard microprocessors and special purpose mathematics and graphics processors into a single heterogenous environment. Mercury develops systems consisting of different microprocessor types with a single-system software model. Mercury's processor independent software offers a consistent set of software tools and interfaces, which can drive a heterogeneous mix of microprocessor types, such as Motorola's PowerPC processor, Analog Devices' SHARC DSP processor and Texas Instruments' C80 processor.

Performance Density. The Company has been using high performance packaging technology such as multi-chip modules and ball grid arrays in its systems since the early 1990's. The Company's thermal analysis expertise allows it to design products that optimize the dissipation of heat from the system in order to meet the environmental constraints imposed by many of its customers' applications. The Company's modular hardware and software building blocks allow it to design systems that best meet the application's specific data profiles. All together, these attributes combine to deliver the maximum performance in processing, reliability and bandwidth in the smallest possible space.

Scalable Software. Mercury's software has been designed to scale to more than one thousand processors in real-time environments while maintaining a high-bandwidth capability. Regardless of the number of processors, the Company's software provides the same programming environment for a software developer working with Mercury's computer systems, allowing faster time-to-market and lower life cycle maintenance costs for its customers.

Optimized Algorithm Development. Mercury specializes in algorithm development for single and multi-processor implementations. The Company believes that using the mathematical algorithms in Mercury's scientific algorithm library significantly increases the performance of customers' applications, reduces development time and minimizes life cycle support costs.

System Engineering Expertise. Mercury has established a core competency in providing total system solutions to its customers. The Company has the knowledge and technical staff to act as an extension of the customer's engineering organization in order to fashion solutions to some of the world's most demanding real-time, signal processing applications. Mercury has partnered with its customers to understand and resolve the challenging problems encountered in applications as diverse as radar, sonar and signal intelligence for the military, and diagnostic imaging for MRI, CT, PET and digital x-ray in the medical imaging market. The Company also provides an integration and development service to meet the demands of its customers with advanced applications which cannot be satisfied with standard products. This service combines the variety of

standard products with custom hardware and software to meet the specific configuration demands of an application.

Leverage and Create Standards. Mercury uses existing standards where applicable and has been successful in developing new standards. For example, Mercury adheres to VME and PCI standard bus interfaces and form factors. The RACEway Interconnect system area network that Mercury developed was adopted as an ANSI/VITA standard in 1995, and since then has been adopted by several companies offering products and services for embedded real-time applications.

PRODUCTS

HARDWARE PRODUCTS

Mercury offers three classes of systems for the Company's target markets. Each class of products is scalable to meet the full range of requirements in signal processing applications.

High Performance Class. For the highest-performance applications, Mercury offers a family of high performance systems for the most compute intensive and I/O capacity and interprocessor bandwidth demanding applications in the defense electronics market. These applications include space time adaptive processing, ground-penetrating and foliage-penetrating radar and synthetic aperture radar. These high-performance systems, known as MultiPort, can scale to over a thousand processors and today include compute modules based on the SHARC and PowerPC processors.

VME Class. The VME bus has been the traditional standard for many embedded applications. Mercury's VME systems each have a RACEway Interconnect port. Systems contain modules based on the SHARC, PowerPC and i860 processors and can scale to several hundred processors. The VME-based systems and components are primarily used in the defense market where backward and forward compatibility is required for the long system life cycles of military equipment. This class of RACE Series systems meets the computing speed, bandwidth and scaleability requirements of many of today's medium performance radar, sonar and signal intelligence applications. Advanced and future radar systems are more likely to use the high performance class systems.

Industrial PC Class. Based on the PCI bus standard, these systems use the RACEway Interconnect to provide the extended bandwidth required for real-time applications. Currently Mercury provides compute modules based on the SHARC and TI C80 processors. These systems scale to hundreds of processors and are primarily directed to the medical imaging market, which is moving from VME to PCI based designs.

SOFTWARE PRODUCTS

Mercury has developed a comprehensive line of signal processing software products for the defense and medical imaging markets. Certain of Mercury's software products are included in a heterogeneous development software package that enables customers to develop application software that will run on Mercury hardware. The development software package includes the MC/OS operating system, scientific algorithm libraries, debugging tools and compilers. License fees range from \$10,000 to \$50,000 based on the number of seats chosen by the user for its application, ranging from a single user license to a project license.

Set forth below are certain signal processing software products offered by the Company.

MC/OS Version 4. The MC/OS runtime operating environment allows maximum use of the RACE heterogeneous multi-computer architecture in a single-system model incorporating a consistent set of system and application programming interfaces, and a common development environment. MC/OS is supported on the high performance, VME and industrial PC classes of Mercury hardware systems. MC/OS is included in Mercury's development software package.

Scientific Algorithm Library (SAL). Mercury's scientific algorithm library consists of more than 400 assembly language routines developed by Mercury's programmers and optimized for execution on Mercury's RACE architecture, permitting extensive code reusability. The library encompasses a comprehensive selection

of functions including vector processing and data conversion commonly performed by digital signal processing applications. SAL is included in Mercury's development software package.

Parallel Application System (PAS). PAS is a set of high performance libraries which form a complete programming environment for developing parallel applications in a distributed memory multicomputer system. The libraries speed the development of advanced applications using many processors in parallel. PAS is included in Mercury's development software package.

SuperVision. SuperVision is a state-of-the-art debugging tool for observation and control of embedded, real-time multicomputing systems. SuperVision speeds application development by selectively monitoring individual and large groups of processors, while simultaneously performing detailed process-level debugging. SuperVision is sold separately.

PeakWare for RACE. PeakWare for RACE is a visual component programming tool, jointly developed with MATRA, that allows the developer to use diagrams to express the interconnection of software components. Jointly mapping the application and the RACE system configuration accelerates the overall development process. From the graphical input, PeakWare for RACE generates the C code for interprocessor communication and builds executable and ready-to-deploy application code. PeakWare for RACE is sold separately.

Mercury also has developed software products for specific shared storage applications in the broadcast and post-production industry. Set forth below is the first such software product commercially introduced by the Company.

SuiteFusion. SuiteFusion is an open, scalable software application that allows various desktop computer systems to simultaneously access large shared files. Written in JAVA, this highly portable code is supported on both Macintosh and Windows-based PC desktops. While SuiteFusion is directed initially to the creative and design departments within the broadcast and post-production industry, the Company believes it has potential applicability in several shared storage markets.

ENGINEERING, RESEARCH AND DEVELOPMENT

The Company's engineering, research and development efforts are focused on developing new products as well as enhancing existing products. Mercury's research and development goal is to fully exploit and maintain the Company's technological lead in the high performance, real-time, signal processing industry. In addition to the central engineering organization which focuses on Mercury's two principal markets, the Company has an engineering team developing SuiteFusion and its derivatives for the shared storage market and another engineering team developing systems for the digital television requirements of the future.

Mercury is involved with researchers from other companies and government organizations to develop new signaling technologies using fiber optics. This has the potential for providing more bandwidth per line than conventional techniques and is directed at the 21(st) century challenges of the next generation of advanced signal processing systems. Similar cooperative developments are underway to develop open software solutions for code portability. This research is focused on developing generic applications which can be targeted to Mercury's products through the use of industry standard tools with Mercury-specific libraries. Some of these research areas benefit from cost sharing through DARPA grants in those areas where the DoD will obtain benefit from the development.

As of September 30, 1997, the Company had 32% of all its employees, or 104 people, primarily engaged in engineering, research and development, including hardware and software architects, design engineers and engineers with expertise in developing medical, defense and shared storage software systems. During fiscal years 1995, 1996 and 1997, the Company's total research and development costs were approximately \$8.6 million, \$9.8 million, and \$12.8 million, respectively.

CUSTOMER SUPPORT AND INTEGRATION

As of September 30, 1997, Mercury's Customer Services Group included 37 people engaged in a full range of support functions, including training, technical program management, integration and design services,

host porting services and the traditional maintenance and support services. The Company has invested in the range of tools, analyzers, simulators, instruments and workstations to provide a rapid response to both development and customer support requirements. Within the Customer Services Group, the solutions systems department has developed many custom interfaces, reviewed customers' designs, developed special hardware and software components and provided program management on behalf of defense and medical customers. The capabilities of this group enable the Company to respond to the demanding individuality of many programs and have resulted in Mercury being selected for both development, high volume production and deployed programs.

MANUFACTURING AND TESTING

Mercury's strengths include the design, development and testing of products which meet the exacting technology and quality expectations of the Company's defense electronics and medical imaging customers. Board assembly is outsourced to a number of electronic contract manufacturers. The supplier typically inserts most of the components into a printed circuit board, solders the connections, conducts preliminary testing and returns the boards to Mercury. The Company conducts final assembly, burn-in and system level testing.

Mercury utilizes Optimal Supply Chain Management to provide highly flexible manufacturing solutions which can be tailored to the specific needs of the Company's customers, while maintaining the highest level of quality and control of product assembly. This standard is maintained through demanding Quality Assurance and Reliability Programs, such as Statistical Process Control, which are integrated throughout the manufacturing process.

The Company's outsourcing strategy provides maximum flexibility to respond to customer requirements and schedule adjustments, with minimal asset investment by Mercury. This outsourcing strategy also provides multiple sources of supply, both to support the breadth and complexity of Mercury's product lines, as well as to ensure continuity of supply. By outsourcing assembly to electronic contract manufacturers, Mercury is able to focus its manufacturing efforts on designing more reliable products, designing more efficient methods of building its products, systems integration, testing and supply chain management.

Mercury's manufacturing approach is based on a highly integrated process that takes a product from concept through production. All products are required to meet specified standards of performance, quality, reliability and safety. The Company manufactures both commercial and ruggedized versions of its computer systems. Extensive testing is a fundamental part of the Company's process. Computer Integrated Manufacturing, Concurrent Engineering, Material Requirements Planning and Just-In-Time techniques are also integrated into manufacturing operations as part of an on-time delivery philosophy. Mercury has been ISO 9001 certified since 1995.

Several components used in the Company's products are currently obtained from sole source suppliers. Mercury is dependent on LSI Logic for four custom designed ASICs, on Analog Devices for its SHARC processors, on IBM for ball grid array packaging, on Motorola for its PowerPC processors and on Intel for its i860 processors. IBM may terminate its contract with the Company without cause upon thirty days notice and may cease offering products to the Company upon sixty days notice. In addition, Analog Devices may discontinue or modify any product upon 180 days notice and LSI Logic may discontinue any product upon 180 days notice. If LSI Logic, Analog Devices, IBM, Motorola or Intel were to limit or reduce the sale of such components to the Company, or if these or other suppliers to the Company were to experience financial difficulties or other problems which prevented them from supplying the Company with the necessary components, such events could have a material adverse effect on the Company's business, financial condition and results of operations. These sole source suppliers are subject to quality and performance issues, materials shortages, excess demand, reduction in capacity and other factors that may disrupt the flow of goods to the Company or its customers and thereby adversely affect the Company's business and customer relationships. The Company has no guaranteed supply arrangements with its suppliers and there can be no assurance that its suppliers will continue to meet the Company's requirements. If the Company's supply arrangements are interrupted, there can be no assurance that the Company would be able to find another supplier on a timely or satisfactory basis. Any shortage or interruption in the supply of any of the components used in the Company's

products, or the inability of the Company to procure these components from alternate sources on acceptable terms could have a material adverse effect on the Company's business, financial condition and results of operations. There can be no assurance that severe shortages of components will not occur in the future. Such shortages could increase the cost or delay the shipment of the Company's products, which could have a material adverse effect on the Company's business, financial condition and results of operations. Significant increases in the prices of these components would also materially adversely affect the Company's financial performance since the Company may not be able to adjust product pricing to reflect the increase in component costs. The Company could incur set-up costs and delays in manufacturing should it become necessary to replace any key vendors due to work stoppages, shipping delays, financial difficulties or other factors and, under certain circumstances, these costs and delays could have a material adverse effect on the Company's business, financial condition and results of operations.

COMPETITION

The markets for the Company's products are highly competitive and are characterized by rapidly changing technology, frequent product performance improvements and evolving industry standards. Competition typically occurs at the design stage, where the customer evaluates alternative design approaches, including those from internal development organizations. A design win usually ensures a customer will purchase the product until their next generation system is developed. Occasionally, the Company's computer systems compete with computer systems from workstation vendors, all of whom have substantially greater research and development resources, long term guaranteed supply capacity, marketing and financial resources, manufacturing capability and customer support organizations than those of the Company. The Company believes that its future ability to compete effectively will depend, in part, upon its ability to continue to improve product and process technologies and develop new technologies in order to maintain the performance advantages of products and processes relative to competitors, to adapt products and processes to technological changes, to identify and adopt emerging industry standards and to adapt to customer needs.

The principal bases for selection in sales of digital signal processing systems to the defense electronics industry are performance (measured primarily in terms of processing speed, I/O capacity and interprocessor bandwidth, processing density per cubic foot, power consumption and heat dissipation), systems engineering support, overall quality of products and associated services, use of industry standards, ease of use and price. Competitors in the defense electronics industry include a relatively small number of companies that design, manufacture and market DSP board level products and in-house design teams employed by prime defense contractors. In-house design efforts historically have provided a significant amount of competition to the Company. However, competition from in-house design teams has diminished in significance in recent years due to the increasing use of COTS products and the trend toward greater use of outsourcing. Despite this recent change, there can be no assurance that in-house developments will not re-emerge as a major competitive force in the future. Prime contractors are much larger than Mercury and have substantially more resources to invest in research and development. Increased use of in-house design teams by defense contractors in the future may have a material adverse effect on the Company's business, financial condition and results of operations.

In the medical imaging industry the principal bases for selection are performance (measured primarily in terms of processing speed, I/O capacity and interprocessor bandwidth and power consumption), price, systems engineering support, overall quality of products and associated services, use of industry standards and ease of use. Competitors in the medical imaging market include in-house design teams, a small number of companies that design, manufacture and market DSP board level products and workstation manufacturers. Workstations have become a competitive factor primarily in the market for low-end MRI and CT machines and, to date, have not been a significant factor in the high-performance market, Mercury's primary focus. There can be no assurance that workstation manufacturers will not attempt to penetrate the high-performance market for medical imaging machines. Workstation manufacturers typically have greater resources than Mercury and their entry into markets historically targeted by Mercury may have a material adverse effect on the Company's business, financial condition and results of operations.

Due to the emerging nature of the markets for the Company's shared storage technology, its competitive factors are not yet clearly defined. The Company currently is focusing its efforts in this area on the broadcast

and post-production industry, where the Company believes there is currently only one directly competitive product. As this market develops, the Company anticipates that other companies will begin offering additional competitive products. New competitors may have significantly greater marketing and financial resources, better access to individuals making purchasing decisions, superior products and services than those offered by the Company. The Company believes that the primary impediment to future sales of shared storage products to the post-production and broadcast industry is the need to transform entrenched operating modes, such as those associated with linear tape based technologies, to accommodate new modes of operation such as those associated with non-linear, disk-based digital technology. However, there can be no assurance that industry participants will adopt such new technologies or that, if adopted, the Company's products will not be obsolete, uncompetitive or incompatible.

Some of the Company's competitors have greater financial and other resources than the Company, and the Company may be operating at a cost disadvantage compared to manufacturers who have greater direct buying power from component suppliers or who have lower cost structures. There can be no assurance that the Company will be able to compete successfully in the future with any of these sources of competition. In addition, there can be no assurance that competitive pressures will not result in price erosion, reduced margins, loss of market share or other factors, that could have a material adverse effect on the Company's business, financial condition and results of operations.

INTELLECTUAL PROPERTY AND PROPRIETARY RIGHTS

The Company relies on a combination of patent, copyright, trademark and trade secret laws to establish and protect its rights in its products and proprietary technology. In addition, the Company currently requires its employees and consultants to enter into nondisclosure and assignment of invention agreements to limit use of, access to and distribution of, proprietary information. There can be no assurance that the Company's means of protecting its proprietary rights in the U.S. or abroad will be adequate. The laws of some foreign countries may not protect the Company's proprietary rights as fully or in the same manner as do the laws of the U.S. Also, despite the steps taken by the Company to protect its proprietary rights, it may be possible for unauthorized third parties to copy or reverse engineer aspects of the Company's products, develop similar technology independently or otherwise obtain and use information that the Company regards as proprietary. There can be no assurance that others will not develop technologies similar or superior to the Company's technology or design around the proprietary rights owned by the Company. Although the Company is not aware that its products infringe on the proprietary rights of third parties, there can be no assurance that others will not assert claims of infringement in the future or that, if made, such claims will not be successful. Litigation to determine the validity of any claims, whether or not such litigation is determined in favor of the Company, could result in significant expense to the Company and divert the efforts of the Company's technical and management personnel from daily operations. In the event of any adverse ruling in any litigation regarding intellectual property, the Company may be required to pay substantial damages, discontinue the sale of infringing products, expend significant resources to develop non-infringing technology or obtain licenses to use infringing or substituted technology. The failure to develop, or license on acceptable terms, a substitute technology could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company holds two issued United States patents covering aspects of the RACE architecture and the SuperVision debugging tool. In addition, the Company has two pending United States patent applications covering additional aspects of the RACE architecture and the Company's Parallel Application System. The Company may file additional patent applications seeking protection for other proprietary aspects of its technology in the future. Patent positions frequently are uncertain and involve complex and evolving legal and factual questions. The coverage sought in a patent application either can be denied or significantly reduced before or after the patent is issued. Consequently, there can be no assurance that any patents from pending patent applications or from any future patent application will be issued, that the scope of any patent protection will exclude competitors or provide competitive advantages to the Company, that any of the Company's patents will be held valid if subsequently challenged or that others will not claim rights in or ownership of the patents and other proprietary rights held by the Company. Since patent applications are secret until patents are issued in the United States or corresponding applications are published in international countries, and

since publication of discoveries in the scientific or patent literature often lags behind actual discoveries, the Company cannot be certain that it was the first to make the inventions covered by each of its pending patent applications or that it was the first to file patent applications for such inventions. In addition, there can be no assurance that competitors, many of which have substantial resources and have made substantial investments in competing technologies, will not seek to apply for and obtain patents that will prevent, limit or interfere with the Company's ability to make, use or sell its products either in the United States or in international markets.

BACKLOG

As of September 30, 1997, the Company had a backlog of orders aggregating approximately \$25.7 million. The Company includes in its backlog customer orders for products and services for which it has accepted signed purchase orders with assigned delivery dates within twelve months. Orders included in backlog may be canceled or rescheduled by customers without penalty. A variety of conditions, both specific to the individual customer and generally affecting the customer's industry, may cause customers to cancel, reduce or delay orders that were previously made or anticipated. The Company cannot assure the timely replacement of canceled, delayed or reduced orders. Significant or numerous cancellations, reductions or delays in orders by a customer or group of customers could materially adversely affect the Company's business, financial condition and results of operations. Backlog should not be relied upon as indicative of the Company's revenues for any future period.

EMPLOYEES

At September 30, 1997, the Company employed a total of 323 persons, including 104 in research and development, 120 in sales, marketing and customer support, 51 in manufacturing and 48 in finance and administration. Eight of the Company's employees are located in Europe, four in Japan and the remainder in the U.S. None of the Company's employees are represented by a labor organization and the Company believes that its relations with employees are good. Competition for qualified personnel in the engineering fields is intense and the Company is aware that much of its future success will depend on its continued ability to attract and retain qualified personnel. The Company seeks to attract new employees by offering competitive compensation packages, including salary, bonus, stock options and employee benefits. There can be no assurance, however, that the Company will be successful in retaining its key employees or that it will be able to attract skilled personnel for the development of its business.

FACILITIES

The Company's headquarters consist of approximately 96,000 square feet of office space under lease in Chelmsford, Massachusetts. The Company intends to use a portion of the net proceeds of the Offering to fund construction of additional 91,000 square feet of office space on vacant land adjacent to its headquarters. The Company used internally generated funds to acquire this parcel in November 1997. The Company anticipates that construction and development of the additional office space will cost approximately \$9.0 million, that it will break ground in April 1998 and that it will complete construction in approximately 12 months after construction begins. Once the new office space is completed, the Company plans to transfer the building and the underlying real estate to an unaffiliated third party pursuant to a sale and leaseback transaction. The Company has not yet identified a counterparty for this sale and leaseback transaction. While the Company believes it should be able to identify such a party within a reasonably limited period of time, there can be no assurance that the Company will be able to successfully consummate such transaction on commercially acceptable terms, if at all. If the Company is not able to successfully consummate a sale and leaseback transaction, the Company would retain this property and would not have use of the money invested therein. See "Use of Proceeds."

The Company also maintains offices near Los Angeles and San Jose, California, and in Dallas, Texas, Chanhassen, Minnesota, Madison, Wisconsin and Vienna, Virginia and has international offices in the United Kingdom, France and Japan.

LEGAL PROCEEDINGS

To the Company's knowledge, there are no pending legal proceedings which are material to the Company or its business to which it is a party or to which any of its properties is subject.

MANAGEMENT

DIRECTORS, EXECUTIVE OFFICERS AND KEY EMPLOYEES

The directors and executive officers of the Company are as follows:

NAME	AGE	POSITION
James R. Bertelli.....	57	President, Chief Executive Officer, Director and Co-Founder
Donald Barry.....	52	Vice President and Director of Medical Business Group
Vincent A. Mancuso.....	50	Vice President and Director of Government Electronics Group
G. Mead Wyman.....	57	Vice President, Chief Financial Officer and Treasurer
Gordon B. Baty(1)(2).....	58	Director
Albert P. Belle Isle(2).....	53	Director
R. Schorr Berman(1)(2).....	49	Director
Sherman N. Mullin.....	62	Director
Melvin Sallen(1).....	69	Director

(1) Member of Compensation Committee

(2) Member of Audit Committee

MR. BERTELLI co-founded the Company in 1981, and has served as the Company's President, Chief Executive Officer and a Director since that time. Prior to founding the Company, 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, he began his high-tech career with RCA Corporation as a computer systems analyst, and later moved into computer sales with RCA and Univac.

DR. BARRY has been Vice President and Director of Medical Business Group of the Company 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 Company 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., a computer hardware firm formerly known as Pyramid Technology Corporation 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.

MR. WYMAN has been Vice President, Treasurer and Chief Financial Officer of the Company since November 1996. 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 has also held senior financial management positions at Prime Computer Inc. and Millipore Corporation.

DR. BATY has been a Director of the Company since 1983. Dr. Baty has been a partner of First Stage Capital, Limited Partnership, 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 Novitron International, Inc. and numerous private companies.

DR. BELLE ISLE has been a Director of the Company since 1986. Dr. Belle Isle, who is an independent investor in technology based companies, was President of Custom Silicon, Inc., a semiconductor company, 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.

MR. BERMAN has been a Director of the Company since 1993. Mr. Berman is President and Chief Executive Officer of MDT Advisers, Inc., a venture capital firm. Mr. Berman is also a director of Arch Communications Group, Inc. and numerous private companies.

MR. MULLIN has been a Director of the Company since 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 adviser to the U.S. Air Force Scientific Advisory Board.

MR. SALLEN has been a Director of the Company since 1990 and since 1991 has served as a consultant to the Company 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.

Set forth below are certain of the Company's additional key employees:

NAME	AGE	POSITION
Robert C. Frisch.....	43	Vice President, Chief Technical Officer and Co-Founder
John K. Nitzsche.....	62	Vice President, Special Products Development and Co-Founder
Bruce A. Beck.....	47	Vice President and Director of Digital Video Products
David L. Bertelli.....	52	Vice President, Organization Development
Steven M. Chasen.....	42	Vice President, Customer Services
Barry S. Isenstein.....	41	Vice President, Advanced Technologies Group
Mark R. LaForest.....	38	Vice President and Director of Engineering
Robert Perry.....	51	Vice President of Manufacturing Operations
Gary Olin.....	48	Director of Strategic Marketing
Steven Patterson.....	43	Director of Systems Engineering
Graham Smith.....	57	Director of International Sales

MR. FRISCH co-founded the Company in 1981 and serves as the Company's Vice President and Chief Technical Officer. Mr. Frisch served as the principal hardware architect and designer for the Company's core hardware products and is also working on enhancing the current RACE architecture.

MR. NITZSCHE co-founded the Company in 1981 and serves part time as the Company's Vice President of Special Products Development.

MR. BECK joined the Company in 1994 as Vice President and Director of Digital Video Products. Prior to joining the Company, Mr. Beck was the Vice President of World Wide Sales at BBN Communications, a telecommunications consulting firm, from 1993 until 1994 and the Managing Director of DMR Consulting Group Inc., a technology consulting company, from 1989 through 1993.

MR. DAVID BERTELLI joined the Company in 1987 as Vice President of Organization Development.

MR. CHASEN joined the Company in 1990 as Vice President of Customer Services when the Company acquired Numerix Corporation where Mr. Chasen was the Director of Service and Support.

MR. ISENSTEIN joined the Company in 1984 and serves as Vice President of the Advanced Technologies Group.

MR. LAFOREST joined the Company in 1992 and serves as the Company's Vice President and Director of Engineering.

MR. PERRY joined the Company in October 1997 as the head of the Company's manufacturing operations. From April 1995 through October 1997, Mr. Perry was

Program Manager for SCI Systems, a contract manufacturing company. Prior to that, he held a managerial position at Digital Equipment Corporation, a computer equipment supplier, from 1976 through March 1995.

MR. OLIN joined the Company in July 1995 as Director of Strategic Marketing. Prior to joining the Company, he worked from February 1995 until July 1995 at Wang Laboratories, a network and desktop services company, as World Wide Marketing Director. Previously, Mr. Olin was employed at Bull World Wide Information Systems, an information technology company, from 1987 through 1994.

MR. PATTERSON joined the Company in 1990 as Director of Systems Engineering when the Company acquired Numerix Corporation where he had been the Director of Hardware Engineering and Product Marketing Manager.

MR. SMITH joined the Company in 1988 and serves as the Vice President of International Sales.

ELECTION AND COMPENSATION OF DIRECTORS

Each director of the Company holds office until his successor has been duly elected and qualified. Officers of the Company are elected by the Board of Directors of the Company at each annual meeting of the Board of Directors and serve at its discretion. The Company's Board of Directors is divided into three classes, with three-year staggered terms. Dr. Belle Isle and Mr. Sallen are Class I directors, Dr. Baty and Mr. Mullin are Class II directors and Messrs. Bertelli and Berman are Class III directors. The terms of the Class I, Class II and Class III directors expire in 1998, 1999 and 2000, respectively.

The Company's non-employee directors currently receive \$2,500 annually plus \$500 per meeting attended as compensation for service on the Board of Directors, plus reimbursement for reasonable expenses incurred in connection with attendance at Board and committee meetings. Committee members receive \$300 for attending a meeting not held on the same day as a meeting of the Board of Directors.

The Company has in effect its 1993 Stock Option Plan for Non-employee Directors, pursuant to which the Company's non-employee directors are eligible to receive options to purchase shares of the Company's Common Stock if and when granted by the Compensation Committee. See "-- Stock Options and Stock Purchase Plans."

COMMITTEES OF THE BOARD

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 Company's engagement of its independent public accountant and their reports. The Audit Committee also meets with the financial staff of the Company to review accounting procedures and reports. The Compensation Committee is composed of Dr. Baty and Messrs. Berman and Sallen. 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 Stock Option Plans.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION IN COMPENSATION DECISIONS

During fiscal 1997, Dr. Baty and Messrs. Berman and Sallen served as the Compensation Committee of the Company's Board of Directors. During fiscal 1997, no interlocking relationship existed between any member of the Company's Compensation Committee and any other member of the Company's Board of Directors. See "Certain Transactions."

EXECUTIVE COMPENSATION

Summary Compensation Table. The following table sets forth the compensation earned by the Company's Chief Executive Officer and each of the Company's three other most highly compensated executive officers (collectively, the "Named Executive Officers") during the year ended June 30, 1997:

SUMMARY COMPENSATION TABLE

NAME AND PRINCIPAL POSITION	ANNUAL COMPENSATION			LONG-TERM COMPENSATION	
	SALARY (\$)	BONUS (\$)	OTHER ANNUAL COMPENSATION (\$)	SECURITIES UNDERLYING OPTIONS/SARS (#)	ALL OTHER COMPENSATION (\$)
James R. Bertelli, President and Chief Executive Officer.....	\$260,000	\$112,300	\$6,000(1)	12,290	\$32,869(2)(3)
G. Mead Wyman, Vice President, Treasurer and Chief Financial Officer(4).....	100,000	56,434	--	80,000	3,529(2)(3)
Donald Barry, Vice President and Director of Medical Business Group.....	111,000	64,020	--	1,500	2,160(2)
Vincent A. Mancuso, Vice President, Government Electronics Group(5)....	55,000	75,000	--	25,000	1,400(2)

(1) Represents automobile allowance.

(2) Represents \$3,150 and \$2,519 matching contributions by the Company into the participant's 401(k) plan for the benefit of Messrs. Bertelli and Wyman, respectively.

(3) Represents \$29,719 and \$1,010 premiums paid by the Company for split dollar life insurance policies for the benefit of Messrs. Bertelli and Wyman, respectively.

(4) Reflects salary earned from November 1996, when the Company hired Mr. Wyman, through June 30, 1997.

(5) Reflects salary earned from January 1997, when the Company hired Mr. Mancuso, through June 30, 1997.

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, 1997. The Company issued no SARs during the year ended June 30, 1997.

NAME	OPTION/SAR GRANTS IN LAST FISCAL YEAR				POTENTIAL REALIZABLE VALUE AT ASSUMED ANNUAL RATES OF STOCK PRICE APPRECIATION FOR OPTION TERM(1)	
	INDIVIDUAL GRANTS				5% (\$)	10% (\$)
	NUMBER OF SECURITIES UNDERLYING OPTION/SARS GRANTED (#)	PERCENT OF TOTAL OPTION/SARS GRANTED TO EMPLOYEES IN FISCAL YEAR (%)	EXERCISE PRICE (\$/SHARE)	EXPIRATION DATE		
James R. Bertelli(2).....	17,129	4.3%	\$4.00	07/30/06	\$ 43,089	\$109,197
	5,161	1.3	4.00	12/02/06	12,983	32,908
G. Mead Wyman(3).....	80,000	19.8	4.00	01/27/07	201,247	569,997
Donald Barry(4).....	1,500	0.4	4.00	07/30/06	3,774	9,163
	500	0.1	4.00	09/19/06	1,258	3,188
Vincent A. Mancuso(5).....	25,000	6.2	4.00	01/27/07	62,890	159,675

(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 Company's estimate or projection of future Common Stock prices.

(2) Options to purchase 10,144 of these shares were exercisable at June 30, 1997. The remaining options vest as to 2,581 shares on December 2, 1998, as to 3,565 shares on July 31, 1998 and as to 6,000 shares in increments of 2,000 shares on July 30 in each of 1998, 1999 and 2000, as long as Mr. Bertelli's employment has not been terminated.

(3) Options with respect to 40,000 of these shares vest in equal 20% increments on December 2, 1997, and the four succeeding anniversaries thereof, as long as Mr. Wyman's employment has not been terminated. Options with respect to the remaining 40,000 shares vest based on the achievement of certain performance criteria, and in all events on the seventh anniversary of the option grant date, as long as Mr. Wyman's employment has not been terminated.

(4) Options to purchase 1,030 shares were exercisable at June 30, 1997. The remaining options vest as to 250 shares on September 19, 1998 and as to 720 shares on July 30, 1998, as long as Mr. Barry's employment has not been terminated.

(5) This option vests in equal 20% increments on the first five anniversaries of January 27, 1997, as long as Mr. Mancuso's employment has not been terminated.

Option Exercises and Holdings. The Named Executive Officers did not exercise any options during the year ended June 30, 1997. The following table sets forth certain information regarding exercise of options held at June 30, 1997, by each of the Named Executive Officers.

FISCAL YEAR-END OPTION VALUES

NAME	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.....	10,144	12,146	\$91,296	\$ 109,314
G. Mead Wyman.....	--	80,000	--	720,000
Donald Barry.....	9,750	2,250	87,750	20,250
Vincent A. Mancuso.....	--	25,000	--	225,000

(1) Value is based on the difference between the option exercise price and the assumed initial public offering price of \$13.00 per share, the mid-point of the filing range, multiplied by the number of shares of Common Stock underlying the option. No market existed for the Common Stock prior to this offering.

STOCK OPTION AND STOCK PURCHASE PLANS

Stock Option Plans

The Company has in effect its 1997 Stock Option Plan (the "1997 Plan"), 1993 Stock Option Plan for Non-Employee Directors (the "1993 Plan"), 1991 Stock Option Plan (the "1991 Plan") and 1982 Stock Option Plan (the "1982 Plan," and with the 1997 Plan, the 1993 Plan and the 1991 Plan, the "Stock Option Plans"). The Company's stock option plans are designed to attract, retain and motivate key employees and directors. The Compensation Committee of the Board of Directors (the "Compensation Committee") is responsible for the administration and interpretation of the Stock Option Plans and is authorized to grant options thereunder to all eligible employees and directors of the Company, except that no director who is not also an employee of the Company is eligible to receive incentive stock options (as defined in Section 422 of the Internal Revenue Code) ("Incentive Options") and only directors who are not employees of the Company are eligible to receive options under the 1993 Plan. The Compensation Committee has full power to select, from among the persons eligible for awards under the 1982 Plan, the 1991 Plan and the 1997 Plan, the individuals to whom awards will be granted, to make any combination of awards to participants, and to determine the specific terms of each award, subject to the provisions of the Stock Option Plans. Under the 1993 Plan, each non-employee director of the Company received on or about September 30 in each of 1994, 1995, 1996 and 1997, and will receive on or about September 30, 1998, that number of shares of Common Stock equal to one percent of the net income of the Company for the most recent fiscal year ending prior to the grant divided by the per share fair market value of the Company Stock on the first day of such fiscal year divided by the number of non-employee directors in office at the time of the grant. Options granted under the Stock Option Plans vest and become exercisable in accordance with option agreements evidencing such grants. Incentive Options may be granted only to officers or other employees of the Company, including members of the Board of Directors who are also employees of the Company or its subsidiaries. Options which do not qualify as Incentive Options, "Non-Qualified Options" may be granted or issued to officers or other employees of the Company, directors and to consultants and other key persons who provide services to the Company (regardless of whether they are also employees).

The exercise price of each option granted under the Stock Option Plans is determined by the Compensation Committee but, in the case of Incentive Options, may not be less than 100% of the fair market value of the underlying shares on the date of grant. No Incentive Option may be granted under the Stock Option Plans to any employee of the Company or any subsidiary who owns at the date of grant shares of stock representing in excess of 10% of the combined voting power of all classes of stock of the Company or a parent or a subsidiary unless the exercise price for stock subject to such option is at least 110% of the fair market value of such stock at the time of grant and the option term does not exceed five years.

Options may be made exercisable in installments, and the exercisability of options may be accelerated by the Compensation Committee. Upon exercise of options, the option exercise price must be paid in full (i) in cash or by certified or bank check or other instrument acceptable to the Compensation Committee, (ii) if the applicable option agreement permits, by delivery of shares of Common Stock of the Company owned by the optionee having a fair market value equal in amount to the exercise price of the options being exercised or (iii) any combination of (i) and (ii), provided, however that payment of the exercise price by delivery of shares of Common Stock of the Company owned by such optionee may be made only to the extent such payment, in whole or in part, would not result in a charge to earnings for financial accounting purposes.

As of October 31, 1997, options to purchase 342,601 shares of Common Stock were outstanding under the 1997 Plan, of which 19,175 were then exercisable. As of October 31, 1997, options to purchase 32,482 shares of Common Stock were outstanding under the 1993 Plan, all of which were then exercisable. As of October 31, 1997 options to purchase 579,090 shares of Common Stock were outstanding under the 1991 Plan, of which options to purchase 267,910 shares were then exercisable. As of October 31, 1997, options to purchase 142,200 shares of Common Stock were outstanding under the 1982 Plan, all of which were then exercisable.

Options granted under the Company's stock option plans are not transferable by the optionee except by will, by the laws of descent and distribution or pursuant to a qualified domestic relations order. Options are exercisable only while the optionee remains in the employ of the Company or for a short period of time thereafter. Options which are exercisable following termination of employment are exercisable only to the extent that the optionee was entitled to exercise such options on the date of termination of his or her employment.

Under the 1997 Plan, 575,000 shares are reserved for issuance upon exercise of stock options. Under the Company's 1993 Plan, 50,000 shares of Common Stock are currently reserved for exercise upon exercise of stock options. Under the 1991 Plan, 700,000 shares of Common Stock are currently reserved for exercise upon exercise of stock options. Under the Company's 1982 Stock Option Plan, 144,700 shares are reserved for issuance upon exercise of stock options.

Employee Stock Purchase Plan

The Company's 1997 Employee Stock Purchase Plan (the "1997 Purchase Plan") for employees of the Company was adopted by the Board of Directors on November 6, 1997 and will be submitted by the Stockholders of the Company for approval at a Special Meeting of Stockholders to be held on December 18, 1997. The 1997 Purchase Plan authorizes the issuance of a maximum of 250,000 shares of Common Stock pursuant to the exercise of nontransferable options granted to participating employees.

The 1997 Purchase Plan is administered by the Compensation Committee. All employees of the Company whose customary employment is 20 hours or more per week and have been employed by the Company for at least six months are eligible to participate in the 1997 Purchase Plan. Employees who own 5% or more of the Company's stock and directors who are not employees of the Company may not participate in the 1997 Purchase Plan. To participate in the 1997 Purchase Plan an employee must authorize the Company in writing to deduct an amount (not less than 1% nor more than 10% of a participant's base compensation not to exceed \$25,000 per year) from his or her pay commencing on January 1 and July 1, of each year (each a "Purchase Period"). On the first day of each Purchase Period, the Company grants to each participating employee an option to purchase up to that number of shares of Common Stock, the fair market value of which on the date of grant is equal to \$25,000. The exercise price for the option for each Purchase Period is the lesser of 85% of the fair market value of the Common Stock on the first or last business day of the Purchase Period. The fair market value will be the closing selling price of the Common Stock as quoted on the Nasdaq National Market. If an employee is not a participant on the last day of the Purchase Period, such employee is not entitled to exercise his or her option, and the amount of his or her accumulated payroll deduction will be refunded to the employee. Shares acquired by employees pursuant to the Purchase Plan may not be transferred for three months following the date of acquisition. An employee's rights under the 1997 Purchase

Plan terminate upon his or her voluntary withdrawal from the Plan at any time or upon termination of employment.

Common Stock for the 1997 Purchase Plan will be made available either from authorized but unissued shares of Common Stock or from shares of Common Stock reacquired by the Company, including shares repurchased in the open market.

LIMITATION OF LIABILITY; INDEMNIFICATION OF DIRECTORS AND OFFICERS

As permitted by the Massachusetts General Laws, the Company has included in its Charter a provision to eliminate the personal liability of its directors for monetary damages for breach or alleged breach of their fiduciary duties as directors, subject to certain exceptions. In addition, the Bylaws of the Company provide that the Company is required to indemnify its officers and directors under certain circumstances, including those circumstances in which indemnification would otherwise be discretionary, and the Company is required to advance expenses to its officers and directors as incurred in connection with proceedings against them for which they may be indemnified. At present, the Company is not aware of any pending or threatened litigation or proceeding involving a director, officer, employee or agent of the Company in which indemnification would be required or permitted. The Company believes that its Charter provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing, the Company has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

CERTAIN TRANSACTIONS

The Company has loaned James R. Bertelli, President of the Company, an aggregate of \$200,000, of which \$150,000 accrues interest at an annual rate of 9.75% and \$50,000 accrues interest at an annual rate of 10.5%. In addition, the Company has loaned Albert Belle Isle, a Director of the Company, an aggregate of \$125,000, of which \$100,000 accrues interest at an annual interest rate of 8% and \$25,000 accrues interest at 9.25%. The notes evidencing such obligations of Mr. Bertelli and Dr. Belle Isle are payable in full on the earlier of December 31, 1999, or 181 days following the consummation of an initial public offering of the Company's Common Stock.

The Company has granted Memorial Drive Trust, Mr. Bertelli, President and Chief Executive Officer of the Company, and certain other stockholders certain rights with respect to the registration of the Company's securities. See "Description of Capital Stock -- Registration Rights of Certain Holders."

PRINCIPAL AND SELLING STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of the Company's Common Stock as of October 31, 1997 and as adjusted to reflect the sale of the Common Stock offered hereby by, for (i) each person who is known by the Company to own beneficially more than 5% of the outstanding shares of Common Stock, (ii) each of the Company's directors, (iii) each of the Selling Stockholders, (iv) each Named Executive Officer and (v) all directors and executive officers as a group.

NAME AND ADDRESS OF BENEFICIAL OWNER(1)	SHARES BENEFICIALLY OWNED PRIOR TO OFFERING(1)		SHARES TO BE SOLD IN OFFERING	SHARES BENEFICIALLY OWNED AFTER OFFERING(1)	
	NUMBER	PERCENT		NUMBER	PERCENT
Memorial Drive Trust(2).....	2,879,786	36.6%	425,000	2,454,786	24.9%
Massachusetts Mutual Life Insurance Company(3).....	1,000,000	12.7	212,500	787,500	8.0
Data General Corporation(4).....	655,067	8.3	280,500	374,567	3.8
First Stage Capital Limited Partnership(5).....	375,000	4.8	318,750	56,250	*
James R. Bertelli(6).....	437,119	5.5	--	437,119	4.4
Donald Barry(7).....	11,030	*	--	11,030	*
Vincent A. Mancuso.....	--	*	--	--	*
G. Mead Wyman(8).....	44,000	*	--	44,000	*
Gordon Baty(9).....	490,653	6.2	318,750	171,903	1.7
Albert P. Belle Isle(10).....	48,228	*	--	48,228	*
R. Schorr Berman(11).....	2,889,514	36.7	425,000	2,464,514	25.0
Sherman N. Mullin(12).....	6,649	*	--	6,649	*
Melvin Sallen(13).....	23,649	*	--	23,649	*
All directors and executive officers as a group (nine persons)(16).....	3,950,842	49.8	743,750	3,207,092	32.3
OTHER SELLING STOCKHOLDERS					
Robert Frisch(14).....	176,000	2.2	21,250	154,750	1.6
John Nitzsche.....	291,000	3.7	85,000	206,000	2.1
Kathryn Bertelli(15).....	301,500	3.8	10,200	291,300	3.0
Susan L. Ansin.....	140,000	1.8	29,750	110,250	1.1
Patrick B. Maraghy, Trustee(17).....	360,000	4.6	91,800	268,200	2.7
Other Selling Stockholders each owning less than 1% of the Common Stock before the Offering (18 parties)(18).....	314,629	4.0	25,250	289,379	2.9

* Less than one percent

(1) Beneficial ownership is determined in accordance with rules of the Securities and Exchange Commission (the "Commission") and includes general voting power or investment power with respect to securities. Shares of Common Stock subject to options and warrants currently exercisable or exercisable within sixty (60) days of October 31, 1997 are deemed outstanding for computing the percentage of the person holding such options, but are not deemed outstanding for computing the percentage of any other person. Except as otherwise specified below, the persons named in the table above have sole voting and investment power with respect to all shares of Common Stock shown as beneficially owned by them. Unless otherwise indicated, the address of each of the beneficial owners identified is 199 Riverneck Road, Chelmsford, MA 01824.

(2) The address of this beneficial owner is MDT Advisers, Inc., 125 Cambridge Park Drive, Cambridge, MA, attention R. Schorr Berman. Includes 2,036,910 shares issuable upon conversion of Series A Convertible Preferred Stock of the Company. Shares are held of record by MD Co., a partnership organized by Memorial Drive Trust to hold securities on behalf of Memorial Drive Trust.

- (3) Includes 500,000 shares held of record by MassMutual Corporate Investors. The address of these beneficial owners is 1295 State Street, Springfield, MA 01111.
- (4) The address of this beneficial owner is 4400 Computer Drive, Westborough, MA 01580. Includes 306,816 shares issuable upon conversion of Series A Convertible Preferred Stock of the Company.
- (5) The address of this beneficial owner is c/o First Stage Capital Limited Partnership, 101 Main Street, Cambridge, MA 02142.
- (6) Includes options to purchase 17,319 shares exercisable within sixty days of October 31, 1997.
- (7) Consists of options to purchase 11,030 shares exercisable within sixty days of October 31, 1997.
- (8) Includes options to purchase 8,000 shares exercisable within sixty days of October 31, 1997.
- (9) Includes 375,000 shares owned by First Stage Capital Limited Partnership, as to which Mr. Baty may be deemed beneficial owner and as to which Mr. Baty disclaims beneficial ownership except to the extent of his direct pecuniary interest. Includes options to purchase 7,228 shares exercisable within sixty days of October 31, 1997. Mr. Baty is a general partner of First Stage Capital Limited Partnership.
- (10) Includes options to purchase 7,228 shares exercisable within sixty days of October 31, 1997.
- (11) Includes options to purchase 7,228 shares exercisable within sixty days of October 31, 1997. Includes 2,879,786 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 Advisors, Inc., which manages the investments of MD Co. See note (2) above.
- (12) Includes options to purchase 5,399 shares exercisable within sixty days of October 31, 1997.
- (13) Includes options to purchase 5,399 shares exercisable within sixty days of October 31, 1997.
- (14) Includes options to purchase 20,000 shares exercisable within sixty days of October 31, 1997.
- (15) Includes 270,000 shares held of record by Kathryn Bertelli 1995 Irrevocable Trust, of which Ms. Bertelli serves as a trustee, 1,500 shares held as custodian for Heidi Bertelli and 30,000 shares held of record by Kathryn Bertelli.
- (16) Includes options to purchase 68,831 shares exercisable within sixty days of October 31, 1997.
- (17) Includes 210,000 shares held as a Trustee of Lawrence J. Ansin 1990 Revocable Trust -- Trust A-2, 75,000 shares held as a Trustee of Gregory David Ansin 1992 Irrevocable Trust and 75,000 shares held as a Trustee of Lisa Ansin 1988 Irrevocable Trust.
- (18) Includes options to purchase 22,504 shares exercisable within sixty days of October 31, 1997.

DESCRIPTION OF CAPITAL STOCK

Effective upon the closing of the Offering, the Company's authorized capital stock will consist of 25,000,000 shares of Common Stock and 1,000,000 shares of Preferred Stock, par value \$.01 per share and will have 9,864,023 shares of Common Stock outstanding, assuming no exercise of options after October 31, 1997. As of October 31, 1997, an aggregate of 5,307,231 shares of Common Stock were held of record by 148 stockholders, and 852,264 shares of Preferred Stock were outstanding and held of record by three stockholders. All shares of Preferred Stock will be converted into Common Stock upon the completion of this offering at the rate of three shares of Common Stock for each share of Preferred Stock. Copies of the Charter and Bylaws have been filed as exhibits to the Registration Statement and are incorporated by reference herein.

COMMON STOCK

All outstanding shares of Common Stock are, and the Common Stock offered hereby will be, fully paid and nonassessable. The holders of Common Stock are entitled to one vote for each share held of record on all matters voted upon by Stockholders and may not cumulate votes. Subject to the rights of holders of any future series of undesignated preferred stock which may be designated, each share of the outstanding Common Stock is entitled to participate equally in any distribution of net assets made to the Stockholders in the liquidation, dissolution or winding up of the Company and is entitled to participate equally in dividends as and when declared by the Board of Directors. There are no redemption, sinking fund, conversion or preemptive rights with respect to the shares of Common Stock. All shares of Common Stock have equal rights and preferences.

PREFERRED STOCK

Upon the completion of this Offering, all of the outstanding Preferred Stock will be converted into Common Stock. After the completion of this Offering, the Board of Directors will have the authority, without further stockholder approval, to issue 1,000,000 shares of preferred stock where defined in one or more series and to fix the relative rights, preferences, privileges, qualifications, limitations and restrictions thereof, including dividend rights, dividend rates, conversion rights, voting rights, terms of redemption, redemption prices, liquidation preferences and the number of shares constituting any series or the designation of such series. The issuance of preferred stock, while potentially providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of delaying, deferring or preventing a change in control of the Company, may discourage bids for the Common Stock at a premium over the market price of the Common Stock and may adversely affect the market price of, and the voting and other rights of the holders of the Common Stock. No shares of preferred stock will be outstanding immediately following the completion of this Offering. The Company has no present plans to issue any shares of Preferred Stock. See "Risk Factors -- Anti-takeover Provisions; Possible Issuance of Preferred Stock."

REGISTRATION RIGHTS OF CERTAIN HOLDERS

The holders of 6,505,264 shares of Common Stock (the "Registrable Securities") or their transferees are entitled to certain rights with respect to the registration of such shares under the Securities Act. These rights are provided under the terms of certain agreements, by and among the Company and the holders of the Registrable Securities. No shares being registered for the account of Selling Stockholders are being registered pursuant to these registration rights. Upon consummation of the Offering and subject to certain limitations in the applicable agreements, holders of 5,078,794 shares of Registrable Securities may request registration under the Securities Act of all or part of their Registrable Securities, six months after the effective date of the Offering. If the Company registers any of its Common Stock either for its own account or for the account of other security holders, the holders of 5,078,794 shares of Registrable Securities are entitled to include their shares of Common Stock in the registration, subject to pro rata cutback. All registration expenses must be borne by the Company and all selling expenses relating to Registrable Securities must be borne by the holders of the securities being registered. In addition, certain holders of Registrable Securities may request registration under the Securities Act of all or part of their Registrable Securities on Form S-3 if use of such form becomes available to the Company.

Pursuant to a Stock Purchase Agreement, dated as of January 20, 1984, among the Company and certain of its stockholders, (i) Memorial Drive Trust and other investors (together, the "Investors") purchased an aggregate of 852,264 shares of the Company's Series A Convertible Preferred Stock for an aggregate consideration of \$1,200,000; and (ii) the Investors received so-called "demand" registration rights, and the Investors, James R. Bertelli, a director and President of the Company, Gordon Baty, a director of the Company, and certain other stockholders of the Company received so-called "piggyback" registration rights.

Pursuant to a Debenture Agreements, dated December 21, 1987, between the Company and each of Massachusetts Mutual Life Insurance Company and MassMutual Corporate Investors (together "Massachusetts Mutual"), Massachusetts Mutual received so-called "demand" and "piggyback" registration rights. Under these Debenture Agreements, the Company sold to Massachusetts Mutual \$3,000,000 in principal amount of convertible debentures. On March 1, 1993, these debentures were converted into 1,000,000 shares of Common Stock which are covered by the registration rights described above.

No predictions can be made as to the effect, if any, that future sales of shares, or the availability of shares for future sales, will have on the prevailing market price for the Common Stock. Sales of substantial amounts of Common Stock, or the perception that such sales could occur, could adversely affect prevailing market prices for the Common Stock and could impair the Company's future ability to obtain capital through an offering of equity securities. See "Risk Factors -- Shares Eligible for Future Sale."

CERTAIN ARTICLES OF ORGANIZATION, BYLAWS AND STATUTORY PROVISIONS AFFECTING STOCKHOLDERS

Classified Board and Other Matters. The Board of Directors will be divided into three classes, each of which, after a transitional period, will serve until the third annual meeting of stockholders after their election, with one class being elected each year. Since the classification of directors has already been established, investors purchasing Common Stock in the Offering will not have an opportunity to vote on the classification. Under the Massachusetts General Laws, in the case of a corporation having a classified Board, Stockholders may remove a director only for cause. The Bylaws require that stockholders provide the Clerk of the Company 60 days advance notice prior to the date set forth in the Bylaws for an annual meeting of Stockholders or special meeting in lieu thereof for the purpose of any director nominations or within ten (10) days notice after notice of a special meeting not in lieu of annual meeting. The Bylaws provide that special meetings of stockholders of the Company may be called only by the Board of Directors, the President or 30% in interest of the stockholders. The Bylaws as well as applicable provisions of the Massachusetts General Laws, provide that no action required or permitted to be taken at any annual or special meeting of the stockholders of the Company may be taken without a meeting, unless the unanimous consent of stockholders entitled to vote thereon is obtained. The affirmative vote of the holders of at least 80% of the combined voting power of then outstanding voting stock of the Company will be required to alter, amend or repeal the foregoing provisions; provided, however, that if any proposal to alter any of the foregoing provisions receives the affirmative vote of a majority of the directors, then such proposal shall require only the affirmative vote of the holders of a majority of the outstanding voting stock of the Company. Such supermajority voting provisions diminish the likelihood that a potential acquirer would make an offer for the Common Stock, impede a transaction favorable to the interest of the stockholders or increase the difficulty of removing a number of Board of Directors or management. See "Risk Factors -- Anti-Takeover Provisions; Possible Issuance of Preferred Stock."

Chapters 110D and 110F of Massachusetts General Laws. The Company is subject to the provisions of Chapter 110F of the Massachusetts General Laws, an anti-takeover law. In general, this statute prohibits a publicly held Massachusetts corporation with sufficient ties to Massachusetts from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person becomes an interested stockholder, unless either (i) the interested stockholder obtains the approval of the board of directors prior to becoming an interested stockholder, (ii) the interested stockholder acquires 90% of the outstanding voting stock of the corporation (excluding shares held by certain affiliates of the corporation) at the time he becomes an interested stockholder or (iii) the business combination is approved by both the board of directors and two-thirds of the outstanding voting stock of the corporation (excluding shares held by the interested stockholder) at an annual or special meeting of stockholders, not by written consent. An interested stockholder is a person who, together with affiliates and associates, owns 5% or

more of the Corporation's outstanding voting stock or who is an affiliate at any time within the prior three years did own 5% or more of the corporation's voting stock. Voting control obtained by means of a revocable proxy will not trigger the implications of Chapter 110F of the Massachusetts General Laws. A "business combination" includes mergers, stock and asset sales and other transactions resulting in a financial benefit to the stockholder. The Company may at any time amend its Articles of Organization or Bylaws to elect not to be governed by Chapter 110F, by vote of the holders of a majority of its voting stock, but such an amendment would not be effective for twelve months and would not apply to a business combination with any person who became an interested stockholder prior to the date of the amendment.

The Company is also subject to the provisions of Chapter 110D of the Massachusetts General Laws, entitled "Regulation of Control Share Acquisitions." This statute provides, in general, that any stockholder who acquires 20% or more of the outstanding voting stock of a corporation subject to this statute may not vote that stock unless the stockholders of the corporation so authorize. Voting control obtained by means of a revocable proxy will not trigger the implications of Chapter 110D of the Massachusetts General Laws. In addition, Chapter 110D permits a corporation to provide in its articles of organization or bylaws that the corporation may redeem (for fair value) all the shares thereafter acquired in a control share acquisition if voting rights for those shares were not authorized by the stockholders or if no control share acquisition statement was delivered. The Charter includes a provision which permits the Company to effect such redemptions. See "Risk Factors."

Directors Liability. The Charter provides that no director shall be personally liable to the Company or its stockholders for monetary damages for breach of fiduciary duty as a director, except for (i) any breach of the directors's duty of loyalty to the Company or its Stockholders; (ii) acts or omissions which has been adjudicated not to be in good faith or to have involved intentional misconduct; (iii) acts covered by Massachusetts General Laws, Chapter 156B, Section 61, which imposes personal liability upon directors voting for distributions to stockholders which are prohibited by a company's Articles of Organization or for which a company has insufficient funds to make legally; (iv) acts covered by Massachusetts General Laws, Chapter 156B, Section 62, which imposes personal liability for directors in the event Company loans to its officers and directors are not repaid; or (v) any transaction from which such director derives improper personal benefit. The effect of this provision is to eliminate the rights of the Company and its stockholders (through stockholders' derivative suits on behalf of the Company) to recover monetary damages against a director for breach of the fiduciary duty of care as a director (including breaches resulting from negligent or grossly negligent behavior) except in the situations described in clauses (i) through (iv) above. The limitations summarized above, however, do not affect the ability of the Company or its stockholders to seek non-monetary based remedies, such as an injunction or rescission, against a director for breach of his fiduciary duty nor would such limitations limit liability under the federal securities laws. The Bylaws provide that the Company shall, to the full extent permitted by the Massachusetts General Laws as currently in effect, indemnify and advance expenses to each of its currently acting and former directors, officers, employees and agents arising in connection with their acting in such capacities.

TRANSFER AGENT AND REGISTRAR

Boston EquiServe will serve as the transfer agent and registrar for the Common Stock.

SHARES ELIGIBLE FOR FUTURE SALE

Upon completion of the Offering, the Company will have outstanding 9,864,023 shares of Common Stock, assuming no exercise of options after October 31, 1997. Of these shares, the 3,500,000 shares offered hereby (4,025,000 shares if the Underwriters' over-allotment options are exercised in full) will be freely tradeable without restriction or further registration under the Securities Act, unless purchased by "affiliates" of the Company as that term is defined in Rule 144 described below. The remaining 6,364,023 shares of Common Stock (6,069,673 shares if the Underwriters' over-allotment options are exercised in full) outstanding upon closing of the Offering are "restricted securities" as that term is defined in Rule 144. Of the remaining 6,364,023 shares (6,069,673 shares if the Underwriters' over-allotment options are exercised in full), 6,024,578 shares are subject to lock-up agreements (described below).

Upon completion of the Offering, 2,231,063 shares, including shares subject to the lock-up restrictions described below, will become eligible for immediate sale pursuant to Rule 144(k) and, beginning 90 days after commencement of the Offering, an additional 4,107,809 shares, including shares subject to the lock-up restrictions described below, will become eligible for sale pursuant to Rule 144 or Rule 701 under the Securities Act ("Rule 701"). The 25,250 remaining shares held by existing stockholders will become eligible for sale at various times over a period of less than one year. In addition, 463,517 shares of Common Stock subject to outstanding vested stock options could also be sold, subject in some cases to compliance with certain volume limitations as described below. Upon expiration of the lock-up agreements, an aggregate of 2,127,266 shares will become immediately eligible for sale without restriction pursuant to Rule 144(k) or Rule 701 (described below), and approximately 3,924,311 additional shares will be eligible for sale subject to the timing, volume, and manner of sale restrictions of Rule 144.

In general, under Rule 144, as recently amended, a person (or persons whose shares are aggregated) who has beneficially owned shares for at least one year (including the holding period of any prior owner except an affiliate from whom such shares were purchased) is entitled to sell in "brokers' transactions" or to market makers, within any three-month period commencing 90 days after the date of this Prospectus, a number of shares that does not exceed the greater of (i) one percent of the number of shares of Common Stock then outstanding (approximately 98,640 shares immediately after the completion of the Offering) or (ii) generally, the average weekly trading volume in the Common Stock during the four calendar weeks preceding the required filing of a Form 144 with respect to such sale. Sales under Rule 144 are subject to the availability of current public information about the Company. Under Rule 144(k), a person who is not deemed to have been an affiliate of the Company at any time during the 90 days preceding a sale, and who has beneficially owned the shares proposed to be sold for at least two years (including the holding period of any prior owner other than an affiliate from whom such shares were purchased), is entitled to sell such shares without having to comply with the manner of sale, public information, volume limitation or notice provisions of Rule 144. Under Rule 701, persons who purchase shares upon exercise of options granted prior to the effective date of the Offering are entitled to sell such shares 90 days after the effective date of the Offering in reliance on the resale provisions of Rule 701, which are similar to the resale provisions of Rule 144, except such persons do not have to comply with the holding period requirements of Rule 144 and, in the case of non-affiliates, such persons do not have to comply with the public information, volume limitation or notice provisions of Rule 144.

Pursuant to the lock-up agreements, the Company, its executive officers and directors, the Selling Stockholders and certain other stockholders have agreed that they will not, without the prior written consent of Prudential Securities Incorporated, on behalf of the Underwriters, directly or indirectly, offer, sell, offer to sell, contract to sell, pledge, grant any option to purchase or otherwise sell or dispose (or announce any offer, sale, offer of sale, contract of sale, pledge, grant of any option to purchase or other sale or disposition) of any shares of Common Stock or any securities convertible into, or exercisable or exchangeable for, any shares of Common Stock, or other similar securities of the Company for a period of 180 days from the date of this Prospectus, except that such agreements do not prevent the Company from granting additional options under the Stock Option Plans or from issuing shares pursuant to the 1997 Purchase Plan. After such 180 day period, this restriction will expire and shares permitted to be sold under Rule 144 will be eligible for sale. Prudential

Securities Incorporated may, in its sole discretion, at any time and without prior notice, release all or any portion of the shares of Common Stock subject to such lock-up agreements.

The holders of an aggregate of 6,505,264 shares of Common Stock or their transferees are entitled to certain rights with respect to the registration of such shares under the Securities Act. See "Description of Capital Stock -- Registration Rights of Certain Holders."

The Company currently intends to file one or more registration statements on Form S-8 with the Commission in order to register the 1,719,700 shares of Common Stock subject to the Stock Option Plans and the 1997 Purchase Plan.

Prior to the Offering, there has not been any public market for the Common Stock. Future sales of substantial amounts of Common Stock in the public market could adversely affect the prevailing market prices and impair the Company's ability to raise capital through the sale of equity securities.

UNDERWRITING

The Underwriters named below (the "Underwriters"), for whom Prudential Securities Incorporated and Cowen & Company are acting as representatives (the "Representatives"), have severally agreed, subject to the terms and conditions contained in the Underwriting Agreement, to purchase from the Company and the Selling Stockholders the number of shares of Common Stock set forth opposite their respective names:

UNDERWRITERS	NUMBER OF SHARES
-----	-----
Prudential Securities Incorporated.....	
Cowen & Company.....	

Total.....	3,500,000
	=====

The Company and the Selling Stockholders are obligated to sell, and the Underwriters are obligated to purchase, all of the shares of Common Stock offered hereby if any are purchased.

The Underwriters, through their Representatives, have advised the Company and the Selling Stockholders that they propose to offer the shares of Common Stock initially at the public offering price set forth on the cover page of this Prospectus; that the Underwriters may reallow to selected dealers a concession of \$ _____ per share; and that such dealers may reallow a concession of \$ _____ per share to certain other dealers. After the initial public offering, the offering price and the concessions may be changed by the Representatives.

The Company and certain Selling Stockholders have granted to the Underwriters over-allotment options, exercisable for 30 days from the date of this Prospectus, to purchase, in the aggregate, up to 525,000 additional shares of Common Stock at the initial public offering price, less underwriting discounts and commissions, as set forth on the cover page of this Prospectus. The Underwriters may exercise such options solely for the purpose of covering over-allotments incurred in the sale of the shares of Common Stock offered hereby. To the extent such options to purchase are exercised, each Underwriter will become obligated, subject to certain conditions, to purchase approximately the same percentage of such additional shares as the number set forth next to such Underwriter's name in the preceding table bears to 3,500,000.

The Company and the Selling Stockholders have agreed to indemnify the several Underwriters and contribute to any losses arising out of certain liabilities, including liabilities under the Securities Act.

The Representatives have informed the Company and the Selling Stockholders that the Underwriters do not intend to confirm sales to any accounts over which they exercise discretionary authority.

The Company, its executive officers and directors and certain Stockholders, including the Selling Stockholders, have agreed that they will not, for a period of 180 days subsequent to the date of this Prospectus, directly or indirectly, offer, sell, offer to sell, contract to sell, pledge, grant any option to purchase or otherwise sell or dispose (or announce any offer, sale, offer of sale, contract of sale, pledge, grant of any option to purchase or other sale or disposition) of any shares of Common Stock or securities substantially similar thereto, or any securities convertible into or exercisable or exchangeable for, any shares of Common Stock or

securities substantially similar thereto of the Company without the prior written consent of Prudential Securities Incorporated, on behalf of the Underwriters, except that such agreements do not prevent the Company from granting additional options under the Stock Option Plan. Further, certain holders of outstanding vested stock options are subject to 180 day lock-up agreements with the Company and/or Prudential Securities Incorporated. Prudential Securities Incorporated may in its sole discretion at any time and without notice, release all or any portion of the securities subject to such lock-up agreements.

Prior to the Offering, there has been no public market for the Common Stock of the Company. Consequently, the initial public offering price will be determined through negotiations between the Company and the Representatives. Among the factors to be considered in making such determination will be the prevailing market conditions, the Company's financial and operating history and condition, its prospects and the prospects for its industry in general, the management of the Company and the market prices of securities for companies in businesses similar to that of the Company.

In connection with the Offering, certain Underwriters and selling group members (if any) and their respective affiliates may engage in transactions that stabilize, maintain or otherwise affect the market price of the Common Stock. Such transactions may include stabilization transactions effected in accordance with Rule 104 of Regulation M, pursuant to which such persons may bid for or purchase Common Stock for the purpose of stabilizing its market price. The Underwriters also may create a short position for the account of the Underwriters by selling more Common Stock in connection with the Offering than they are committed to purchase from the Company and the Selling Stockholders, and in such case may purchase Common Stock in the open market following the closing of the Offering to cover all or a portion of such short position. The Underwriters may also cover all or a portion of such short position, up to 525,000 shares of Common Stock, by exercising the Underwriters' over-allotment options referred to above. In addition, Prudential Securities Incorporated, on behalf of the Underwriters, may impose "penalty bids" under contractual arrangements with the Underwriters whereby it may reclaim from an Underwriter (or dealer participating in the Offering) for the account of the other Underwriters, the selling concession with respect to Common Stock that is distributed in the Offering but subsequently purchased for the account of the Underwriters in the open market. Any of the transactions described in this paragraph may result in the maintenance of the price of the Common Stock at a level above that which might otherwise prevail in the open market. None of the transactions described in this paragraph is required, and, if they are undertaken, they may be discontinued at any time.

LEGAL MATTERS

The validity of the shares of Common Stock offered hereby will be passed upon for the Company and the Selling Stockholders by Hutchins, Wheeler & Dittmar, A Professional Corporation, Boston, Massachusetts. Anthony J. Medaglia, Jr., a Stockholder of Hutchins, Wheeler & Dittmar and the Clerk of the Company, owns 17,250 shares directly, 8,000 shares indirectly as Trustee and options to purchase 5,000 shares of Common Stock, of which options to purchase 2,500 shares are currently exercisable. James Westra, a Stockholder of Hutchins, Wheeler & Dittmar and a Selling Stockholder, owns 6,000 shares of Common Stock. Certain legal matters in connection with the Offering will be passed upon for the Underwriters by Testa, Hurwitz & Thibeault, LLP, Boston, Massachusetts.

EXPERTS

The consolidated balance sheets of Mercury Computer Systems, Inc. as of June 30, 1996 and 1997 and the consolidated statements of operations, changes in stockholders' equity and cash flows for each of the three years in the period ended June 30, 1997, included in this Prospectus, have been included herein in reliance on the report of Coopers & Lybrand L.L.P., independent accountants, on the authority of that firm as experts in accounting and auditing.

ADDITIONAL INFORMATION

The Company has filed with the Commission, Washington, D.C. 20549 a Registration Statement on Form S-1 under the Securities Act with respect to the shares of Common Stock offered hereby. This Prospectus does not contain all of the information set forth in the Registration Statement and the exhibits and schedules thereto. For further information with respect to the Company and such Common Stock, reference is hereby made to such Registration Statement and to the exhibits and schedules filed therewith. Statements contained in this Prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, reference is made to the copy of such contract or other document filed as an exhibit to the Registration Statement, each such statement being qualified in all respects by such reference. A copy of the Registration Statement may be inspected by anyone without charge at the Commission's principal office in Washington, D.C., and copies of all or any part of the Registration Statement may be obtained from the Public Reference Section of the Commission, 450 Fifth Street, N.W. Washington, D.C. 20549, upon payment of certain fees prescribed by the Commission. The Commission maintains a World Wide Website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Commission. The address of the website is <http://www.sec.gov>.

Upon completion of the Offering, the Company will be subject to the information reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and, in accordance therewith, will file reports, proxy statements and other information with the Commission.

The Company intends to furnish its Stockholders with annual reports containing financial statements audited by the Company's independent public accountants and quarterly reports for the first three fiscal quarters of each fiscal year containing unaudited interim financial information.

RACE(R) is a registered trademark of the Company. Mercury, Mercury Computer Systems, the Mercury logo, SuiteFusion, MC/OS, PAS, SuperVision and PeakWare are trademarks of the Company. SHARC is a trademark of Analog Devices, Inc. and PowerPC(R) is a registered trademark of Motorola, Inc. Trademarks of others are also referred to in this Prospectus.

MERCURY COMPUTER SYSTEMS, INC.
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REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Stockholders of
Mercury Computer Systems, Inc.:

We have audited the accompanying consolidated balance sheets of Mercury Computer Systems, Inc. as of June 30, 1996 and 1997, and the related consolidated statements of operations, changes in stockholders' equity, and cash flows for each of the three years in the period ended June 30, 1997. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Mercury Computer Systems, Inc. as of June 30, 1996 and 1997, and the consolidated results of its operations and its cash flows for each of the three years in the period ended June 30, 1997, in conformity with generally accepted accounting principles.

COOPERS & LYBRAND L.L.P.

Boston, Massachusetts

August 28, 1997, except for
the information in the final
paragraph of Note F,
as to which the date is
December 12, 1997

MERCURY COMPUTER SYSTEMS, INC.
 CONSOLIDATED BALANCE SHEETS
 (IN THOUSANDS, EXCEPT SHARE DATA)

	JUNE 30,		SEPTEMBER 30,
	1996	1997	1997
			(UNAUDITED)
ASSETS			
Current assets:			
Cash and cash equivalents.....	\$ 9,704	\$15,193	\$16,035
Trade accounts receivable, net of allowance for doubtful accounts of \$80, \$119 and \$119 at June 30, 1996 and 1997, and September 30, 1997, respectively.....	10,236	12,816	12,370
Trade notes receivable.....	312	--	--
Contracts in progress.....	--	1,096	1,997
Inventory.....	7,188	8,314	8,905
Deferred income taxes, net.....	328	926	1,152
Prepaid expenses and other current assets.....	521	728	988
	-----	-----	-----
Total current assets.....	28,289	39,073	41,447
Property and equipment, net.....	4,394	4,984	5,650
Capitalized software development costs, net.....	371	483	363
Deferred income taxes, net.....	40	39	145
Other assets.....	170	269	300
	-----	-----	-----
Total assets.....	\$33,264	\$44,848	\$47,905
	=====	=====	=====
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities:			
Accounts payable.....	\$ 1,710	\$ 2,801	\$ 2,316
Accrued expenses.....	760	1,903	2,679
Accrued compensation.....	1,639	2,316	2,351
Billings in excess of revenues and customer advances....	393	2,877	3,366
Income taxes payable.....	233	1,629	2,082
	-----	-----	-----
Total current liabilities.....	4,735	11,526	12,794
Commitments and contingencies (Note F)			
Stockholders' equity:			
Preferred Stock, \$.01 par value; 2,000,000 shares authorized: 1,000,000 shares designated as Series A Convertible Preferred Stock, 852,264 shares issued and outstanding (liquidation preference of \$1,200,000).....	1,200	1,200	1,200
Common Stock, \$.01 par value; 25,000,000 shares authorized, 5,083,231, 5,202,231 and 5,269,181 shares issued and outstanding at June 30, 1996 and 1997, and September 30, 1997, respectively.....	51	52	53
Additional paid-in capital.....	5,434	5,703	5,846
Retained earnings.....	22,141	26,752	28,358
Cumulative translation adjustment.....	3	(60)	(21)
Subscriptions and related parties notes receivable.....	(300)	(325)	(325)
	-----	-----	-----
Total stockholders' equity.....	28,529	33,322	35,111
	-----	-----	-----
Total liabilities and stockholders' equity.....	\$33,264	\$44,848	\$47,905
	=====	=====	=====

The accompanying notes are an integral part of the consolidated financial statements.

MERCURY COMPUTER SYSTEMS, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS
(IN THOUSANDS, EXCEPT PER SHARE DATA)

	YEAR ENDED JUNE 30,			THREE MONTHS ENDED SEPTEMBER 30,	
	1995	1996	1997	1996	1997
				(UNAUDITED)	
Revenues.....	\$54,323	\$58,300	\$64,574	\$13,038	\$19,039
Cost of revenues.....	21,221	24,688	22,034	4,538	6,661
Gross profit.....	33,102	33,612	42,540	8,500	12,378
Operating expenses:					
Selling, general and administrative....	15,798	16,927	22,631	4,726	6,645
Research and development.....	8,586	9,776	12,837	2,405	3,381
Total operating expenses.....	24,384	26,703	35,468	7,131	10,026
Income from operations.....	8,718	6,909	7,072	1,369	2,352
Interest income.....	278	561	582	136	233
Interest expense.....	(38)	(13)	(22)	--	(2)
Other income (expense), net.....	22	(77)	(88)	(23)	83
Income before income tax provision.....	8,980	7,380	7,544	1,482	2,666
Income tax provision.....	2,636	2,952	2,933	576	1,060
Net income.....	\$ 6,344	\$ 4,428	\$ 4,611	\$ 906	\$ 1,606
Net income per common share.....	\$0.77	\$0.54	\$0.57	\$0.11	\$0.20
Weighted average number of common and common equivalent shares outstanding...	8,256	8,264	8,157	8,191	8,174

The accompanying notes are an integral part of the consolidated financial statements.

MERCURY COMPUTER SYSTEMS, INC.

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
 FOR THE YEARS ENDED JUNE 30, 1995, 1996 AND 1997 AND
 FOR THE THREE MONTHS ENDED SEPTEMBER 30, 1997 (UNAUDITED)
 (IN THOUSANDS)

	SERIES A CONVERTIBLE PREFERRED STOCK		COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	RETAINED EARNINGS	CUMULATIVE TRANSLATION ADJUSTMENT	SUBSCRIPTIONS AND RELATED PARTIES NOTES RECEIVABLE	TOTAL STOCKHOLDERS' EQUITY
	SHARES	AMOUNT	SHARES	AMOUNT					
Balance, June 30, 1994...	852	\$1,200	4,963	\$ 50	\$4,242	\$11,369	\$ 17	\$(188)	\$16,690
Issuance of Notes Receivable to Related Parties.....								(120)	(120)
Exercise of Common Stock options and subscription repayment.....			49	--	40			8	48
Conversion of Series B Convertible Redeemable Preferred Stock.....					1,000				1,000
Net income.....						6,344			6,344
Foreign currency translation.....							41		41
Balance, June 30, 1995...	852	1,200	5,012	50	5,282	17,713	58	(300)	24,003
Exercise of Common Stock options.....			71	1	152				153
Net income.....						4,428			4,428
Foreign currency translation.....							(55)		(55)
Balance, June 30, 1996...	852	1,200	5,083	51	5,434	22,141	3	(300)	28,529
Issuance of Notes Receivable to Related Parties.....								(25)	(25)
Exercise of Common Stock options.....			86	1	137				138
Issuance of Common Stock.....			33	--	132				132
Net income.....						4,611			4,611
Foreign currency translation.....							(63)		(63)
Balance, June 30, 1997...	852	1,200	5,202	52	5,703	26,752	(60)	(325)	33,322
Exercise of Common Stock options and warrants...			67	1	143				144
Net income.....						1,606			1,606
Foreign currency translation.....							39		39
Balance, September 30, 1997 (Unaudited).....	852	\$1,200	5,269	\$ 53	\$5,846	\$28,358	\$(21)	\$(325)	\$35,111

The accompanying notes are an integral part of the consolidated financial statements.

MERCURY COMPUTER SYSTEMS, INC.
 CONSOLIDATED STATEMENTS OF CASH FLOWS
 (IN THOUSANDS)

	YEAR ENDED JUNE 30,			THREE MONTHS ENDED SEPTEMBER 30,	
	1995	1996	1997	1996	1997
	(UNAUDITED)				
Cash flows from operating activities:					
Net income.....	\$ 6,344	\$ 4,428	\$ 4,611	\$ 906	\$ 1,606
Adjustments to reconcile net income to net cash provided by operating activities:					
Depreciation and amortization of property and equipment.....	1,594	2,020	2,855	518	685
Amortization of capitalized software development costs.....	--	--	438	136	120
Provision for doubtful accounts.....	--	--	40	--	--
Deferred income taxes.....	79	242	(596)	(117)	(332)
Other noncash items.....	--	88	87	14	27
Changes in assets and liabilities:					
Trade accounts receivable.....	996	(2,235)	(2,710)	(53)	446
Trade notes receivable.....	--	(312)	296	(1,163)	--
Contracts in progress.....	--	--	(1,096)	--	(901)
Inventory.....	(4,302)	5,231	(1,158)	135	(591)
Prepaid expenses and other current assets.....	(5)	(103)	(246)	(22)	(260)
Income taxes receivable.....	959	--	--	--	--
Other assets.....	(46)	(158)	(101)	(238)	(31)
Accounts payable.....	(148)	(16)	1,081	(199)	(485)
Accrued expenses and compensation....	(46)	503	1,846	312	812
Billings in excess of revenues and customer advances.....	4,137	(5,090)	2,472	(79)	489
Income taxes payable.....	525	(291)	1,403	693	453
Net cash provided by operating activities....	<u>10,087</u>	<u>4,307</u>	<u>9,222</u>	<u>843</u>	<u>2,038</u>
Cash flows from investing activities:					
Purchases of property and equipment.....	(2,101)	(2,924)	(3,457)	(567)	(1,358)
Capitalized software development costs.....	--	(371)	(550)	(324)	--
Notes receivable from related parties.....	(120)	--	(25)	--	--
Net cash used in investing activities.....	<u>(2,221)</u>	<u>(3,295)</u>	<u>(4,032)</u>	<u>(891)</u>	<u>(1,358)</u>
Cash flows from financing activities:					
Principal payments under capital lease obligations.....	(73)	--	--	--	--
Proceeds from issuance of Common Stock....	40	153	270	2	144
Subscription repayment.....	8	--	--	--	--
Net cash provided by (used in) financing activities.....	<u>(25)</u>	<u>153</u>	<u>270</u>	<u>2</u>	<u>144</u>
Net increase in cash and cash equivalents....	<u>7,841</u>	<u>1,165</u>	<u>5,460</u>	<u>(46)</u>	<u>824</u>
Effect of exchange rate changes on cash and cash equivalents.....	38	(52)	29	(8)	18
Cash and cash equivalents at beginning of period.....	<u>712</u>	<u>8,591</u>	<u>9,704</u>	<u>9,704</u>	<u>15,193</u>
Cash and cash equivalents at end of period...	<u>\$ 8,591</u>	<u>\$ 9,704</u>	<u>\$15,193</u>	<u>\$ 9,650</u>	<u>\$16,035</u>
Cash paid during the period for:					
Interest.....	\$ 38	\$ 13	\$ 22	--	\$ 2
Income taxes.....	2,177	2,901	2,133	--	939
Noncash transactions:					
Series B Convertible Redeemable Preferred Stock converted to additional paid-in capital.....	\$ 1,000	--	--	--	--

The accompanying notes are an integral part of the consolidated financial statements.

MERCURY COMPUTER SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(TABLES IN THOUSANDS EXCEPT FOR SHARE AND PER SHARE DATA)
INFORMATION AS OF SEPTEMBER 30, 1997, AND FOR THE THREE MONTHS ENDED
SEPTEMBER 30, 1996 AND 1997, IS UNAUDITED

A. DESCRIPTION OF BUSINESS:

Mercury Computer Systems, Inc. (the "Company") designs, manufactures and markets high performance real-time digital signal processing computer systems which transform sensor generated data into information which can be displayed as images for human interpretation or subjected to additional computer analysis. These multicomputer systems are heterogeneous and scalable, allowing them to accommodate several different microprocessor types and to scale from a few to hundreds of microprocessors within a single system. The two primary markets for the Company's products are defense electronics and medical diagnostic imaging. Both of these markets have computing needs which benefit from the unique system architecture developed by the Company.

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

Basis of Presentation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All material intercompany transactions and balances have been eliminated.

Interim Financial Information

The consolidated financial statements of the Company as of September 30, 1997 and for the three months ended September 30, 1996 and 1997 are unaudited. All adjustments (consisting only of normal recurring adjustments) have been made which, in the opinion of management, are necessary for a fair presentation. Results of operations for the three months ended September 30, 1997 are not necessarily indicative of the results that may be expected for any future period.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

Revenue Recognition

Revenue from product sales is generally recorded upon shipment to the customer provided that no significant vendor obligations remain outstanding and collection of the related receivable is deemed probable by management. If insignificant vendor obligations remain after shipment of the product, the Company accrues for the estimated costs of such obligations. Additionally, the Company accrues for warranty costs upon shipment. Service revenue is recognized ratably over applicable contract periods or as the services are performed. Revenue from contracts involving significant product modification or customization is recognized using the percentage-of-completion accounting method on an efforts-expended basis. Changes to total estimated costs and anticipated losses, if any, are recognized in the period in which determined. No revenue was recognized under the percentage of completion method for the fiscal years ended June 30, 1995 and 1996, and the three months ended September 30, 1996. Approximately \$2,102,000 and \$901,000 of revenue was recognized under the percentage-of-completion method for the fiscal year ended June 30, 1997, and the three months ended September 30, 1997, respectively. There were no retainages at June 30, 1996 and 1997 and September 30, 1997.

MERCURY COMPUTER SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
 (TABLES IN THOUSANDS EXCEPT FOR SHARE AND PER SHARE DATA)
 INFORMATION AS OF SEPTEMBER 30, 1997, AND FOR THE THREE MONTHS ENDED
 SEPTEMBER 30, 1996 AND 1997, IS UNAUDITED

Contracts in Progress

Contracts in progress include costs and estimated profits under uncompleted contracts accounted for using the percentage-of-completion method, net of amounts billed. Amounts billed at June 30, 1996 and 1997 and September 30, 1997, which were netted against costs and estimated profits, were \$0, \$1,016,000 and \$1,091,000, respectively. Amounts billed at September 30, 1997 are expected to be collected within the next twelve months.

Billings in Excess of Revenues and Customer Advances

Billings in excess of revenues and customer advances include amounts billed on uncompleted contracts accounted for using the percentage-of-completion method net of costs and estimated profits recognized.

Cash and Cash Equivalents

Cash equivalents, consisting of money market funds and U.S. government and U.S. government agency issues with original maturities of 90 days or less, are carried at cost which approximates fair value.

Concentration of Credit Risk

Financial instruments which potentially expose the Company to concentrations of credit risk consist principally of cash and trade accounts receivable. The Company places its cash and cash equivalents with financial institutions which management believes are of high credit quality. At September 30, 1997, the Company had approximately \$15,489,000 on deposit or invested with its primary financial and lending institution.

One customer accounted for approximately 19% and 57% of the accounts receivable balances at June 30, 1996 and 1997, respectively. Two other customers accounted for approximately 15% and 12% of the accounts receivable balance at June 30, 1996, respectively. Three customers accounted for approximately 17%, 16% and 10%, respectively, of the accounts receivable balance at September 30, 1997. The Company performs ongoing credit evaluations of its customers and maintains reserves for potential credit losses. Such losses have historically been within management's expectations.

Inventory

Inventory is stated at the lower of cost, determined on the first-in, first-out (FIFO) basis, or market.

Property and Equipment

Property and equipment are recorded at cost. Depreciation is based on the following estimated useful lives of the assets using the straight-line method:

Computer equipment.....	1-3 years
Machinery and equipment.....	5 years
Furniture and fixtures.....	5 years
Leasehold improvements.....	Shorter of the lease term or economic life

Expenditures for additions, renewals and betterments of property and equipment are capitalized. Expenditures for repairs and maintenance are charged to expense as incurred. As assets are retired or sold, the

MERCURY COMPUTER SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
(TABLES IN THOUSANDS EXCEPT FOR SHARE AND PER SHARE DATA)
INFORMATION AS OF SEPTEMBER 30, 1997, AND FOR THE THREE MONTHS ENDED
SEPTEMBER 30, 1996 AND 1997, IS UNAUDITED

related cost and accumulated depreciation are removed from the accounts and any resulting gain or loss is included in the results of operations.

Capitalized Software Development Costs

The Company capitalizes software development costs incurred after a product's technological feasibility has been established and before it is available for general release to customers. Amortization of capitalized software costs is computed on an individual product basis and is the greater of a) the ratio that current gross revenues for a product bear to the total of current and anticipated future gross revenues for that product or b) the straight-line method over the estimated economic life of the product. Currently, the Company uses an estimated economic life of 36 months for all capitalized software costs.

Income Taxes

The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the Company's consolidated financial statements. Under this method, deferred tax liabilities and assets are determined based on the difference between the financial statement and tax bases of assets and liabilities using currently enacted tax rates for the year in which the differences are expected to reverse. The Company records a valuation allowance against net deferred tax assets if, based upon the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

Net Income Per Common Share

Net income per common share is based upon the weighted average number of common and common equivalent shares (using the treasury stock method) outstanding after certain adjustments described below. Common equivalent shares are included in the per share calculations where the effect of their inclusion would be dilutive. Common equivalent shares consist of outstanding stock options, stock warrants, and the Series A convertible preferred stock. Pursuant to Securities and Exchange Commission Staff Accounting Bulletin No. 83, all common and common equivalent shares issued at prices less than the mid-point of the estimated initial public offering price range during the twelve-month period prior to the initial filing of the Registration Statement for the initial public offering have been included in the calculation as if they were outstanding for all periods using the treasury stock method and an assumed mid-point of the estimated initial public offering price range of \$13.00 per common share. Fully diluted earnings per share is not presented, as the difference between primary and fully diluted earnings per share is immaterial.

Foreign Currency

The accounts of foreign subsidiaries are translated using exchange rates in effect at period-end for assets and liabilities and at average exchange rates during the period for results of operations. The local currency for all foreign subsidiaries is the functional currency. The related translation adjustments are reported as a separate component of stockholders' equity. Gains (losses) resulting from foreign currency transactions are included in other income (expense) and are immaterial for all period presented.

Reclassification

Certain reclassifications have been made to the prior years' financial statements to conform to the current year's presentation.

MERCURY COMPUTER SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
(TABLES IN THOUSANDS EXCEPT FOR SHARE AND PER SHARE DATA)
INFORMATION AS OF SEPTEMBER 30, 1997, AND FOR THE THREE MONTHS ENDED
SEPTEMBER 30, 1996 AND 1997, IS UNAUDITED

New Accounting Pronouncements

In February 1997, the Financial Accounting Standards Board (the "FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 128, "Earnings Per Share," which is effective for both interim and annual periods ending after December 31, 1997. Earlier adoption is not permitted. The statement requires restatement of all prior period earnings per share data presented after the effective date. SFAS No. 128 specifies the computation, presentation and disclosure requirements for earnings per share and is substantially similar to the standards recently issued by the International Accounting Standards Committee entitled "International Accounting Standards, Earnings Per Share." The Company will adopt SFAS No. 128 in the interim period ending December 31, 1997. The impact of SFAS No. 128 will be immaterial to reported net income per common share.

In June 1997, the FASB issued SFAS No. 130, "Reporting Comprehensive Income." This statement requires that changes in comprehensive income be shown in a financial statement that is displayed with the same prominence as other financial statements. The statement will be effective for annual periods beginning after December 15, 1997 and the Company will adopt its provisions in fiscal 1999. Reclassification for earlier periods is required for comparative purposes. The Company is currently evaluating the impact this statement will have on its financial statements; however, because the statement requires only additional disclosure, the Company does not expect the statement to have a material impact on its financial position or results of operations.

In June 1997, the FASB issued SFAS No. 131, "Disclosures about Segments of an Enterprise and Related Information." This statement supersedes SFAS No. 14, "Financial Reporting for Segments of a Business Enterprise." This statement includes requirements to report selected segment information quarterly and entity-wide disclosures about products and services, major customers, and the material countries in which the entity holds assets and reports revenues. The statement will be effective for annual periods beginning after December 15, 1997 and the Company will adopt its provisions in fiscal 1999. Reclassification for earlier periods is required, unless impracticable, for comparative purposes. The Company is currently evaluating the impact this statement will have on its financial statements; however, because the statement requires only additional disclosure, the Company does not expect the statement to have a material impact on its financial position or results of operations.

In October 1997, the American Institute of Certified Public Accountants ("AICPA") issued the statement of position ("SOP") 97-2 "Software Revenue Recognition," which will supersede SOP 91-1. SOP 97-2 has not changed the basic rules of revenue recognition but does provide more guidance particularly with respect to multiple deliverables and "when and if available" products. SOP 97-2 is effective for transactions entered into for annual periods beginning after December 15, 1997. The Company will adopt SOP 97-2 in fiscal 1999 and has not yet determined its impact.

MERCURY COMPUTER SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
 (TABLES IN THOUSANDS EXCEPT FOR SHARE AND PER SHARE DATA)
 INFORMATION AS OF SEPTEMBER 30, 1997, AND FOR THE THREE MONTHS ENDED
 SEPTEMBER 30, 1996 AND 1997, IS UNAUDITED

C. INVENTORY:

Inventory consists of the following:

	JUNE 30,		SEPTEMBER 30, 1997
	1996	1997	
Raw materials.....	\$2,107	\$2,925	\$ 2,548
Work in process.....	2,355	3,084	4,477
Finished goods.....	2,726	2,305	1,880
	<u>\$7,188</u>	<u>\$8,314</u>	<u>\$ 8,905</u>

D. PROPERTY AND EQUIPMENT:

Property and equipment consists of the following:

	JUNE 30,		SEPTEMBER 30, 1997
	1996	1997	
Computer equipment.....	\$ 11,651	\$11,253	\$ 12,437
Machinery and equipment.....	982	337	268
Furniture and fixtures.....	1,481	1,697	1,880
Leasehold improvements.....	934	1,050	1,098
	<u>15,048</u>	<u>14,337</u>	<u>15,683</u>
Less: accumulated depreciation and amortization.....	<u>(10,654)</u>	<u>(9,353)</u>	<u>(10,033)</u>
	<u>\$ 4,394</u>	<u>\$ 4,984</u>	<u>\$ 5,650</u>

The decrease in accumulated depreciation as of June 30, 1997 occurred when the Company disposed of a significant amount of fully depreciated assets without receiving any proceeds.

E. FINANCING ARRANGEMENT:

Under a credit agreement with a commercial bank, the Company may borrow up to \$6,000,000 at an interest rate equal to the prime rate or, at the election of the Company, two and one-quarter percentage points above the London InterBank Offered Rate, payable monthly. The credit agreement contains certain covenants, including restrictions on incurrence of additional indebtedness and liens on its assets, capital expenditures, disposition of assets, investments and acquisitions, limitations on distributions, and requires the Company to meet certain financial tests pertaining to current and debt ratios and income before tax provision. There were no borrowings outstanding at June 30, 1996 and 1997 and September 30, 1997.

F. COMMITMENTS AND CONTINGENCIES:

Lease Commitments

The Company has an operating lease agreement for its main facility which expires on September 30, 2002, with an option to extend the lease for an additional five-year period.

Additionally, the Company leases branch office space. The leases expire at various dates through 2003 and contain various renewal options. Rental charges are subject to escalation for increases in certain operating costs of the lessor.

MERCURY COMPUTER SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
 (TABLES IN THOUSANDS EXCEPT FOR SHARE AND PER SHARE DATA)
 INFORMATION AS OF SEPTEMBER 30, 1997, AND FOR THE THREE MONTHS ENDED
 SEPTEMBER 30, 1996 AND 1997, IS UNAUDITED

Future minimum lease payments under noncancelable operating leases with initial or remaining terms of one year or more consisted of the following at September 30, 1997:

October 1, 1997 through June 30, 1998.....	\$ 701
Year ending June 30, 1999.....	904
Year ending June 30, 2000.....	827
Year ending June 30, 2001.....	820
Year ending June 30, 2002.....	804
Thereafter.....	197

Total future minimum lease payments.....	\$4,253
	=====

Rental expense during the fiscal years ended June 30, 1995, 1996 and 1997 and the three months ended September 30, 1996 and 1997 was approximately \$674,000, \$670,000, \$642,000, \$140,000 and \$203,000, respectively.

Internal Revenue Service Audit

On December 12, 1997, the Internal Revenue Service ("IRS") concluded an audit of the Company's tax returns for the years ended June 30, 1992 through June 30, 1995, and issued a formal report reflecting proposed adjustments with respect to the years under audit. The proposed IRS adjustments primarily relate to the disallowance of research and experimental tax credits claimed by the Company, as well as the treatment of certain other items. The total deficiency attributable to the proposed adjustments is \$4,181,000, including penalties and interest of \$1,591,000 through the date of the report. The Company is in the process of responding to this report by appealing the proposed adjustments to the Appeals Division of the IRS. While the Company does not believe that the final outcome of the IRS audit will have a material adverse effect on the Company's financial condition or results of operations, no assurance can be given as to the final outcome of the audit, the amount of any final adjustments or the potential impact of such adjustments on the Company's financial condition or results of operations.

G. STOCKHOLDERS' EQUITY:

Preferred Stock

General

The Company is authorized to issue 2,000,000 shares of preferred stock with a par value of \$.01 per share. Under the terms of the various agreements related to the sale and/or issuance of the preferred stock, restrictions are placed on the Company pertaining to dividends, mergers, incurrence of indebtedness and reorganizations. These agreements also grant certain preferred stockholders' representation on the Company's Board of Directors ("the Board"), demand registration rights, piggyback registration rights and certain antidilutive rights.

Series A Convertible Preferred Stock

The Series A Convertible Preferred Stock has a liquidation preference of \$1.41 per share and has voting rights similar to the common stock. Each of the preferred stockholders has one vote for each share of Common Stock into which the Series A Convertible Preferred Stock is convertible. The Series A Convertible Preferred Stock is convertible, at the option of the holder, into shares of the Company's Common Stock in accordance with a conversion formula which would currently result in a three-for-one exchange with

MERCURY COMPUTER SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
(TABLES IN THOUSANDS EXCEPT FOR SHARE AND PER SHARE DATA)
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mandatory conversion required in the event of a sale of the Company's Common Stock in a public offering meeting a specified aggregate valuation.

Series B Convertible Redeemable Preferred Stock

On April 26, 1993, the Company redeemed all of the outstanding shares of Series B Convertible Redeemable Preferred Stock for \$3.00 per share resulting in a \$1,500,000 redemption and a \$1,000,000 payment contingent on a qualified public offering on or before April 26, 1995. During the fiscal year ended June 30, 1995, the contingent obligation expired and the remaining obligation was reclassified to additional paid-in capital.

Stock Options

The Company has four stock option plans. The 1982, 1991 and 1993 Stock Option Plans (the "Plans") provide for the granting of options to purchase an aggregate of not more than 1,950,000 shares of the Company's Common Stock to employees and directors. Under these plans, options are granted at not less than the fair value of the stock on the date of grant as determined by the Board. The terms of the options are established by the Board on an individual basis. The options generally vest over five years and have a maximum term of ten years.

The 1997 Stock Option Plan (the "1997 Plan"), which the Board approved in June 1997, provides for the granting of options to purchase an aggregate of not more than 575,000 shares of the Company's Common Stock. Under the 1997 Plan, options are granted at not less than 50% of the fair value of the stock on the date of grant as determined by the Board. The options vest over five years and have a maximum term of ten years. With the implementation of the 1997 Plan, no further stock options were granted under the 1982, 1991 and 1993 Stock Option Plans. No options were granted under the 1997 Plan during the fiscal year ended June 30, 1997. Options granted under the 1997 Plan during the three months ended September 30, 1997 were granted at the fair value of the common stock on the date of grant.

In determining the fair value of the Stock at the date of grant under each plan, the Board considered a broad range of factors including the illiquid nature of an investment in the Company's Common Stock, transactions in the Company's Common Stock with third parties, consultations with financial advisors (as appropriate), the Company's historical financial performance relative to that of comparable companies and its future prospects.

MERCURY COMPUTER SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
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In fiscal year 1997, the Company adopted SFAS No. 123, "Accounting for Stock-Based Compensation." SFAS No. 123 requires that companies either recognize compensation expense for grants of stock, stock options and other equity instruments based on fair value or provide pro forma disclosure of net income and earnings per share in the notes to the financial statements. The Company adopted the disclosure provisions of SFAS No. 123 in fiscal 1997 and has applied APB Opinion No. 25 and related Interpretations in accounting for all of its stock option plans. Accordingly, no compensation cost has been recognized for its stock option plans as compensation cost is measured as the excess, if any, of the fair market value of the Company's stock at the date of grant over the amount an individual must pay to acquire the stock.

	NUMBER OF SHARES	WEIGHTED AVERAGE EXERCISE PRICE
	-----	-----
Outstanding at June 30, 1994.....	849,367	\$ 3.23
Granted.....	90,251	7.25
Exercised.....	(49,067)	0.82
Canceled.....	(96,900)	3.88
Outstanding at June 30, 1995.....	793,651	3.76
Granted.....	47,675	6.16
Exercised.....	(71,250)	2.17
Canceled.....	(60,700)	5.51
Outstanding at June 30, 1996.....	709,376	4.02
Granted.....	526,292	4.00
Exercised.....	(85,850)	1.61
Canceled.....	(305,226)	6.15
Outstanding at June 30, 1997.....	844,592	3.41
Granted.....	41,101	4.00
Exercised.....	(56,950)	2.19
Canceled.....	(600)	5.00
Outstanding at September 30, 1997.....	828,143	\$ 3.52
	=====	

Information related to the stock options outstanding as of September 30, 1997, is as follows:

RANGE OF EXERCISE PRICES	NUMBER OF OPTIONS	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE	WEIGHTED AVERAGE EXERCISE PRICE	EXERCISABLE	
				NUMBER OF OPTIONS	WEIGHTED AVERAGE EXERCISE PRICE
-----	-----	-----	-----	-----	-----
\$1.50 - \$3.50.....	309,250	3.42	\$ 2.48	303,450	\$ 2.46
\$4.00	475,293	9.06	4.00	127,604	4.00
\$5.00 - \$7.50.....	43,600	6.60	7.10	35,850	7.10
Total.....	828,143	6.83	\$ 3.60	466,904	\$ 3.24
	=====	=====	=====	=====	=====

There were 527,791 and 473,890 options exercisable at June 30, 1996 and 1997, respectively. The weighted average fair value at date of grant for stock options granted during the fiscal years ended June 30, 1996 and 1997 and the three months ended September 30, 1997 was \$3.82, \$1.64 and \$1.64, respectively. The

MERCURY COMPUTER SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
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fair value of each option granted during the fiscal years ended June 30, 1996 and 1997 is estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions: an expected life of eight years, a dividend yield of 0%, a risk free interest rate of 6.8% and zero expected volatility.

Had compensation cost for the Company's stock option grants been determined based on the fair value at the grant dates, as calculated in accordance with SFAS No. 123, the Company's net income and net income per common share for the fiscal years ended June 30, 1996 and 1997 and the three months ended September 30, 1997, would approximate the following pro forma amounts as compared to the amounts reported:

	NET INCOME	NET INCOME PER COMMON SHARE
	-----	-----
As reported:		
1996.....	\$4,428	\$ 0.54
1997.....	4,611	0.57
Three months ended September 30, 1997.....	1,606	0.20
Pro Forma:		
1996.....	\$4,330	\$ 0.53
1997.....	4,345	0.53
Three months ended September 30, 1997.....	1,542	0.19

The effects of applying SFAS No. 123 in this disclosure are not indicative of future amounts. SFAS No. 123 does not apply to awards prior to 1995 and additional awards in future years are anticipated.

Repricing Stock Options

On July 30, 1996, the Board approved a plan (the "repricing plan") to reprice employee stock options under the Plans to restore the long-term employee retention and performance incentives of the stock options outstanding. In accordance with the repricing plan, all stock options with exercise prices above \$4.00 per share and approved by the individual optionholder were canceled and replaced by the same number of options exercisable at \$4.00 per share, the fair value of the Company's common stock as determined by the Board on the date of the repricing. In reaching this determination, the Board considered a broad range of factors including the illiquid nature of an investment in the Company's Common Stock, transactions of the Company's Common Stock with third parties, the Company's historical financial performance relative to that of comparable companies and its future prospects. Fifty percent of those options which were vested prior to the repricing vested immediately under the repricing plan. All remaining previously vested and unvested options will vest in accordance with the current option plan.

Warrants

At June 30, 1996 and 1997, a warrant to purchase 10,000 shares of the Company's Common Stock was outstanding with an exercise price of \$2.00 per share and exercisable through June 30, 2000. In September 1997, the warrants were exercised.

MERCURY COMPUTER SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
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H. INCOME TAXES:

Income tax expense consisted of the following:

	YEAR ENDED JUNE 30,			THREE MONTHS ENDED SEPTEMBER 30,	
	1995	1996	1997	1996	1997
Federal:					
Current.....	\$2,295	\$2,437	\$3,088	\$ 606	\$1,168
Deferred.....	214	115	(592)	(116)	(290)
	2,509	2,552	2,496	490	878
State:					
Current.....	208	101	301	60	162
Deferred.....	(135)	127	(4)	(1)	(42)
	73	228	297	59	120
Foreign -- current.....	54	172	140	27	62
	\$2,636	\$2,952	\$2,933	\$ 576	\$1,060

The following is a reconciliation between the statutory provision for federal income taxes and the effective income tax expense:

	YEAR ENDED JUNE 30,			THREE MONTHS ENDED SEPTEMBER 30,	
	1995	1996	1997	1996	1997
Income taxes at federal statutory rates.....	34.0%	34.0%	34.0%	34.0%	34.0%
State income tax, net of federal tax benefit and credits.....	0.5	2.0	3.9	3.9	3.9
Research and development credits utilized.....	(5.9)	--	(3.5)	(3.5)	(2.9)
Other.....	0.8	4.0	4.5	4.5	4.8
	29.4%	40.0%	38.9%	38.9%	39.8%

The components of the net deferred tax asset are as follows:

	JUNE 30,			SEPTEMBER 30,
	1995	1996	1997	1997
Receivables, allowances and inventory reserves.....	\$162	\$ 377	\$ 614	\$ 851
Deferred revenue.....	188	--	--	--
Accrued vacation.....	--	--	213	202
Property and equipment.....	(54)	1	232	290
Research and development credits.....	260	100	--	--
Capitalized software development costs.....	--	(148)	(193)	(145)
Other temporary differences.....	54	38	99	99
Total deferred tax asset, net.....	\$610	\$ 368	\$ 965	\$ 1,297

Property and equipment temporary differences as of September 30, 1997 result from a shorter estimated useful life related to certain computer equipment for financial reporting versus tax reporting.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
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No valuation allowance was deemed necessary for the deferred tax asset. Although realization is not assured, management believes it is more likely than not that all of the deferred tax asset will be realized. The amount of the deferred tax asset considered realizable, however, could be reduced in the near term if estimates of future taxable income during the carryforward period are reduced.

I. MAJOR CUSTOMERS AND INTERNATIONAL DATA:

Customers comprising 10% or more of the Company's revenues for the periods shown below are as follows:

	YEAR ENDED JUNE 30,			THREE MONTHS ENDED SEPTEMBER 30,	
	1995	1996	1997	1996	1997
Customer A.....	18%	--	--	--	--
Customer B.....	12%	16%	--	--	11%
Customer C.....	--	12%	10%	10%	--
Customer D.....	--	19%	22%	--	11%
Customer E.....	--	--	--	19%	11%
Customer F.....	--	--	--	--	16%

Export sales to unaffiliated customers were approximately \$20,987,000, \$5,521,000, \$5,351,000, \$1,000,714 and \$1,130,280 for the fiscal years ended June 30, 1995, 1996 and 1997 and September 30, 1996 and 1997, respectively.

The Company has operations in the United Kingdom, the Netherlands, Japan and France. For each of the fiscal years ended June 30, 1995, 1996 and 1997 and each of the three months ended September 30, 1996 and 1997, revenues and operating income from foreign operations represented less than 10% of the Company's total revenues and operating income. At June 30, 1996 and 1997 and September 30, 1997, identifiable assets of foreign operations were not material to total assets.

J. EMPLOYEE BENEFIT PLANS:

The Company maintains a qualified 401(a) Plan and a qualified Profit Sharing and 401(k) Plan. The plans cover substantially all full-time employees who have three months of service and have attained the age of 21. Employee contributions to the Profit Sharing and 401(k) Plan may range from 1% to 15% of compensation with a discretionary matching Company contribution. The Company will match up to 2% of compensation. The Company may also make optional contributions to both plans for any plan year at its discretion.

Expense recognized by the Company under the Profit Sharing and 401(k) Plan was approximately \$245,000, \$232,000, \$287,000, \$40,000 and \$101,000 for the fiscal years ended June 30, 1995, 1996 and 1997 and the three months ended September 30, 1996 and 1997, respectively.

The Company maintains a bonus plan which provides cash awards to employees, at the discretion of the Board of Directors, based upon operating results and employee performance. Bonus expense to employees was approximately \$943,000, \$1,150,000, \$1,245,000, \$245,000 and \$454,000 for the years ended June 30, 1995, 1996, and 1997, and for the three months ended September 30, 1996 and 1997, respectively.

MERCURY COMPUTER SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
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K. RELATED PARTY TRANSACTIONS:

Notes receivable from related parties are from members of the Board of Directors and management and are due 181 days subsequent to an initial public offering or December 31, 1999, whichever occurs first. The notes receivable are without recourse and bear interest at two percentage points above the prime rate per annum.

L. VALUATION AND QUALIFYING ACCOUNTS:

The following table sets forth activity in the Company's reserve accounts:

ACCOUNTS RECEIVABLE

	BALANCE AT BEGINNING OF PERIOD	CHARGES TO EXPENSES	DEDUCTIONS	BALANCE AT END OF PERIOD
	-----	-----	-----	-----
Year ended:				
June 30, 1995.....	\$124		17	\$107
June 30, 1996.....	\$107		27	\$ 80
June 30, 1997.....	\$ 80	40	1	\$119
Three months ended September 30, 1997...	\$119	--	--	\$119

INVENTORY

	BALANCE AT BEGINNING OF PERIOD	CHARGES TO EXPENSES	DEDUCTIONS	BALANCE AT END OF PERIOD
	-----	-----	-----	-----
Year ended:				
June 30, 1995.....	\$1,000	896	1,623	\$ 273
June 30, 1996.....	\$ 273	1,047	74	\$1,246
June 30, 1997.....	\$1,246	504	27	\$1,723
Three months ended September 30, 1997...	\$1,723	561	--	\$2,284

Charges to expenses for inventory are due to program cancellations, engineering change orders and obsolescence. Deductions are recorded when the inventory is written-off. During the year ended June 30, 1995, the Company wrote-off \$1,623,000 in inventory relating primarily to engineering change orders, program cancellations and obsolescence.

SHARED STORAGE

[DRAWING OF TELEVISION
VCR, SPEAKER AND VIDEO
CAMERA]

MERCURY's application software and system integration services are used in shared storage, work group environments within video post-production, broadcasting and webcasting applications.

The software allows work groups to share commodity, network-attached disk arrays, eliminating the need for an expensive, intermediate file server.

MERCURY'S SuiteFusion(TM) is supported on several desktop environments, and supports multiple network technologies including fibrechannel.

[PICTURE OF PACKAGING
WITH THE WORDS "SUITEFUSION
THE SHARED STORAGE SOLUTION"
AND THE MERCURY LOGO]

[PICTURE OF PEOPLE
SITTING AT DESKS IN
FRONT OF COMPUTERS]

MERCURY'S SuiteFusion(TM) choreographs the interactions between workstations and disks to keep files protected and allow work to proceed efficiently.

[MERCURY COMPUTER SYSTEMS, INC. LOGO]

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NO DEALER, SALESPERSON OR ANY OTHER PERSON HAS BEEN AUTHORIZED TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATIONS OTHER THAN THOSE CONTAINED IN THIS PROSPECTUS IN CONNECTION WITH THE OFFER MADE BY THIS PROSPECTUS AND, IF GIVEN OR MADE, SUCH INFORMATION OR REPRESENTATIONS MUST NOT BE RELIED UPON AS HAVING BEEN AUTHORIZED BY THE COMPANY, THE SELLING STOCKHOLDERS OR ANY OF THE UNDERWRITERS. THIS PROSPECTUS DOES NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF ANY OFFER TO BUY ANY SECURITY OTHER THAN THE SHARES OF COMMON STOCK OFFERED BY THIS PROSPECTUS, NOR DOES IT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF ANY OFFER TO BUY THE SHARES OF COMMON STOCK BY ANYONE IN ANY JURISDICTION IN WHICH SUCH OFFER OR SOLICITATION IS NOT AUTHORIZED, OR IN WHICH THE PERSON MAKING SUCH OFFER OR SOLICITATION IS NOT QUALIFIED TO DO SO, OR TO ANY PERSON TO WHOM IT IS UNLAWFUL TO MAKE SUCH OFFER OR SOLICITATION. NEITHER THE DELIVERY OF THIS PROSPECTUS NOR ANY SALE MADE HEREUNDER SHALL, UNDER ANY CIRCUMSTANCES, CREATE ANY IMPLICATION THAT THE INFORMATION CONTAINED HEREIN IS CORRECT AS OF ANY TIME SUBSEQUENT TO THE DATE HEREOF.

UNTIL , 1998, ALL DEALERS EFFECTING TRANSACTIONS IN THE REGISTERED SECURITIES, WHETHER OR NOT PARTICIPATING IN THIS DISTRIBUTION, MAY BE REQUIRED TO DELIVER A PROSPECTUS. THIS IS IN ADDITION TO THE OBLIGATION OF DEALERS TO DELIVER A PROSPECTUS WHEN ACTING AS UNDERWRITERS AND WITH RESPECT TO THEIR UNSOLD ALLOTMENTS OR SUBSCRIPTIONS.

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3,500,000 Shares

[LOGO: MERCURY COMPUTER SYSTEMS, INC.-- The Ultimate Performance Machine]

Common Stock

PROSPECTUS

PRUDENTIAL SECURITIES INCORPORATED

COWEN & COMPANY

January , 1998

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PART II. INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The expenses (other than underwriting discount and commissions) payable in connection with the sale of the Common Stock offered hereby (including the Common Stock which may be sold pursuant to the Underwriters' over-allotment option) are as follows, all of which will be paid by the Company:

	AMOUNTS(1)

SEC Registration fee.....	\$ 17,076
NASD filing fee.....	6,135
Nasdaq National Market fee.....	42,195
Printing Expenses.....	(2)
Legal fees and expenses.....	(2)
Accounting Fees and expenses.....	(2)
Blue sky fees and expenses (including legal fees and expenses).....	(2)
Transfer agent and registrar fees and expenses.....	(2)
Miscellaneous.....	(2)

Total.....	\$750,000

(1) All amounts are estimated, except SEC Registration, NASD and Nasdaq National Market Fees.

(2) To be completed by amendment.

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 67 of Chapter 156B of the Massachusetts Business Corporation Law, which is applicable to the Company, provides as follows:

Indemnification of directors, officers, employees and other agents of a corporation, and persons who serve at its request as directors, officers, employees or other agents of another organization, or who serve at its request in any capacity with respect to any employee benefit plan, may be provided by it to whatever extent shall be specified in or authorized by (i) the articles of organization or (ii) a by-law adopted by the Stockholders or (iii) a vote adopted by the holders of a majority of the shares of stock entitled to vote on the election of directors. Except as the articles of organization or by-laws otherwise require, indemnification of any persons referred to in the preceding sentence who are not directors of the corporation may be provided by it to the extent authorized by the directors. Such indemnification may include payment by the corporation of expenses incurred in defending a civil or criminal action or proceeding in advance of the final disposition of such action or proceeding, upon receipt of an undertaking by the person indemnified to repay such payment if he shall be adjudicated to be not entitled to indemnification under this Section which undertaking may be accepted without reference to the financial ability of such person to make repayment. Any such indemnification may be provided although the person to be indemnified is no longer an officer, director, employee or agent of the corporation or of such other organization or no longer serves with respect to any such employee benefit plan.

No indemnification shall be provided for any person with respect to any matter as to which he shall have been adjudicated in any proceeding not to have acted in good faith in the reasonable belief that his action was in the best interest of the corporation or to the extent that such matter relates to service with respect to an employee benefit plan, in the best interests of the participants or beneficiaries of such employee benefit plan.

The absence of any express provision for indemnification shall not limit any right of indemnification existing independently of this section.

A corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or other agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or other agent of another organization or with respect to any

employee benefit plan, against any liability incurred by him in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify him against such liability.

In addition, pursuant to its Articles of Organization and Bylaws, the Company shall indemnify its directors and officers against expenses (including judgments or amounts paid in settlement) incurred in any action, civil or criminal, to which any such person is a party by reason of any alleged act or failure to act in his capacity as such, except as to a matter as to which such director or officer shall have been finally adjudged not to have acted in good faith in the reasonable belief that his action was in the best interest of the corporation.

The Underwriting Agreement provides that the Underwriters are obligated, under certain circumstances, to indemnify directors, officers and controlling persons of the Company against certain liabilities, including liabilities under the Securities Act. Reference is made to the form of Underwriting Agreement filed as Exhibit 1.1 hereto.

The Company maintains directors and officers liability insurance for the benefit of its directors and certain of its officers and has entered into indemnification agreements with its directors and certain of its officers.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

During the past three years, the Company has issued the following securities, none of which has been registered under the Securities Act:

(1) In transactions exempt from registration pursuant to Rule 701 under the Securities Act the Company has issued the following securities:

(a) On October 28, 1997, the Company issued 8,000 shares of Common Stock at a price of \$2.00 per share upon the exercise of two stock options.

(b) On October 17, 1997, the Company issued 200 shares of Common Stock at a price of \$4.00 per share upon the exercise of a stock option.

(c) On October 16, 1997, the Company issued 3,000 shares of Common Stock at a price of \$3.50 per share upon the exercise of two stock options.

(d) On October 9, 1997, the Company issued 800 shares of Common Stock at a price of \$5.00 per share upon the exercise of a stock option.

(e) On October 3, 1997, the Company issued 17,000 shares of Common Stock at a price of \$2.00 per share upon the exercise of three stock options.

(f) On September 26, 1997, the Company issued 10,000 shares of Common Stock at a price of \$2.00 per share upon the exercise of a warrant.

(g) On September 23, 1997, the Company issued 500 shares of Common Stock at a price of \$4.00 per share and 1,000 shares of Common Stock at a price of \$3.50 per share upon the exercise of three stock options.

(h) On September 22, 1997, the Company issued 1,500 shares of Common Stock at a price of \$2.00 per share and 4,000 shares of Common Stock at a price of \$3.50 per share upon the exercise of three stock options.

(i) On September 18, 1997, the Company issued 12,500 shares of Common Stock at a price of \$1.50 upon the exercise of a stock option.

(j) On September 12, 1997, the Company issued 2,400 shares of Common Stock at a price of \$5.00 per share upon the exercise of a stock option.

(k) On September 11, 1997, the Company issued 3,000 shares of Common Stock at a price of \$2.00 per share upon the exercise of two stock options.

- (l) On September 7, 1997, the Company issued 20,000 shares of Common Stock at a price of \$4.00 per share upon the exercise of a stock option.
- (m) On September 5, 1997, the Company issued 10,300 shares of Common Stock at a price of \$2.00 per share upon the exercise of two stock options.
- (n) On September 4, 1997, the Company issued 5,000 shares of Common Stock at a price of \$1.50 per share upon the exercise of a stock option.
- (o) On August 29, 1997, the Company issued 3,000 shares of Common Stock at a price of \$1.00 per share upon the exercise of a stock option.
- (p) On August 11, 1997, the Company issued 3,000 shares of Common Stock at a price of \$1.00 per share upon the exercise of a stock option.
- (q) On June 3, 1997, the Company issued 5,000 shares of Common Stock at a price of \$2.00 per share and 3,000 shares of Common Stock at a price of \$3.50 per share upon the exercise of two stock options.
- (r) On June 2, 1997, the Company issued 7,500 shares of Common Stock at a price of \$1.50 per share upon the exercise of a stock option.
- (s) On May 23, 1997, the Company issued 200 shares of Common Stock at a price of \$4.00 per share upon the exercise of a stock option.
- (t) On May 5, 1997, the Company issued 2,500 shares of Common Stock at a price of \$1.00 per share upon the exercise of a stock option.
- (u) On April 17, 1997, the Company issued 13,000 shares of Common Stock at a price of \$1.00 per share upon the exercise of a stock option.
- (v) On April 14, 1997, the Company issued 18,000 shares of Common Stock at a price of \$4.00 per share and 100 shares of Common Stock at a price of \$4.00 per share upon the exercise of three stock options.
- (w) On February 19, 1997, the Company issued 5,500 shares of Common Stock at a price of \$2.00 per share and 50 shares of Common Stock at a price of \$3.50 per share upon the exercise of three stock options.
- (x) On February 13, 1997, the Company issued 3,000 shares of Common Stock at a price of \$1.50 per share upon the exercise of a stock option.
- (y) On February 12, 1997, the Company issued 4,000 shares of Common Stock at a price of \$3.50 per share and 3,000 shares at a price of \$2.00 per share upon the exercise of two stock options.
- (z) On February 11, 1997, the Company issued 12,500 shares of Common Stock at a price of \$1.50 per share and 5,000 shares of Common Stock of a price of \$2.00 per share upon the exercise of three stock options.
- (aa) On February 7, 1997, the Company issued 4,000 shares of Common Stock at a price of \$3.50 per share upon the exercise of a stock option.
- (bb) On December 26, 1996, the Company sold 33,000 shares of Common Stock at a price of \$4.00 per share.
- (cc) On December 2, 1996, the Company issued 3,000 shares of Common Stock at a price of \$2.00 per share upon the exercise of a stock option.
- (dd) On October 15, 1996, the Company issued 6,000 shares of Common Stock at a price of \$1.00 per share upon the exercise of a stock option.

(ee) On October 11, 1996, the Company sold 30,000 shares of Common Stock at a price of \$4.00 per share and issued 500 shares of Common Stock at a price of \$1.00 per share upon the exercise of a stock option.

(ff) On October 10, 1996, the Company issued 5,000 shares of Common Stock at a price of \$1.00 per share upon the exercise of a stock option.

(gg) On September 9, 1996, the Company issued 1,000 shares of Common Stock at a price of \$2.00 per share upon the exercise of a stock option.

(hh) On June 12, 1996, the Company issued 800 shares of Common Stock at a price of \$7.50 per share upon the exercise of a stock option.

(ii) On June 1, 1996, the Company issued 1,000 shares of Common Stock at a price of \$3.00 per share upon the exercise of a stock option.

(jj) On May 15, 1996, the Company issued 1,000 shares of Common Stock at a price of \$3.50 per share upon the exercise of a stock option.

(kk) On April 12, 1996, the Company issued 5,000 shares of Common Stock at a price of \$1.00 per share and 200 shares of Common Stock at a price of \$2.00 per share upon the exercise of two stock options.

(ll) On March 25, 1996, the Company issued 1,000 shares of Common Stock at a price of \$3.50 per share upon the exercise of a stock option.

(mm) On March 1, 1996, the Company issued 2,000 shares of Common Stock at a price of \$2.00 per share and 600 shares of Common Stock at a price of \$3.50 per share upon the exercise of two stock options.

(nn) On February 6, 1996, the Company issued 12,000 shares of Common Stock at a price of \$2.00 per share and 4,400 shares of Common Stock at a price of \$3.50 per share upon the exercise of five stock options.

(oo) On January 6, 1996, the Company issued 5,200 shares of Common Stock at a price of \$2.00 per share and 400 shares of Common Stock at a price of \$3.50 per share upon the exercise of three stock options.

(pp) On December 29, 1995, the Company issued 5,750 shares of Common Stock at a price of \$2.00 per share and 2,500 shares of Common Stock at a price of \$1.50 per share upon the exercise of three stock options.

(qq) On December 19, 1995, the Company issued 4,000 shares of Common Stock at a price of \$1.00 per share and 2,000 shares of Common Stock at a price of \$2.00 per share upon the exercise of three stock options.

(rr) On December 12, 1995, the Company issued 2,000 shares of Common Stock at a price of \$2.00 per share upon the exercise of a stock option.

(ss) On December 5, 1995, the Company issued 1,500 shares of Common Stock at a price of \$1.00 per share upon the exercise of a stock option.

(tt) On October 25, 1995, the Company issued 1,500 shares of Common Stock at a price of \$2.00 per share upon the exercise of a stock option.

(uu) On October 24, 1995, the Company issued 1,600 shares of Common Stock at a price of \$3.50 per share and 5,000 shares of Common Stock at a price of \$2.00 per share upon the exercise of two stock options.

(vv) On September 25, 1995, the Company issued 5,000 shares of Common Stock at a price of \$2.00 per share and 200 shares of Common Stock at a price of \$3.50 per share upon the exercise of four stock options.

(ww) On August 11, 1995, the Company issued 600 shares of Common Stock at a price of \$3.50 per share upon the exercise of a stock option.

(xx) On July 21, 1995, the Company issued 5,000 shares of Common Stock at a price of \$1.50 per share upon the exercise of a stock option.

(yy) On January 11, 1995, the Company issued 17,967 shares of Common Stock at a price of \$.50 per share upon the exercise of a stock option.

(zz) On January 3, 1995, the Company issued 1,200 shares of Common Stock at a price of \$.50 per share upon the exercise of a stock option.

(aaa) On December 27, 1994, the Company issued 3,700 shares of Common Stock at a price of \$.50 per share upon the exercise of a stock option.

(bbb) On December 20, 1994, the Company issued 4,000 shares of Common Stock at a price of \$.50 per share upon the exercise of a stock option.

(ccc) On December 15, 1994, the Company issued 1,500 shares of Common Stock at a price of \$1.00 per share upon the exercise of a stock option.

(ddd) On December 2, 1994, the Company issued 100 shares of Common Stock at a price of \$2.00 per share upon the exercise of a stock option.

(2) In transactions exempt from registration pursuant to Section 4(2) of the Securities Act, the Company sold an aggregate of 33,000 shares of Common Stock for an aggregate consideration of \$252,000.

ITEM 16. EXHIBITS

EXHIBITS: ITEM

- 1.1 Form of Underwriting Agreement
- 3.1 Restated Articles of Organization of the Registrant
- 3.2 Bylaws of the Registrant
- 3.3* Articles of Amendment to Articles of Organization of the Registrant (to be effective concurrently with the closing of the Offering)
- 4.1* Form of Stock Certificate
- 5.1* Form of Opinion of Hutchins, Wheeler & Dittmar, A Professional Corporation
- 10.1 1982 Stock Option Plan, as amended
- 10.2 1991 Stock Option Plan, as amended
- 10.3 1993 Stock Option Plan for Non-Employee Directors
- 10.4 1997 Stock Option Plan
- 10.5 1997 Employee Stock Purchase Plan
- 10.6 Lease Agreement, dated July 24, 1992, by and between the Company and Equitable Variable Life Insurance Company, as amended and extended
- 10.7 Purchase and Sale Agreement, dated November 8, 1996 between Corcoran Chelmsford & Associates and Northland Development Corporation
- 10.8+ Term Purchase Agreement, dated July 25, 1995 between the Company and Analog Devices, Inc.
- 10.9+ Risk Reproduction Agreement, dated March 20, 1996, between the Company and LSI Logic Corporation
- 10.10+ Purchase Offer Agreement for OEM Manufacturer, dated February 16, 1995, between the Company & IBM Microelectronics Division
- 10.11 \$100,000 Promissory Note, dated December 22, 1993 and amended January 27, 1997, issued by Albert P. Belle Isle to the Company

EXHIBITS:

ITEM #	
10.12	\$25,000 Promissory Note, dated July 13, 1994 and amended January 27, 1997, issued by Albert P. Belle Isle to the Company
10.13	\$150,000 Promissory Note, dated March 26, 1994 and amended August 26, 1997, issued by James R. Bertelli to the Company
10.14	\$50,000 Promissory Note, dated June 24, 1995 and amended August 26, 1997, issued by James R. Bertelli to the Company
10.15*	Quitclaim Deed, dated October 1, 1997, executed by Corcoran Chelmsford & Associates Limited Partnership
11.1	Statement of Computation at Earnings Per Share
21.1	Subsidiaries of the Registrant
23.1*	Consent of Coopers & Lybrand L.L.P.
23.2*	Consent of Hutchins, Wheeler & Dittmar, A Professional Corporation (included in Exhibit 5.1)
24.1	Power of Attorney (included on page II-7)
27.1*	Financial Data Schedule

- -----

* Filed with this Amendment No. 1 to Registration Statement.

+ Confidential treatment requested.

ITEM 17. UNDERTAKINGS

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

The undersigned registrant hereby undertakes that: (1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of his registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and (2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to provisions described in Item 14 above, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in Chelmsford, Massachusetts, on January 7, 1998.

MERCURY COMPUTER SYSTEMS, INC.

By: /s/ JAMES R. BERTELLI

 NAME: JAMES R. BERTELLI
 TITLE: PRESIDENT

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE(S)	DATE
/s/ JAMES R. BERTELLI	President, Chief Executive Officer and Director	January 7, 1998
JAMES R. BERTELLI	(principal executive officer)	
/s/ G. MEAD WYMAN	Vice President, Chief Financial Officer and Treasurer (principal financial and accounting officer)	January 7, 1998
G. MEAD WYMAN		
*	Director	January 7, 1998
GORDON B. BATY		
*	Director	January 7, 1998
R. SCHORR BERMAN		
*	Director	January 7, 1998
ALBERT P. BELLE ISLE		
*	Director	January 7, 1998
SHERMAN N. MULLIN		
*	Director	January 7, 1998
MELVIN SALLEN		
*By /s/ JAMES R. BERTELLI		
ATTORNEY-IN-FACT		

EXHIBIT INDEX

EXHIBITS:

ITEM #		PAGE
-----		-----
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21.1	Subsidiaries of the Registrant	
23.1*	Consent of Coopers & Lybrand L.L.P.	
23.2*	Consent of Hutchins, Wheeler & Dittmar, A Professional Corporation (included in Exhibit 5.1)	
24.1	Power of Attorney (included on page II-7)	
27.1*	Financial Data Schedule	

- -----

* Filed with this Amendment No. 1 to Registration Statement.

+ Confidential treatment requested.

FEDERAL IDENTIFICATION NO. 04-2741391

The Commonwealth of Massachusetts William Francis Galvin Secretary of the Commonwealth One Ashburton Place, Boston, Massachusetts 02108-1512

ARTICLES OF AMENDMENT (General Laws, Chapter 156B, Section 72)

We, James Bertelli, *President and Anthony J. Medaglia, Jr. *Clerk of MERCURY COMPUTER SYSTEMS, INC. (Exact name of corporation)

located at 199 Riverneck Road, Chelmsford, MA 01824 (Street address of corporation in Massachusetts)

certify that these Articles of Amendment affecting articles numbered:

Articles 3 and 4 (Number those articles 1, 2, 3, 4, 5 and/or 6 being amended)

of the Articles of Organization were duly adopted at a meeting held on December 18, 1997, by vote of:

Table with 6 columns: Number of shares, unit (shares of), stock type, unit (of), total number of shares, and status (shares outstanding). Rows include Common Stock (3,477,252 shares of, 5,311,431 shares outstanding) and Preferred (852,264 shares of, 852,264 shares outstanding, and shares outstanding).

C [] (1)**being at least a majority of each type, class or series outstanding and entitled to vote thereon:/or (2)**being at least two-thirds of each type, class or series outstanding and entitled to vote thereon and of each type, class or series outstanding and entitled to vote thereon and of each type, class or series of stock whose rights are adversely affected thereby:

*Delete the inapplicable words. **Delete the inapplicable clause. (1) For amendments adopted pursuant to Chapter 156B, Section 70. (2) For amendments adopted pursuant to Chapter 156B, Section 71. Note: If the space provided under any article or item on this form is insufficient, additions shall be set forth on one side only of separate 8 1/2 x 11 sheets of paper with a left margin of at least 1 inch. Additions to more than one article may be made on a single sheet so long as each article requiring each addition is clearly indicated.

P.C.

To change the number of shares and the par value (if any) of any type, class or series of stock which the corporation is authorized to issue, fill in the following:

The total presently authorized is:

WITHOUT PAR VALUE STOCKS	
TYPE	NUMBER OF SHARES
COMMON:	
.....
.....
PREFERRED:	
.....
.....

WITH PAR VALUE STOCKS		
TYPE	NUMBER OF SHARES	PAR VALUE
COMMON:	25,000,000	\$.01
.....
.....
PREFERRED:	2,000,000	\$.01
.....
.....

Change the total authorized to:

WITHOUT PAR VALUE STOCKS	
TYPE	NUMBER OF SHARES
COMMON:	
.....
.....
PREFERRED:	
.....
.....

WITH PAR VALUE STOCKS		
TYPE	NUMBER OF SHARES	PAR VALUE
COMMON:	25,000,000	\$.01
.....
.....
PREFERRED:	1,000,000	\$.01
.....
.....

ARTICLE 4

SECTION E OF ARTICLE 4 (ENTITLED "DESCRIPTION OF SERIES A CONVERTIBLE PREFERRED STOCK") IS HEREBY DELETED IN ITS ENTIRETY.

The foregoing amendment will become effective when these articles of amendment are filed in accordance with General Laws, Chapter 156B, Section 6 unless these articles specify, in accordance with the vote adopting the amendment, a later effective date not more than thirty days after such filing, in which event the amendment will become effective on such later date.

Later effective date: -----

SIGNED UNDER THE PENALTIES OF PERJURY, this 18th day of December, 1997.

/s/ James Bertelli President

JAMES BERTELLI

/s/ Anthony J. Medaglia, Jr. Clerk

ANTHONY J. MEDAGLIA, JR.

*Delete the inapplicable words.

THE COMMONWEALTH OF MASSACHUSETTS
ARTICLES OF AMENDMENT
GENERAL LAWS, CHAPTER 156B, SECTION 72

=====

I hereby approve the within articles of amendment and, the filing fee in the amount of \$ _____ having been paid, said articles are deemed to have been filed with me this _____ day of _____, 19 ____.

Effective date: _____

WILLIAM FRANCIS GALVIN
Secretary of the Commonwealth

TO BE FILLED IN BY CORPORATION

PHOTOCOPY OF ARTICLES OF AMENDMENT TO BE SENT TO:

PATRICIA ROBICHAUD

HUTCHINS, WHEELER & DITTMAR

101 FEDERAL STREET
BOSTON, MA 02110

TELEPHONE: (617) 951-6600

COMMON STOCK

COMMON STOCK

[EMBLEM]

[MERCURY LOGO]

[EMBLEM]

INCORPORATED UNDER THE LAWS
OF THE COMMONWEALTH
OF MASSACHUSETTS

SEE REVERSE FOR
CERTAIN DEFINITIONS
CUSIP 589378 10 8

THIS CERTIFIES THAT

IS THE OWNER OF

FULLY PAID AND NONASSESSABLE SHARES OF COMMON STOCK,
PAR VALUE \$.01 PER SHARE, OF
MERCURY COMPUTER SYSTEMS, INC.

transferable on the books of the Company by the holder hereof in person or by
its duly authorized attorney upon surrender of this Certificate properly
endorsed or assigned. This Certificate and the shares represented hereby are
issued and shall be held subject to the laws of The Commonwealth of
Massachusetts and the provisions of the Articles of Organization and the By-laws
of the Company, as amended from time to time, to which the holder by acceptance
hereof assents. This Certificate is not valid unless countersigned and
registered by the Transfer Agent and Registrar.

WITNESS the facsimile seal of the Company and the facsimile
signatures of its duly authorized officers.

Dated:

/s/ James R. Bertelli

President and Chief
Executive Officer

[MERCURY SEAL]

/s/ G. Mead Wyman

Treasurer and Chief
Financial Officer

COUNTERSIGNED AND REGISTERED:
Boston EquiServe Trust Company

TRANSFER AGENT
AND REGISTRAR

BY

AUTHORIZED OFFICER

MERCURY COMPUTER SYSTEMS, INC.

THE CORPORATION IS AUTHORIZED TO ISSUE MORE THAN ONE CLASS OF STOCK. THE CORPORATION WILL FURNISH WITHOUT CHARGE TO EACH STOCKHOLDER WHO SO REQUESTS A COPY OF THE POWERS, DESIGNATIONS, PREFERENCES AND RELATIVE RIGHTS OF THE SHARES OF EACH OUTSTANDING CLASS OF STOCK OR SERIES THEREOF OF THE CORPORATION, AND THE QUALIFICATIONS, LIMITATIONS OR RESTRICTIONS OF SUCH PREFERENCES AND/OR RIGHTS.

The following abbreviations, when used in the inscription on the face of this Certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM -- as tenants in common
TEN ENT -- as tenants by the entirety
JT TEN -- as joint tenants with right of survivorship and not as tenants in common

UNIF GIFT MIN ACT -- Custodian
(Cust) (Minor)
under Uniform Gifts to Minors
Act
(State)

Additional abbreviations may also be used though not in the above list.

For value received, _____ hereby sell, assign and transfer unto

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE OF ASSIGNEE)

_____ Shares
of the common stock represented by the within Certificate, and do hereby irrevocably constitute and appoint

_____ Attorney
to transfer the said stock on the books of the within named Corporation with full power of substitution in the premises.

Dated _____

NOTICE: THE SIGNATURE TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATEVER.

SIGNATURE(S) GUARANTEED:

THE SIGNATURE(S) MUST BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (BANKS, STOCKBROKERS, SAVINGS AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM), PURSUANT TO SEC RULE 17Ad-15.

January 7, 1998

Mercury Computer Systems, Inc.
199 Riverneck Road
Chelmsford, MA 01824

Ladies and Gentlemen:

We have acted as counsel to Mercury Computer Systems, Inc., a Massachusetts corporation (the "Company"), in connection with proceedings being taken to register under the Securities Act of 1933, as amended, up to 4,025,000 shares of the Company's Common Stock, \$.01 par value per share (the "Common Stock") pursuant to a Registration Statement on Form S-1 (File No. 333-41139) (the "Registration Statement"), which includes 525,000 shares which may be sold upon exercise of the underwriters' overallotment option described in the Registration Statement.

As such counsel, we have examined (i) certain corporate records of the Company, including its Restated Articles of Organization, as amended, its Amended and Restated Bylaws, stock records and Minutes of Meetings of its Board of Directors; (ii) a Certificate of the Secretary of State of The Commonwealth of Massachusetts as to the legal existence of the Company; and (iii) such other documents as we have deemed necessary as a basis for the opinions hereinafter expressed. For purposes of rendering this opinion, we have assumed that the Articles of Amendment of the Company in the form filed as an Exhibit to the Registration Statement will be filed with the Secretary of the State of The Commonwealth of Massachusetts prior to the issuance and sale of its Common Stock under the circumstances contemplated in the Registration Statement.

Based upon the foregoing, and having regard for such legal considerations as we deem relevant, we are of the opinion that:

1. The Company is a validly existing corporation under the laws of The Commonwealth of Massachusetts.

Mercury Computer Systems, Inc.
January 7, 1998
Page 2

2. The Company, as of the effective date of the foregoing Articles of Amendment, will be authorized to issue 25,000,000 shares of Common Stock, par value \$.01 per share, and 1,000,000 shares of Preferred Stock, par value \$.01 per share.
3. When issued and sold under the circumstances contemplated in the Registration Statement, the 4,025,000 shares of Common Stock offered by the Company will be duly authorized, validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the references to us under the caption "Legal Matters" in the Prospectus forming a part of the Registration Statement.

Very truly yours,

/s/ Hutchins, Wheeler & Dittmar

HUTCHINS, WHEELER & DITTMAR
A Professional Corporation

QUITCLAIM DEED

CORCORAN CHELMSFORD B ASSOCIATES LIMITED PARTNERSHIP, a Massachusetts limited partnership having its principal place of business at 100 Grandview Road, Braintree, Massachusetts ("GRANTOR"), for consideration of Six Hundred Thousand Dollars (\$600,000) paid, hereby grants unto RIVERNECK ROAD LLC, a Delaware limited liability company having its principal place of business c/o Mercury Computer Systems, Inc., 199 Riverneck Road, Chelmsford, Massachusetts ("GRANTEE") WITH QUITCLAIM COVENANTS, the parcel of land situated in Chelmsford, Middlesex County, Massachusetts, together with any improvements if any located thereon (collectively, the "Property") being more particularly in EXHIBIT A.

SUBJECT to and with the benefit of all easements, covenants, restrictions and other encumbrances of record, to the extent in force and applicable, including, without limitation, the easements described in the deed from John M. Corcoran and P. Leo Corcoran, Trustees of Corcoran Chelmsford Trust to Grantor dated December 5, 1986 and recorded with the Middlesex North District Registry of Deeds in Book 3818, Page 249 and Transfer Certificate of Title No. 27533 filed with the Middlesex North Registry of the Land Court.

The premises are granted subject to the restriction that no building or buildings exceeding 97,000 gross square feet of floor area in the aggregate, including, without limitation, additions hereto (exclusive of parking or accessory structures or matters not included within the meaning of "gross floor area" contained in the Town of Chelmsford Zoning By-Laws as amended) shall be constructed upon the Premises; unless, prior to construction the Grantee, its successors or assigns shall record in the Land Court Registry District of North Middlesex County and the Middlesex County (Northern District) Registry of Deeds either (i) an affidavit pursuant to G.L. c. 183 Section 5B attaching evidence issued pursuant to G.L. c. 30 Section 61 through 62H and 301 C.M.R. 11.00 et seq. for construction of up to 59,000 gross square feet of floor area upon Lot A on the plan entitled "Plan of Land in Chelmsford, Mass." prepared for John M. Corcoran & Co. by Fleming Bienvenue & Associates, Inc. Engineers and Surveyors, Billerica, Mass. dated January 27, 1984 recorded with the Middlesex County (Northern District) Registry of Deeds in Plan Book 144 Plan 142 as described in a Deed recorded with said Deeds in Book 3838 Page 289 (ii) an affidavit pursuant to G.L. c. 183 Section 5B stating that a building has been build on Lot A and a certificate of occupancy has been issued by the Town of Chelmsford for such building, or (iii) the written consent of the owner from time to time of Lot A.

In creating the building restriction herein contained the Grantor acknowledges that the construction of a building and other improvements consistent with the plans entitled "Building II 495/3 Tech Center Site Development Plans Chelmsford, MA" containing 17 sheets endorsed by the Planning Board of the Town of Chelmsford July 21, 1997 and referred to in 4 Certificates of Decision on Special Permit Application voted June 4, 1997 and issued June 6, 1997 by the

Planning Board of the Town of Chelmsford in favor of Northland Development Corporation and recorded in the Middlesex County (Northern District) Registry of Deeds herewith, does not violate this restriction and is in compliance therewith.

The foregoing restriction shall expire upon the issuance of a certificate of occupancy by the Town of Chelmsford for a building on Lot A.

GRANTOR's title is derived under a deed recorded with the Middlesex North District Registry of Deeds in Book 3818, Page 249 and Transfer Certificate of the Title No. 27533 filed with the Middlesex North Registry District of the Land Court.

Executed under seal this 1st day of October, 1997,

CORCORAN CHELMSFORD B ASSOCIATES
LIMITED PARTNERSHIP

By: /s/ John M. Corcoran

John M. Corcoran
General Partner

By: /s/ P. Leo Corcoran

P. Leo Corcoran
General Partner

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss.

October 1, 1997

Then personally appeared the above-named John M. Corcoran, General Partner of Corcoran Chelmsford B Associates Limited Partnership and acknowledged the foregoing instrument to be the free act and deed of said corporation, before me,

/s/ Marie Louise Troiano

Notary Public
My Commission Expires:

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss.

October 1, 1997

Then personally appeared the above-named P. Leo Corcoran, General Partner of Corcoran Chelmsford B Associates Limited Partnership and acknowledged the foregoing instrument to be the free act and deed of said corporation, before me,

/s/ Marie Louise Troiano

Notary Public
My Commission Expires:

EXHIBIT A

Parcel I (Registered)

That certain parcel of registered land in Chelmsford, Middlesex County bounded as described as follows:

Southwesterly by Orleans Street, three hundred fifty-three and 50/100 (353.50) feet;

Northwesterly by land now or formerly of Sundry Owners, by three lines measuring together seven hundred twenty-one and 69/100 (721.69) feet;

Northeasterly by land now or formerly of Harvey T. Parlee et al, five hundred sixty-eight and 34/100 (568.34) feet;

Southeasterly by Lot 9 and Clarke Ave., one hundred thirty (130) feet;

Easterly seventeen and 79/100 (17.79) feet; and

Southeasterly fifty-five (55) feet by said Clarke Ave.,

Southeasterly again by said Clarke Ave. and Lot 12, by two lines measuring together one hundred seventy-six and 68/100 (176.68) feet;

Southwesterly twenty (20) feet; and

Southeasterly one hundred forty-three (143) feet, by land now or formerly of Francis Shurtliff.

All of said boundaries are determined by the Land Court to be located as shown on subdivision plan 8155-E drawn by Fleming, Bienvenu & Associates Inc., Surveyors, dated August 8, 1985, as approved by the Court, filed in the Land Registration Office, a copy of a portion of which is filed with Certificate of Title 27533, and said land is shown as Lot eleven (11) on said plan.

Being the premises described in Transfer Certificate of Title No. 27533 filed in the Land Court Registry District of Northern Middlesex County in Land Registration Book 131 Page 93.

Parcel II (Recorded)

A certain parcel of land in Chelmsford, Massachusetts, shown as Lot 2-B on a plan entitled "Plan of Land in Chelmsford, Mass., Prepared for: Corcoran Chelmsford Trust", dated August 9, 1985, prepared by Fleming, Bienvenu & Associates, Inc., Billerica, Mass. (the "Plan") recorded in the Middlesex County North District Registry of Deeds (the "Registry") in Plan Book 152, Page 115, and bounded and described according to the Plan as follows:

SOUTHEASTERLY
EASTERLY and
SOUTHEASTERLY by Riverneck Road, in four courses measuring 123.81 feet,
5.00 feet, 64.14 feet, 89.37 feet;

WESTERLY by land of George J. Clarke, of Harold J. Collins, of Earl
C. Batson, Jr., of Charles A. Gray, and Lot 2-A, 923.34
feet;

NORTHWESTERLY by Lot 3, 88.09 feet;

EASTERLY by Lot 1, 287.06 feet;

NORTHEASTERLY by Lot 1, 133.97 feet;

EASTERLY by Lot 1, 77.00 feet;

NORTHERLY by Lot 1, 25.00 feet;

EASTERLY and
NORTHEASTERLY by Lot 1, in five courses measuring 37.60 feet, 47.26 feet,
218.68 feet, 61.09 feet, and 8.46 feet; and

NORTHEASTERLY by Lot 1, 56.04 feet.

Parcel II contains 3.17 acres of land, according to the Plan.

Parcel I and II are the same premises conveyed to Corcoran
Chelmsford B Associates Limited Partnership by a Deed filed with the Land Court
Registry District of Northern Middlesex County as Document No. 114711 and
recorded with the Middlesex County (Northern District) Registry of Deeds in Book
3818 Page 249.

CONSENT OF INDEPENDENT ACCOUNTANTS

We consent to the inclusion in this registration statement on Form S-1 (File No. 333-41139) of our report dated August 28, 1997, except for the information in the final paragraph of Note F, as to which the date is December 12, 1997, on our audits of the consolidated financial statements of Mercury Computer Systems, Inc. We also consent to the reference to our firm under the captions "Experts" and "Selected Consolidated Financial Data."

COOPERS & LYBRAND L.L.P.

BOSTON, MASSACHUSETTS

JANUARY 5, 1998

5
1,000
US DOLLARS

3-MOS	JUN-30-1998	JUL-01-1997	SEP-30-1997
		1	16,035
		0	12,370
		119	8,905
	41,447		15,683
	10,033		
	47,905		
12,794			0
0		1,200	53
		33,858	
47,905		19,039	
	19,039		6,661
	6,661		
	9,710		
	0		
	2		
	2,666		
	1,060		
1,606		0	
	0		
		0	
			0
	1,606		
	0.20		
	0.20		

5
1,000
US DOLLARS

YEAR

	JUN-30-1997	JUL-01-1996	JUN-30-1997
			1
			15,193
			0
		12,816	
		119	
		8,314	
	39,073		14,337
		9,353	
		44,848	
11,526			0
	0		
		1,200	
			52
44,848		32,070	
			64,574
	64,574		
		22,034	
		22,034	
	34,974		
		40	
	22		
	7,544		
		2,933	
4,611			
		0	
		0	
			0
		4,611	
		0.57	
		0.57	

5
1,000
US DOLLARS

YEAR

	JUN-30-1996	
	JUL-01-1995	
	JUN-30-1996	
	1	9,704
	0	
	10,236	
	80	
	7,188	
	28,289	15,048
	10,654	
	33,264	
4,735		0
0		
	1,200	51
	27,278	
33,264		
	58,300	
	58,300	24,688
	24,688	
	26,219	
	0	
	13	
	7,380	
	2,952	
4,428		
	0	
	0	
		0
	4,428	
	0.54	
	0.54	