

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

AMENDMENT NO. 1
TO
FORM S-3
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

ASPEN TECHNOLOGY, INC.
(Exact name of registrant as specified in its charter)

DELAWARE
(State or other jurisdiction
of incorporation or organization)

04-2739697
(I.R.S. employer
identification number)

TEN CANAL PARK
CAMBRIDGE, MASSACHUSETTS 02141
(617) 949-1000
(Address, including zip code, and telephone number, including
area code, of registrant's principal executive offices)

LAWRENCE B. EVANS
Chairman of the Board and Chief Executive Officer
ASPEN TECHNOLOGY, INC.
Ten Canal Park
Cambridge, Massachusetts 02141
(617) 949-1000
(Name, address, including zip code, and telephone number, including
area code, of agent for service)

Copies to:

STEPHEN J. DOYLE, ESQ.
Senior Vice President, General Counsel,
Chief Legal Officer and Secretary
ASPEN TECHNOLOGY, INC.
Ten Canal Park
Cambridge, Massachusetts 02141

MARK L. JOHNSON, ESQ.
FOLEY, HOAG & ELIOT LLP
One Post Office Square
Boston, Massachusetts 02109

Approximate date of commencement of proposed sale to the public: As soon as
practicable after this Registration Statement becomes effective.

If the only securities being registered on this Form are being offered
pursuant to dividend or interest reinvestment plans, please check the following
box. []

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, other than securities offered only in connection with dividend or interest
reinvestment plans, check the following box. [X]

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

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED	PROPOSED MAXIMUM OFFERING PRICE PER SHARE	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE	AMOUNT OF REGISTRATION FEE
Common Stock, \$.10 par value:				
Previously filed	1,039,361 shares	\$10.9375	\$11,368,011	\$3,161
To be registered pursuant to this Amendment	290,337	12.3750(1)	3,592,920(1)	999
Total	1,329,698 =====			\$4,160 =====

(1) Estimated solely for the purpose of determining the registration fee. In accordance with Rule 457(c) under the Securities Act of 1933, the above calculation is based on the average of the high and low sale prices reported in the consolidated reporting system of the Nasdaq National Market on December 16, 1998.

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 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(a), MAY DETERMINE.

=====

The information in this prospectus is not complete and may be changed. The selling stockholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell securities, and the selling stockholders are not soliciting offers to buy these securities, in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED DECEMBER 23, 1998

1,329,698 SHARES

ASPEN TECHNOLOGY, INC.

COMMON STOCK

The selling stockholders are offering 1,329,698 shares of common stock. We will not receive any of the proceeds from sales of shares by the selling stockholders.

Our common stock trades on the Nasdaq National Market under the symbol "AZPN." On December 22, 1998, the last reported sale price of our common stock on the Nasdaq National Market was \$13.00 per share.

The selling stockholders may sell these shares from time to time on the Nasdaq National Market or otherwise. They may sell the shares at prevailing market prices or at prices negotiated with buyers. The selling stockholders will be responsible for any commissions or discounts due to brokers or dealers. The amount of those commissions or discounts will be negotiated before the sales. We will pay all of the other offering expenses, which we estimate will total \$17,500.

INVESTING IN THESE SHARES INVOLVES RISKS. SEE "RISK FACTORS" BEGINNING ON PAGE 5.

THE SECURITIES AND EXCHANGE COMMISSION AND STATE SECURITIES REGULATORS HAVE NOT APPROVED OR DISAPPROVED THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

December , 1998

YOU SHOULD RELY ONLY ON THE INFORMATION CONTAINED IN THIS PROSPECTUS. NEITHER WE NOR THE SELLING STOCKHOLDERS HAVE AUTHORIZED ANYONE TO PROVIDE YOU WITH INFORMATION DIFFERENT FROM THAT CONTAINED IN THIS PROSPECTUS. THE SELLING STOCKHOLDERS ARE OFFERING TO SELL, AND SEEKING OFFERS TO BUY, SHARES OF COMMON STOCK ONLY IN JURISDICTIONS WHERE OFFERS AND SALES ARE PERMITTED. IN THIS PROSPECTUS, REFERENCES TO "WE," "US" AND "OUR" REFER TO ASPEN TECHNOLOGY, INC. AND ITS SUBSIDIARIES.

TABLE OF CONTENTS

	PAGE

Prospectus Summary.....	3
Risk Factors.....	5
Litigation.....	12
Use of Proceeds.....	12
Selling Stockholders.....	13
Plan of Distribution.....	14
Legal Matters.....	14
Experts.....	15
Where You Can Find More Information.....	15

PROSPECTUS SUMMARY

Because this is only a summary, it does not contain all of the information that may be important to you. You should read the entire prospectus, including "Risk Factors" and the information incorporated by reference, before deciding to invest in shares offered by this prospectus.

ASPEN TECHNOLOGY, INC.

OUR BUSINESS:

We are the leading supplier of software and service solutions used by companies in the process industries to design, operate and manage their manufacturing processes. The process industries include manufacturers of chemicals, petrochemicals, petroleum products, pharmaceuticals, pulp and paper, electric power, food and beverages, consumer products, and metals and minerals.

OUR SOFTWARE AND SERVICES:

We offer a comprehensive, integrated suite of process manufacturing solutions that help process manufacturers enhance their profitability by improving their efficiency, productivity, capacity utilization, safety and environmental compliance. Our solutions facilitate these improvements throughout the entire manufacturing life-cycle, from research and development to engineering, planning and scheduling, procurement, production and distribution. In addition to software solutions, we offer consulting services through our staff of more than 475 project engineers. Since May 1995, we have acquired 15 companies and lines of business to obtain technologies and expertise that complement or enhance our core software and services solutions.

OUR STRATEGY:

Our objective is to extend our leadership in providing process management solutions to the process industries. To achieve this objective, we pursue the following key strategies:

- extending our technology leadership position by continuing to invest in research and development and to identify and pursue opportunities for strategic acquisitions;
- increasing the integration of many of our products for the design, operation and management of process plants, and providing consulting services to implement this technology around the business processes of customers;
- leveraging our position in the process industries to increase our supply chain business, and incorporating our supply chain technology as a key component of our integrated product offerings;
- leveraging our installed customer base in the chemical, petrochemicals, petroleum products and pharmaceuticals industries by increasing the number of users of software currently licensed by our existing customers and by licensing complementary software and services to those customers;
- increasing our penetration of other process industries, particularly the pulp and paper, electric power, and food and beverage industries, as well as the semiconductor industry;
- pursuing strategic acquisitions of complementary technologies and services capabilities; and
- selectively partnering with providers of complementary products and services to supplement our ability to offer enterprise-wide solutions.

OUR CUSTOMERS: We currently have more than 750 customers worldwide, including 44 of the 50 largest chemical companies, 17 of the 20 largest petroleum refiners and 16 of the 20 largest pharmaceutical companies.

OUR ADDRESS: Our principal executive offices are located at Ten Canal Park, Cambridge, Massachusetts 02141. Our telephone number is (617) 949-1000. Our website is located at www.aspentech.com; information contained in our website is not a part of this prospectus.

THE OFFERING

COMMON STOCK OFFERED: All of the 1,329,698 shares offered by this prospectus are being sold by the selling stockholders. The selling stockholders are former record and beneficial stockholders of Chesapeake Decision Sciences, Inc. who acquired these shares as the result of our acquisition of Chesapeake Decision Sciences, Inc. in May 1998.

USE OF PROCEEDS: We will not receive any of the proceeds from sales of shares by the selling stockholders.

RISK FACTORS

An investment in shares of our common stock is risky. You should consider carefully the following risk factors in addition to the remainder of this prospectus, including information incorporated by reference, before purchasing shares offered by this prospectus.

Some of the information in this prospectus contains forward-looking statements that involve substantial risks and uncertainties. You can identify these statements by forward-looking words such as "may," "will," "expect," "anticipate," "believe," "estimate," "continue" and similar words. You should read statements that contain these words carefully because they (1) discuss our future expectations, (2) contain projections of our future operating results or financial condition or (3) state other "forward-looking" information. We believe it is important to communicate certain of our expectations to our investors. There may be events in the future, however, that we are not accurately able to predict or over which we have no control. The risk factors listed in this section, as well as any other cautionary language in this prospectus, provide examples of risks, uncertainties and events that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Before you invest in our common stock, you should be aware that the occurrence of any of the events described in these risk factors and elsewhere in this prospectus could have a material adverse effect on our business, financial condition and results of operations. In such case, the trading price of our common stock could decline and you could lose all or part of your investment.

OUR QUARTERLY OPERATING RESULTS MAY FLUCTUATE

Our operating results are difficult to predict and may fluctuate significantly from quarter to quarter. If our operating results fall below the expectations of investors or public market analysts, the price of our common stock could fall dramatically.

Our operating results in the fiscal quarter and fiscal year ended June 30, 1998 were below the expectations of some public market analysts and investors, principally because our services revenues grew more slowly than anticipated and our company-wide expenses were higher than expected. Our operating results in the fiscal quarter ended September 30, 1998 were below the expectations of some public market analysts and investors, principally because our license revenues were lower than anticipated. During the fiscal quarter ending December 31, 1998, we have reassessed our business prospects for the last three quarters of fiscal 1999 and significantly reduced our internal estimates of revenues and earnings from previously anticipated levels. From July 27, 1998, the date on which we preliminarily announced our estimated results for the fiscal quarter and year ended June 30, 1998, through the close of business on December 22, 1998, the price per share of our common stock, as reported by the Nasdaq National Market, decreased from \$48.25 to \$13.00. See "Litigation."

Our revenues are difficult to forecast for a number of reasons:

- - License fees for our software products are substantial, and as a result the sales process for our solutions is lengthy, sometimes exceeding a year. The length of the sales process makes our software revenues difficult to predict, and the delay of one or more large orders could cause our quarterly revenues to fall substantially below expectations.
- - We ship our software products within a short period after receipt of an order, and we usually do not have a material backlog of unfilled orders of software products. Consequently, our revenues from software licenses in any quarter depend substantially on the orders booked and shipped in that quarter. We historically have derived a majority of our quarterly software license revenues from license agreements consummated in the final weeks of the quarter. As a result, even a short delay in the consummation of an agreement may cause our revenues to fall below expectations for that quarter.

- - Our revenues during the first quarter of each fiscal year typically decline from the immediately preceding fiscal quarter, in part because (1) a substantial portion of our revenues are derived from foreign countries where business is slow during the summer months and (2) a relatively smaller portion of our software licenses come up for renewal in the first quarter.
- - Fluctuating economic conditions may vary demand for our products and services in ways that are difficult to predict. For example, during an economic downturn in the process industries, some manufacturers may cancel orders due to cash flow concerns. Other manufacturers, however, may choose to accelerate or increase their orders for our software and services since they can use our solutions to improve their efficiency and productivity.

Most of our expenses, particularly employee compensation, are relatively fixed. As a result, even relatively small variations in the timing of our revenues may cause significant variations in our quarterly operating results and may result in quarterly losses.

As a result of these factors, we believe that quarter-to-quarter comparisons of our results of operations are not necessarily meaningful. You should not rely on our quarterly results of operations to predict our future performance.

WE FACE SIGNIFICANT COMPETITION FOR A LIMITED SUPPLY OF QUALIFIED PROJECT ENGINEERS

We derive a substantial portion of our revenues from services provided in connection with extremely complex projects. In general, only highly qualified, highly educated project engineers have the training and skills necessary to complete these projects successfully. In order to continue to staff our current and future projects, we will need to attract, motivate and retain a significant number of qualified chemical and other project engineers. Qualified project engineers are in short supply and we face significant competition for these employees, from not only our competitors but also clients, academic institutions and other enterprises. Other employers may offer project engineers significantly greater compensation and benefits or more attractive career paths or geographic locations than we are able to offer. Any failure on our part to hire, train and retain a sufficient number of qualified project engineers would seriously damage our business.

WE FACE INTENSE COMPETITION FROM A BROAD AND INCREASING RANGE OF VENDORS

We face intense competition from four primary sources:

- - commercial vendors of software products and related consulting services for one or more elements in the design, operation and management of manufacturing processes;
- - hardware vendors that offer software solutions in order to add value to their proprietary distributed control systems, or DCS, which use computer hardware systems, communication networks and industrial instruments to measure, record and automatically control process variables during production;
- - large operating companies in the process industries that have developed their own proprietary software solutions; and
- - companies licensing proprietary manufacturing processes and providing consulting services.

Because of the breadth of our software and service offerings, we face competition from different vendors depending on the solution in question:

- - With respect to particular software solutions, we compete with Chemstations, Inc., Hyprotech, Ltd. (a subsidiary of AEA Technology plc), The Foxboro Company, Simulation Sciences, Inc. and Wonderware Corporation (all of which are subsidiaries of Siebe plc), OSI Software, Inc., the Simcon division of ABB Asea Brown Boveri (Holding) Ltd., and several smaller competitors, such as Pavilion Technologies, Inc.
- - With the acquisition of Chesapeake Decision Sciences, Inc., we now compete with established commercial vendors of supply chain management software, including i2 Technologies, Inc. and Manugistics Group, Inc.
- - A number of vendors of enterprise resource planning, or ERP, software products, such as Baan Company N.V., J.D. Edwards Inc., Oracle Corporation, PeopleSoft, Inc., and SAP A.G., have announced their intentions to enter or expand their existing presence in the market for supply chain management solutions. ERP solutions help a process manufacturer manage resources across the enterprise and enable the manufacturer to integrate front- and back-office business functions.
- - We also expect to encounter continuing competition from DCS solution vendors, such as Honeywell Inc., as they expand their software and service offerings to include additional aspects of process manufacturing.

In recent years, consolidation in our markets, such as the acquisitions by Siebe plc of Simulation Sciences, Inc. and Wonderware Corporation and the acquisition of Elsag Bailey by Asea Brown Boveri (Holding) Ltd. has expanded the breadth of product and service offerings by some of our competitors. As a result of this consolidation and the expansion of DCS and ERP vendors into additional markets, we may compete from time to time with divisions of companies, such as Honeywell Inc. and Siebe plc, with which we collaborate on other occasions. Our inability to compete and cooperate simultaneously with these companies may seriously damage our business.

OUR ACQUISITION STRATEGY INVOLVES RISKS

From May 1995 through May 1998, we completed 15 acquisitions. Our largest acquisition to date has been Chesapeake Decision Sciences, Inc., which we acquired on May 27, 1998. Through these acquisitions, we have expanded our product and service offerings, entered new markets, and increased the scope of our operations and the number of our employees. While we are not currently a party to any agreements or understandings for any material acquisitions, we expect to continue to acquire both domestic and foreign companies as part of our growth strategy. Acquisitions involve risks that could cause our actual growth to differ from our expectations. For example:

- - We may be unable to continue to identify suitable acquisition candidates. In light of the consolidation trend in our industry, we face increasing competition for acquisition opportunities. This competition may substantially increase the cost of any acquisition we complete.
- - In future acquisitions, we may issue equity securities that could be dilutive to our shareholders. In those acquisitions, we also may incur additional debt and amortization expense related to goodwill and other intangible assets. This additional debt and amortization expense may materially and adversely affect our business and operating results.
- - We may be unable to integrate acquired businesses successfully and to realize anticipated economic, operational and other benefits in a timely manner. Integration of an acquired business is especially difficult when we acquire a business in a market in which we have limited or no expertise or a business with a corporate culture different from ours. If we are unable to successfully integrate acquired businesses, we may incur substantial costs and delays or other operational, technical or financial problems. In addition, the failure to integrate acquisitions successfully may divert management's

attention from our existing business and may damage our relationships with our key clients and employees.

OUR REVENUES ARE CONCENTRATED IN THE CHEMICALS, PETROCHEMICALS AND PETROLEUM INDUSTRIES

We derive a substantial majority of our revenues from companies in the chemicals, petrochemicals and petroleum industries. We expect that companies in these industries will continue to account for a substantial majority of our revenues for the foreseeable future. Our success therefore depends directly on continued demand for our software and services by companies in these industries.

The chemicals, petrochemicals and petroleum industries are highly cyclical. We believe that in the past chemical, petrochemical and petroleum companies have delayed and reduced capital and operating expenditures as the result of economic downturns, as well as pricing pressures experienced in connection with cost-containment measures and environmental regulations. These industry patterns, as well as general domestic and foreign economic conditions, could seriously damage our business.

Recently some of our clients have completed or announced mergers with other of our clients. For example, The British Petroleum Company p.l.c. and Amoco Corporation executed a merger agreement in October 1998 and Exxon Corporation and Mobil Corporation executed a merger agreement in December 1998. We currently are unable to predict the effect, if any, that these consolidations will have on the nature and quantity of software and services we provide to these clients.

WE NEED TO DEVELOP NEW SOFTWARE AND SERVICES

We face rapidly changing technology and continuing improvements in computer hardware, operating systems, programming tools, programming languages and database technology. In order to be successful, we must:

- - enhance our current software products and services;
- - integrate our current and future software offerings;
- - modify our products to operate on additional or new operating platforms or systems; and
- - develop in a timely and cost-effective manner new software and services that meet changing market conditions, including evolving customer needs, new competitive software and service offerings, emerging industry standards and changing technology.

We face rapidly changing technology and continuing improvements in computer hardware, operating systems, programming tools, programming languages, and database technology, as well as the development of open standards and interfaces between our products and the products of other companies.

In the past, we have experienced delays in developing new products and enhancing existing products, and on occasion we have postponed scheduled delivery dates for products. Like many other software products, our software on occasion has contained undetected errors or "bugs" that may not be detected for a number of months after the delivery of the software. In order to be successful, we must meet our customers' expectations with respect to product development, enhancement and integration and our software and services must address adequately the needs of our customers.

WE DEPEND ON THE SERVICES OF OUR CURRENT CHIEF EXECUTIVE OFFICER

Our future success depends to a significant degree on the skills, experience and efforts of our executive officers, particularly Lawrence B. Evans, our principal founder and Chairman and Chief Executive Officer. Dr. Evans has led us since our incorporation in 1981. We do not have any employment contract requiring Dr. Evans or any of our other executive officers to continue their employment for any period of time, and we do not maintain any significant amount of key-person life insurance on any of our executive officers. The loss of the services of Dr. Evans would seriously damage our business.

WE ARE SUBJECT TO PRODUCT LIABILITY CLAIMS

The sale and implementation of our software products and services potentially may result in significant product liability claims. Process manufacturers use our software products and services in designing, operating and

managing their manufacturing processes at large facilities. Any failure of the software at those facilities could result in significant claims for damages or for violations of environmental, safety and other laws and regulations.

Our agreements with our customers generally contain provisions designed to limit our exposure to potential product liability claims. These provisions may, however, not be effective as a result of applicable laws or judicial decisions.

OUR PROPRIETARY TECHNOLOGY IS SUBJECT TO LIMITED PROTECTION

Our business could be materially and adversely affected if we are not able to protect adequately our proprietary software and other proprietary intellectual property rights. We rely on a combination of copyright, patent, trademark and trade secret laws, license and confidentiality agreements, and software security measures to protect our proprietary rights. Although we presently hold U.S. and foreign registered trademarks and U.S. patents on certain of our proprietary technology, we may be unable to obtain similar protection for our other intellectual property. In addition, the laws of certain countries in which our products are licensed do not protect our products and intellectual property rights to the same extent as U.S. laws. We generally enter into non-disclosure agreements with our employees and customers and restrict access to, and distribution of, our proprietary information. Nevertheless, we may be unable to deter misappropriation of our proprietary information, detect unauthorized use and take appropriate steps to enforce our intellectual property rights. Our competitors also may independently develop technologies that are substantially equivalent or superior to our technology. Although we believe that our services and products do not infringe on the intellectual property rights of others, we cannot prevent someone else from asserting a claim against us in the future for violating their technology rights.

OUR INTERNATIONAL OPERATIONS INVOLVES ADDITIONAL RISKS

In fiscal 1996, 1997 and 1998 and the first three months of fiscal 1999, we derived 42.0%, 50.0%, 45.4% and 51.7% of our revenues from customers outside the United States. We anticipate that revenues from international customers will continue to account for a significant portion of our revenues for the foreseeable future. Our international operations are subject to additional risks, including:

- - fluctuations in exchange rates may reduce our earnings, particularly where we denominate arrangements with international customers in the currency of the country in which our software or services are provided, and the hedging techniques we implement may be expensive and may not fully eliminate the impact of exchange rate fluctuations on our operating results;
- - tariffs and other barriers may reduce our ability to sell our solutions or may reduce the profitability of those solutions;
- - political and economic instability, such as the economic downturn in Asia in 1998, may lead to reduced demand for our solutions or make it difficult for us to offer our products;
- - changes in technology standards, such as interfaces between products, that are developed by European or foreign groups may require additional development efforts by us or may change the buying behavior of some of our customers;
- - unexpected changes in regulatory requirements may decrease the usefulness of our solutions for process manufacturers and therefore reduce the demand for those solutions;
- - we may experience difficulties in managing a global network of distributors or representatives and in staffing and managing foreign subsidiary operations;
- - we may encounter difficulties or delays in translating products and product documentation into foreign languages;
- - we may suffer potentially adverse tax consequences from operations in a large number of countries; and

- - the adoption and use of the euro, the single European currency to be introduced in January 1999, may adversely affect our business in ways we cannot currently predict.

WE MUST INCREASE OUR MARKET PENETRATION

Our failure to achieve increased market penetration in the process industries would substantially restrict our future growth and damage our business prospects. Our ability to increase market penetration will depend upon a number of factors, including product performance, accuracy of results, reliability, breadth and integration of product offerings, scope of applications, and ease of implementation and use.

OUR PRODUCTS, SERVICES AND SYSTEMS MAY NOT BE YEAR 2000 COMPLIANT

Many existing computer systems and software applications use only two digits to identify a year in the date field. These systems and applications were designed and developed without considering the impact of the upcoming change in the century. If not corrected, year 2000 problems may cause many computer applications to fail or create erroneous results for calculations involving years after 1999.

If we are not able to develop or offer, in a timely manner, year 2000 compliant products and product updates, we may suffer the following consequences:

- - We could experience a significant loss of revenues. Customers may decide not to purchase our products and services, or may decide to delay purchasing our products or services in anticipation of our future release of year 2000 compliant products.
- - Year 2000 errors in our products could materially impair the utility of our products and services and could result in significant product liability claims against us.
- - We could incur significant expenses in making our products, services and internal systems year 2000 compliant. We currently believe the total costs to be incurred for all of our year 2000 related projects will not have a material impact on our operating results. Currently unidentified year 2000 problems may, however, cause us to incur material unanticipated expenses. We are assessing these costs on an ongoing basis in order to adjust our spending plans as necessary.

We have undertaken, but not completed, a program to determine whether and to what extent we may need to update our software products and service processes to become year 2000 compliant. We have tested and determined that over 90% of our standard products are compliant. We have not, however, completed testing on other software products or on the work processes of our service groups. We do not intend to test or modify all prior versions of our software products, current products used on year 2000 non-compliant systems, custom applications developed by or for customers, or certain current software products that we plan to replace with either new software products or year 2000 compliant releases by the end of 1999. Until we have completed our assessment, we cannot be sure that our efforts to address year 2000 issues are adequate. Although we have obtained representations as to year 2000 compliance from the sellers of certain of our recently acquired technologies, we cannot be certain that we will not encounter year 2000 problems arising from these technologies. Moreover, the ability of our software products and services to comply with year 2000 requirements depends in part upon the availability of year 2000 compliant versions of operating systems and software applications used by or with our products and services.

We currently are evaluating the readiness of those of our internal systems that are business-critical. We consider hardware, software, systems, technologies and applications to be "business-critical" if a failure would either have a material adverse impact on our business or involve a safety risk to our employees or customers. We have reviewed certain of our internal systems and future system plans to assess year 2000 compliance. We expect that

our internal system development plans will address the year 2000 issue and will correct any existing non-compliant systems without the need to accelerate the overall information systems implementation plans. Our business would be adversely affected if there are unidentified dependencies on internal systems to operate the business, or if any required modifications are not completed on a timely basis or are more costly to implement than currently anticipated.

OUR STOCK PRICE MAY FLUCTUATE SIGNIFICANTLY

Our common stock is traded on the Nasdaq National Market. The market price of our common stock could fluctuate substantially based on a variety of factors such as our financial performance, announcements concerning us or our key clients or competitors, technological innovations, litigation or changes in earnings estimates by analysts. Stock prices may fluctuate widely for reasons unrelated to operating results. Fluctuations in general economic, political and market conditions, such as recessions or international currency fluctuations, may adversely affect the market price of our common stock.

The market price of our common stock has been volatile during the second half of calendar 1998. Our operating results in the fiscal quarter and fiscal year ended June 30, 1998 were below the expectations of some public market analysts and investors, principally because our services revenues grew more slowly than anticipated and our company-wide expenses were higher than expected. Our operating results in the fiscal quarter ended September 30, 1998 were below the expectations of some public market analysts and investors, principally because our licenses revenues were lower than anticipated. During the fiscal quarter ending December 31, 1998, we have reassessed our business prospects for the last three quarters of fiscal 1999 and significantly reduced our internal estimates of revenues and earnings from previously anticipated levels. Since July 27, 1998, the date on which we preliminarily announced our estimated results for the fiscal quarter and year ended June 30, 1998, the price per share of our common stock, as reported by the Nasdaq National Market, decreased from \$48.25 to a low of \$6.125 on October 5, 1998. On December 22, 1998, the last reported sale price of our common stock on the Nasdaq National Market was \$13.00. See "Litigation" for a brief description of three purported class actions against us and certain of our officers and directors on behalf of purchasers of our common stock during certain periods in 1998.

OUR ANTI-TAKEOVER PROVISIONS MAY DISCOURAGE POTENTIAL TAKEOVER ATTEMPTS

Certain provisions of our certificate of incorporation and Delaware law could be used by our incumbent management to make it more difficult for a third party to acquire control of us, even if the change in control might be beneficial to our stockholders. This could discourage potential takeover attempts and could adversely affect the market price of our common stock.

In particular, we may issue preferred stock in the future without stockholder approval, upon terms determined by our board of directors. The rights of holders of our common stock would be subject to, and may be adversely affected by, the rights of holders of any preferred stock issued in the future. The issuance of preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, a majority of our outstanding stock. We have adopted a stockholder rights plan that may deter or delay attempts to acquire us or to accumulate shares of common stock. Except for the stockholder rights plan, we have no present plans to designate or issue any shares of preferred stock.

LITIGATION

On October 5, 1998, a purported class action lawsuit was filed in the United States District Court for the District of Massachusetts against us and certain of our officers and directors, on behalf of purchasers of our common stock between April 28, 1998 and October 2, 1998. This lawsuit seeks an unspecified amount of damages and claims violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, alleging that we and the named officers and directors issued a series of materially false and misleading statements concerning our financial condition, operations and integration of several acquisitions. On October 26, 1998, a second purported class action lawsuit was filed in the United States District Court for the District of Massachusetts against us and certain of our officers and directors, on behalf of purchasers of our common stock between April 28, 1998 and October 2, 1998. The complaint for this second lawsuit is identical to the complaint for the first lawsuit, except for the plaintiff's name. On November 20, 1998, a third purported class action lawsuit was filed in the United States District Court for the District of Massachusetts against us and certain of our officers and directors, on behalf of purchasers of our common stock between January 27, 1998 and October 2, 1998. The complaint for this third lawsuit is identical to the two prior complaints, except for the plaintiff's name and the additional reference to statements made between January 27, 1998 and April 28, 1998. We believe that we have meritorious legal defenses to these lawsuits, and we intend to defend vigorously against these actions. We currently are unable, however, to determine whether resolution of these matters will have a material adverse impact on our financial position or results of operations, or we are unable to estimate the amount of the loss, if any, that may result from resolution of these matters.

USE OF PROCEEDS

All of the shares of common stock offered by this prospectus are being offered by the selling stockholders. For information about the selling stockholders, see "Selling Stockholders." We will not receive any proceeds from sales of these shares.

SELLING STOCKHOLDERS

Several of the selling stockholders are employees of Chesapeake Decision Sciences, Inc. ("Chesapeake") who are offering 490,337 of the shares they acquired as the result of our acquisition of Chesapeake on May 27, 1998. These shares have been registered in accordance with the provisions of a registration rights arrangements entered into in connection with the acquisition.

The other selling stockholders are current or former employees of Chesapeake to whom a total of 839,361 of the offered shares were distributed upon the termination of Chesapeake's employee stock ownership plan (the "ESOP") in December 1998. The ESOP had been a stockholder of Chesapeake and had received 839,361 shares of our common stock as the result of our acquisition of Chesapeake on May 27, 1998. In order to satisfy regulations of the Internal Revenue Service applicable to the termination of the ESOP, we have registered the shares with the Securities and Exchange Commission in order to enable the shares to be freely tradable. We expect to withdraw registration of any unsold shares on or shortly after May 27, 1999, when we expect the shares will become eligible for public sale pursuant to the exemption from registration provided by Rule 144 under the Securities Act of 1933.

The following table sets forth certain information with respect to the beneficial ownership of our common stock by the selling stockholders as of December 7, 1998 and as adjusted to reflect the sale of the shares of common stock offered by this prospectus.

NAME	SHARES		NUMBER OF SHARES BEING OFFERED	SHARES TO BE BENEFICIALLY OWNED AFTER OFFERING IF ALL SHARES SOLD(1)	
	NUMBER	PERCENT		NUMBER	PERCENT
Thomas E. Baker.....	1,749,099(2)	7.1%	329,094	1,549,099(2)	6.2%
Donald E. Shobrys.....	218,068	*	218,068	-	-
David L. Linkin.....	109,440	*	109,440	-	-
Dwight E. Collins.....	86,844	*	86,844	-	-
Jeffrey B. Howard.....	79,706	*	79,706	-	-
Laura H. Rhoden.....	59,916	*	59,916	-	-
Christopher V. Jones.....	32,180	*	32,080	100	*
Joseph F. Faccenda	3,585	*	3,585	-	-
Asmus, Leslie-Ann (Yarrow)	6,783	*	6,783	-	-
Baker, Thomas C.	21,371	*	21,371	-	-
Balogh, Lajos.....	2,802	*	2,802	-	-
Beadling, William H.	13,139	*	13,139	-	-
Beauregard, Deborah A.	1,422	*	1,311	111	*
Bergin, John D.	1,863	*	1,863	-	-
Blackmore, Janet	398	*	398	-	-
Burnside, Jay B.	23,582	*	23,582	-	-
Buttolph, Brian P.	1,057	*	1,057	-	-
Chen, Wenhong.....	16,696	*	16,696	-	-
Constant, Jennifer S.	2,629	*	2,629	-	-
Cooper, Robert A.	25,065	*	25,065	-	-
DeSimone, Joseph J.	2,070	*	1,320	750	*
Dolopei, Rufus S.	644	*	644	-	-
Elkins, George F.	2,171	*	1,881	290	*
Ellis, Robert E.	1,195	*	1,195	-	-
Finnie, Matthew B.	18,972	*	18,972	-	-
Folmer, Victoria A.	2,505	*	2,505	-	-
Gao, Samuel.....	2,705	*	2,605	100	*
Goodhart, Robert E.	11,376	*	11,376	-	-
Gordon, Mary Ann	704	*	704	-	-
Gosavi, Hemant D.	4,340	*	4,340	-	-
Halpin, Paul	1,320	*	1,320	-	-
Harvey, Alison D.	3,725	*	3,725	-	-
Henricksen, Jennifer J. ...	1,310	*	810	500	*
Holwegner, Barbara B.	1,109	*	1,109	-	-
James, Mark R.	31,322	*	31,172	150	*
Kang, Elisa S.	616	*	616	-	-
Kapadia, Nishadh	24,075	*	23,625	450	-
Kaplan, Michael.....	16,539	*	16,539	-	-
Kautsch, Stuart A.	2,008	*	2,008	-	-
Kramer, Jane C.	559	*	559	-	-
Krause, James P.....	1,366	*	1,366	-	-
Lal, Yamini A.	1,601	*	1,601	-	-

Leshner, Fritz C.	2,201	*	2,201	-	-
Limone, Peter J.	2,813	*	2,813	-	-
Logan, Bruce A.	2,412	*	2,412	-	-
Mak, Kin W.	641	*	641	-	-
Matthews, Dorothy E.	1,227	*	1,227	-	-
McKenzie, Cecile G.	914	*	644	270	*
Modi, Yogesh A.	3,452	*	3,452	-	-
Muckstadt, John A.	29,645	*	29,645	-	-
Nagy, Anna C.	12,731	*	12,631	100	*
Nasuti, Floyd R.	2,209	*	1,394	815	*
Nisivoccia, Laura M.	1,476	*	1,476	-	-
Nord, Harry A.	3,835	*	3,835	-	-
Osorio, German J.	5,139	*	5,139	-	-
Peng, Yunyun	4,674	*	4,674	-	-
Perfit, Dianne B.	2,256	*	2,256	-	-
Sanford, Andrew A.	3,742	*	3,742	-	-
Sery, Slava E.	9,413	*	9,413	-	-
Shi, Wei	1,430	*	1,230	200	*
Smith, Caitlin M.	12,205	*	12,205	-	-
Stawicki, Robert J.	5,358	*	5,358	-	-
Swinehart, Susan C.	1,436	*	1,436	-	-
Tai, Tsu-Ta.	1,863	*	1,863	-	-
Tuschen, Laurie E.	803	*	803	-	-
Van Leer, Lisa	4,398	*	4,398	-	-
Watts, Karen L.	15,750	*	15,750	-	-
Wen, Yingzhong	1,941	*	1,941	-	-
Williams, Kirk	14,154	*	14,154	-	-
Wong, Wanshing	11,819	*	11,019	800	*
Yu, David L.	4,664	*	4,664	-	-
Zanchelli, Michael P.	1,961	*	1,861	100	*

- - - - -

* Percentage of shares beneficially owned is less than 1.0%.

- (1) Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission and generally includes voting or investment power with respect to securities. Except as indicated, each of the selling stockholders possesses sole voting and investment power with respect to all of the shares of common stock owned by them, subject to community property laws where applicable. Percentage of beneficial ownership is based on 24,726,751 shares of common stock outstanding as of December 7, 1998.
- (2) Includes 41,032 shares held by Dr. Baker's wife and 64,159 shares held by a trust for the benefit of Dr. Baker's children. Some or all of these shares may be included in the 329,094 shares offered by Dr. Baker.

PLAN OF DISTRIBUTION

The shares offered by this prospectus may be sold from time to time by selling stockholders, who consist of the persons named under "Selling Stockholders" above and those persons' pledgees, donees, transferees or other successors in interest. The selling stockholders may sell the shares on the Nasdaq National Market or otherwise, at market prices or at negotiated prices. They may sell shares by one or a combination of the following:

- a block trade in which a broker or dealer so engaged will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker or dealer as principal and resale by the broker or dealer for its account pursuant to this prospectus; and
- ordinary brokerage transactions and transactions in which a broker solicits purchasers.

In effecting sales, brokers or dealers engaged by the selling stockholders may arrange for other brokers or dealers to participate. Brokers or dealers will receive commissions or discounts from selling stockholders in amounts to be negotiated prior to the sale. The selling stockholders and any broker-dealers that participate in the distribution may be deemed to be "underwriters" within the meaning of Section 2(11) of the Securities Act of 1933, and any proceeds or commissions received by them, and any profits on the resale of shares sold by broker-dealers, may be deemed to be underwriting discounts and commissions.

If any selling stockholder notifies us that a material arrangement has been entered into with a broker-dealer for the sale of shares through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file, a prospectus supplement, if required pursuant to Rule 424(c) under the Securities Act of 1933, setting forth:

- the name of each of the participating broker-dealers,
- the number of shares involved,
- the price at which the shares were sold,
- the commissions paid or discounts or concessions allowed to the broker-dealers, where applicable,
- a statement to the effect that the broker-dealers did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and
- any other facts material to the transaction.

LEGAL MATTERS

Foley, Hoag & Eliot LLP, Boston, Massachusetts, has advised us with respect to the validity of the shares of common stock offered by this prospectus.

EXPERTS

Our consolidated balance sheets as of June 30, 1997 and 1998 and our related consolidated statements of operations, stockholders' equity and cash flows for the years ended June 30, 1996, 1997 and 1998 incorporated by reference in this prospectus from our Annual Report on Form 10-K for the fiscal year ended June 30, 1998 have been audited by Arthur Andersen LLP, independent public accountants, to the extent and for the periods indicated in their reports included in that Form 10-K and are incorporated by reference in this prospectus in reliance upon the authority of Arthur Andersen LLP as experts in giving those reports.

WHERE YOU CAN FIND MORE INFORMATION

We file annual reports, quarterly reports, current reports, proxy statements and other information with the Securities and Exchange Commission (the "SEC"). You may read and copy our SEC filings at the SEC's public reference room at 450 Fifth Street, N.W., Washington D.C. 20549. You may call the SEC at 1-800-SEC-0330 for further information about the public reference room. Our SEC filings also are available on the SEC's website at <http://www.sec.gov>.

The SEC allows us to "incorporate by reference" information from certain of our other SEC filings. This means that we can disclose information to you by referring you to those other filings, and the information incorporated by reference is considered to be part of this prospectus. In addition, certain information that we file with the SEC after the date of this prospectus will automatically update, and in some cases supersede, the information contained or otherwise incorporated by reference in this prospectus. We are incorporating by reference the information contained in the following SEC filings:

- - our Annual Report on Form 10-K for the fiscal year ended June 30, 1998 (as filed on September 28, 1998);
- - our Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 1998 (as filed on November 16, 1998 and as amended by Amendment No. 1 filed on November 20, 1998);
- - our Current Reports on Form 8-K dated October 2, 1998 (as filed on October 6, 1998) and October 5, 1998 (as filed on October 7, 1998);
- - our definitive Proxy Statement (as amended by Amendment No. 1 filed on November 18, 1998) being used in connection with our Annual Meeting of Stockholders to be held on December 15, 1998;
- - the description of our common stock contained in our Registration Statement on Form 8-A (as amended by Amendment No. 1 filed on June 12, 1998); and
- - any filings we make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 after the date of this prospectus (information in these filings will be incorporated as of the filing date).

You may request copies of these filings, at no cost, by writing, telephoning or e-mailing our Manager of Investor Relations as follows:

Aspen Technology, Inc.
Ten Canal Park
Cambridge, Massachusetts 02141
Telephone: (617) 949-0100
E-mail: invest@aspentech.com.

This prospectus is part of a Registration Statement on Form S-3 we filed with the SEC under the Securities Act of 1933. This prospectus does not contain all of the information contained in the Registration Statement.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the various expenses to be paid by the Registrant in connection with the issuance and distribution of the shares of common stock being registered. All amounts shown are estimates except for the Securities and Exchange Commission registration fee. The Registrant will pay all expenses in connection with the distribution of the shares of common stock being sold by the selling stockholders (including fees and expenses of counsel for the Registrant), except for any commissions or discounts due to any broker or dealer in connection with sales of shares offered by this prospectus.

Securities and Exchange Commission registration fee.....	\$ 4,160
Accounting fees and expenses.....	1,000
Legal fees and expenses.....	10,000
Printing, EDGAR formatting and mailing expenses.....	500
Miscellaneous.....	1,840

Total.....	\$17,500
	=====

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Article SEVENTH of the Registrant's Certificate of Incorporation, as amended (the "Certificate of Incorporation"), provides that no director of the Registrant shall be personally liable for any monetary damages for any breach of fiduciary duty as a director, except to the extent that the Delaware General Corporation Law prohibits the elimination or limitation of liability of directors for breach of fiduciary duty.

Article EIGHTH of the Certificate of Incorporation provides that a director or officer of the Registrant shall be indemnified by the Registrant against:

- (a) all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement incurred in connection with any litigation or other legal proceeding (other than an action by or in the right of the Registrant) brought against him or her by virtue of his or her position as a director or officer of the Registrant if he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the Registrant, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful and
- (b) all expenses (including attorneys' fees) and amounts paid in settlement incurred in connection with any action by or in the right of the Registrant brought against him or her by virtue of his or her position as a director or officer of the Registrant if he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the Registrant, except that no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the Registrant, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses.

Notwithstanding the foregoing, to the extent that a director or officer has been successful, on the merits or otherwise, including the dismissal of an action without prejudice, he or she is required to be indemnified by the Registrant against all expenses (including attorneys' fees) incurred in connection therewith. Expenses shall be advanced to a director or officer at his or her request, provided that he or she undertakes to repay the amount advanced if it is ultimately determined that he or she is not entitled to indemnification for such expenses.

Indemnification is required to be made unless the Registrant determines that the applicable standard of conduct required for indemnification has not been met. In the event of a determination by the Registrant that the director or officer did not meet the applicable standard of conduct required for indemnification, or if the Registrant fails to make an indemnification payment within sixty days after such payment is claimed by such person, such person is permitted to petition the court to make an independent determination as to whether such person is entitled to indemnification. As a condition precedent to the right of indemnification, the director or officer must give the Registrant notice of the action for which indemnity is sought and the Registrant has the right to participate in such action or assume the defense thereof.

Article EIGHTH of the Certificate of Incorporation further provides that the indemnification provided therein is not exclusive, and provides that in the event that the Delaware General Corporation Law is amended to expand the indemnification permitted to directors or officers the Registrant must indemnify those persons to the fullest extent permitted by such law as so amended.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against amounts paid and expenses incurred in connection with an action or proceeding to which he or she is or is threatened to be made a party by reason of such position, if such person shall have acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal proceeding, if such person had no reasonable cause to believe his or her conduct was unlawful; provided that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the adjudicating court determines that such indemnification is proper under the circumstances.

The Registrant maintains a directors' and officers' insurance policy that covers certain liabilities of directors and officers of the Registrant, including liabilities under the Securities Act of 1933. The Registrant maintains a general liability insurance policy that covers certain liabilities of directors and officers of the Registrant arising out of claims based on acts or omissions in their capacities as directors or officers.

ITEM 16. EXHIBITS

EXHIBIT NO.

- - - - -

- | | |
|-------|---|
| 5.1 | Opinion of Foley, Hoag & Eliot LLP |
| 23.1 | Consent of Arthur Andersen LLP |
| 23.2 | Consent of Foley, Hoag & Eliot LLP (included in Exhibit 5.1) |
| 24.1 | Powers of Attorney (included on page II-4 of Registration Statement on Form S-3 as initially filed) |
| 99.1* | Declaration of Registration Rights made as of April 27, 1998 by Aspen Technology, Inc. for the benefit of former stockholders of Chesapeake Decision Sciences, Inc. (incorporated by reference to Exhibit 99.1 to registration statement on Form S-3, file No. 333-63483) |

- - - - -

* Previously filed.

ITEM 17. UNDERTAKINGS

(a) The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement;
 - (i) To include any prospectus required to Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-3, Form S-8, or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this Registration Statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment 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.
- (3) To remove from registration, by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference to 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.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the 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, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, as of December 23, 1998.

ASPEN TECHNOLOGY, INC.

By /s/ LAWRENCE B. EVANS

LAWRENCE B. EVANS
Chairman of the Board and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed below by the following persons in the capacities indicated as of December 23, 1998.

SIGNATURE

TITLE

/s/ LAWRENCE B. EVANS Chairman of the Board and Chief Executive Officer
----- (Principal Executive Officer)
LAWRENCE B. EVANS

* Chief Financial Officer
----- (Principal Financial and Accounting Officer)
LISA W. ZAPPALA

* Director

JOSEPH F. BOSTON

* Director

GRESHAM T. BREBACH, JR.

* Director

DOUGLAS R. BROWN

* Director

JOAN C. MCARDLE

* Director

ALISON ROSS

*By /s/ LAWRENCE B. EVANS

Attorney-in-fact

FOLEY, HOAG & ELIOT LLP
One Post Office Square
Boston, Massachusetts 02109-2170
Telephone: (617) 832-1000
Facsimile: (617) 832-7000
Telex 940693
<http://www.fhe.com>

December 23, 1998

ASPEN TECHNOLOGY, INC.
Ten Canal Park
Cambridge, Massachusetts 02141

Ladies and Gentlemen:

We have acted as special counsel for Aspen Technology, Inc., a Delaware corporation (the "Company"), in connection with the preparation and filing with the Securities and Exchange Commission under the Securities Act of 1933, as amended, of a Registration Statement on Form S-3, as amended by Amendment No. 1 thereto (the "Registration Statement"), relating to the offering of up to 1,329,698 shares (the "Shares") of the Company's common stock, \$.10 par value, by certain stockholders of the Company.

In arriving at the opinion expressed below, we have examined and relied on: (i) the Registration Statement; (ii) the Certificate of Incorporation of the Company, as amended; (iii) the By-Laws of the Company; and (iv) minutes of meetings and written consents of the Board of Directors of the Company, including a meeting held on May 26, 1998 and a written consent dated December 8, 1998. In addition, we have examined and relied on the originals or copies certified or otherwise identified to our satisfaction of all such other records, documents and instruments of the Company and such other persons, and we have made such investigations of law, as we have deemed appropriate as a basis for the opinions expressed below. We have assumed the genuineness of all signatures and the authenticity of all documents submitted to us as originals and the conformity to the original documents of all documents submitted to us as certified or photostatic copies.

We express no opinion other than as to the corporation laws of the State of Delaware.

Based upon the foregoing, we are of the opinion that the Shares have been duly authorized and validly issued and are fully paid and non-assessable.

We consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement and to the reference to us under the heading "Legal Matters" in the prospectus forming a part of the Registration Statement.

Very truly yours,

FOLEY, HOAG & ELIOT LLP

By /s/ MARK L. JOHNSON

A Partner

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation by reference in this Amendment No. 1 to Registration Statement on Form S-3 (registration no. 333-68789) of our reports dated August 11, 1998 included in Aspen Technology, Inc.'s Form 10-K for the fiscal year ended June 30, 1998 and to all references to our Firm included in this Amendment No. 1 to Registration Statement.

/s/ ARTHUR ANDERSEN LLP

Boston, Massachusetts
December 22, 1998