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# SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

FORM 10-K

FOR ANNUAL AND TRANSITION REPORTS PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

(MARK ONE)

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
FOR THE FISCAL YEAR ENDED JUNE 30, 1999

OR

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
FOR THE TRANSITION PERIOD FROM TO

COMMISSION FILE NUMBER: 000-24786

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
(ADDRESS OF PRINCIPAL EXECUTIVE OFFICES)

02141 (ZIP CODE)

REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE: (617) 949-1000

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT: NONE

SECURITIES REGISTERED PURSUANT TO SECTION 12(g)OF THE ACT: COMMON STOCK, .10 PAR VALUE PER SHARE

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes [X] No []

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [X]

As of September 20, 1999, the aggregate market value of Common Stock (the only outstanding class of common equity of the registrant) held by nonaffiliates of the registrant was \$249,425,489, based on a total of 24,041,011 shares of Common Stock held by nonaffiliates and on a closing price of \$10.375 for the Common Stock as reported on the Nasdaq National Market.

As of September 20, 1999, 25,174,385 shares of Common Stock were outstanding.

#### DOCUMENTS INCORPORATED BY REFERENCE

The registrant intends to file a definitive proxy statement pursuant to Regulation 14A within 120 days of the end of the fiscal year ended June 30, 1999. Portions of such proxy statement are incorporated by reference in Part III of this Form 10-K.

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This Form 10-K contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, which are intended to be covered by the safe harbors created thereby. For this purpose, any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects," and similar expressions are intended to identify forward-looking statements. Readers are cautioned that all forward-looking statements involve risks and uncertainties, many of which are beyond our control, including the factors set forth under "Item. 1A. Risk Factors." Although we believe that the assumptions underlying the forward-looking statements contained herein are reasonable, any of the assumptions could be inaccurate and there can be no assurance that actual results will be the same as those indicated by the forward-looking statements included in this Form 10-K. In light of the significant uncertainties inherent in the forward-looking statements included herein, the inclusion of such information should not be regarded as a representation by us or any other person that our objectives and plans will be achieved. Moreover, we assume no obligation to update these forward-looking statements to reflect actual results, changes in assumptions or changes in other factors affecting such forward-looking statements.

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# PART I

# ITEM 1. 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 enterprises. The process industries include manufacturers of petroleum products, petrochemicals, polymers, specialty chemicals, pharmaceuticals, pulp and paper, electric power, food and beverages, consumer products, metals and minerals and semiconductors. We offer a comprehensive set of focused solutions, integrated plant-wide solutions and enterprise optimization solutions that help process manufacturers enhance profitability by improving efficiency, productivity, capacity utilization, safety and environmental compliance throughout the entire manufacturing life-cycle, from research and development to engineering, planning and scheduling, procurement, production and distribution. In addition to our software solutions, we offer systems implementation, advanced process control, real-time optimization and other consulting services through our staff of more than 460 project engineers. As part of our strategy to offer the broadest, most integrated suite of process

manufacturing enterprise optimization solutions, we have acquired businesses from time to time to obtain technologies and expertise that complement or enhance its core solutions. We currently have more than 1,000 customers worldwide, including 46 of the 50 largest chemical companies, 22 of the 25 largest petroleum refiners and 16 of the 20 largest pharmaceutical companies.

## INDUSTRY BACKGROUND

Companies in the process industries manufacture products in the form of bulk solids, liquids, gases, powders, and films by using production methods involving chemical reactions, combustion, mixing, separation, heating, cooling and similar processes. The process industries encompass manufacturers of petroleum products, petrochemicals, polymers, specialty chemicals, pharmaceuticals, pulp and paper, electric power, food and beverages, consumer products, metals and minerals and semiconductors. Companies in a number of other industries, also utilize production techniques with characteristics similar to those underlying process manufacturing.

In recent years, companies in the process industries have faced several challenges, which have placed increased pressure on their profitability. These challenges include intensifying global competition, growth, fluctuating commodity prices, and more stringent environmental and safety regulations. The industry has responded to these challenges in several ways. First, they have rationalized and globalized their production processes through acquisitions, divestitures, mergers and joint ventures. Second, they have reduced their overhead expenses by re-engineering the work processes that support their business and downsizing their supporting organizations. Third, they have invested in information technology to support reengineered business processes.

The profitability of these companies depends substantially upon the costs of raw materials, energy and capital; accordingly, the management and utilization of these inputs significantly affect the companies' financial results. Unlike labor-intensive businesses, which can materially change the scale of their business operations by adjusting the sizes of their labor forces, process manufacturers must focus on improving their production methods in order to increase output, lower costs and reduce waste. Because of the large volumes typically produced by process manufacturers, even a relatively small reduction in raw material or energy requirements or a relatively small improvement in throughput or product yields can have a dramatic impact on the profitability of the manufacturing process.

Improvement of production methods in the process industries requires a thorough understanding of chemical engineering analysis, the fundamental discipline underlying the manufacturing processes. Due to the number of variables involved, chemical engineering analysis is complex and calculation intensive. Because of this complexity and because many process manufacturers have significantly reduced their engineering staffs, many process manufacturers are seeking technology-based solutions to aid them in their process manufacturing decisions, with the objective of moving toward optimization of their production processes and manufacturing enterprises under existing process and equipment constraints.

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Increasingly sophisticated process manufacturing optimization solutions have been introduced to assist process manufacturers in optimizing the design, operation and management of their manufacturing processes and to help them coordinate and optimize multiple manufacturing facilities across their enterprise. In designing manufacturing processes, engineers use tools on desktop computers to simulate a new or existing process and to optimize tradeoffs between variables such as capital investment and operating costs. During operation of the manufacturing process, plant operators rely on automation systems installed in the plant to control and optimize the manufacturing process by, for example, accepting a lower yield to increase overall throughput. To manage the production process, plant managers use information systems to perform tasks such as planning and scheduling of production, analysis and reporting of performance, and yield accounting. To optimize multiple manufacturing facilities planners use supply chain management systems that help them optimize and manage their production facilities throughout the enterprise. Although early versions of process manufacturing optimization solutions were limited in scope and complicated to use, the availability of increasingly powerful, affordable computers and networks and sophisticated intuitive graphical user interfaces has expanded the capabilities of the solutions and the market of potential users.

Process manufacturing optimization solutions include applications to address a broad range of manufacturing activities, including the following:

DESTGN

OPERATE

MANAGE

Process Modeling
Design Analysis & Optimization
Process Improvements
Plant Retrofits

Advanced Process Control Real-time Optimization Operator Training Process Information Management Production Scheduling & Planning Quality Assurance Supply Chain Management Environmental, Health & Safety Compliance

Many process manufacturers have implemented solutions to automate processes outside the actual methods of production. For many years, companies in the process industries have sought to control their production processes by deploying 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. More recently, process manufacturers have automated key business processes through the implementation of enterprise resource planning, or ERP, solutions that enhance their ability to manage resources across the enterprise and enable them to integrate front- and back-office business functions. DCS and ERP solutions generally do not, however, incorporate the detailed chemical engineering knowledge of the manufacturing process or data on the performance of the plant either to optimize the operation and management of the production process, or manage relationships with suppliers and customers.

Process manufacturers are increasingly seeking a complete, integrated family of process manufacturing optimization software products and services that can be used to improve their efficiency and productivity throughout the entire manufacturing life-cycle, while at the same time establishing links with the process manufacturers' existing DCS and ERP solutions and with their customers and suppliers.

## THE ASPENTECH ADVANTAGE

We are the leading supplier of software and service solutions that enable companies in the process industries to optimize the design, operation and management of their manufacturing processes and business enterprises. Our comprehensive suite of solutions helps process manufacturers enhance profitability by improving efficiency, productivity, capacity utilization, safety and environmental compliance throughout the entire manufacturing life-cycle. We believe our customers increasingly view their investments in our solutions as strategic because of the substantial potential economic benefits these solutions offer and the broad range of production issues they address. Our competitive advantage is based on the following key attributes:

TECHNOLOGY LEADERSHIP. We believe we are the technology leader among providers of process manufacturing optimization solutions. We have achieved this technology leadership through internal research and development, strategic acquisitions, and partnerships. For example, we obtained the leading advanced process control and optimization technologies through our acquisitions of Dynamic Matrix Control Corporation and

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Setpoint, Inc. in 1996. In 1997, we introduced Batch Plus, a commercialized version of recipe-based simulation functionality developed in collaboration with Merck & Co., Inc. We have integrated acquired technologies with existing products in order to offer solutions that include the best features and functionality of both. Moreover, we have designed our software solutions to operate on all major operating system platforms used by process manufacturers and to be compatible with all major distributed control systems.

BROADEST SUITE OF INTEGRATED SOLUTIONS. We believe our solutions represent the most complete suite of integrated software and services available for the design, operation and management of manufacturing processes in the process industries. Process manufacturers are able to use our solutions across every stage of the manufacturing life-cycle, from research and development to engineering, planning and scheduling, procurement, production and distribution. We are continuing to integrate our software products in order to further

increase the ability of our customers to share models and data across our different software solutions. In October 1997, we announced the introduction of Plantelligence, the name for our integrated suite of plant-wide best-in-class products. Plantelligence is based on the Aspen Framework, software which serves as a base for integrating our products so they work together in ways that support specific business processes such as production planning or purchasing raw material feedstocks. Plantelligence is being further developed to permit, for example, a buyer for a petroleum refinery to determine how much it will cost to refine a specific boatload of crude oil under then-current operating conditions. This information can then be used to help the buyer decide whether it is economically desirable to purchase that crude oil at then-prevailing prices. The buyer can perform these analyses using a single graphical user interface, without needing to understand our individual software solutions used to perform the analysis. In August 1999, we announced the successful completion of a technically complex Plantelligence implementation at Equistar's Matagorda County, Texas facility.

UNPARALLELED PROCESS INDUSTRY EXPERTISE. Over the past 18 years, we have established a reputation as a leading source of process manufacturing enterprise optimization expertise. Our significant base of chemical engineering and process manufacturing experience and knowledge serves as the foundation for the proprietary solution methods, physical property models and data estimation techniques embodied in our software solutions. We have enhanced our knowledge and understanding of process manufacturing optimization solutions over time through extensive interaction with our customers, which have performed millions of simulations using our software. These customer relationships have also enabled us to identify and develop or acquire solutions that best meet the needs of our customers. To complement our software expertise, we have assembled a staff of more than 460 project engineers to provide implementation, advanced process control, real-time optimization and other consulting services to our customers. We believe our large engineering team provides an important source of competitive differentiation.

LARGE INSTALLED CUSTOMER BASE. We currently have more than 1,000 customers worldwide, including 46 of the 50 largest chemical companies, 22 of the 25 largest petroleum refiners and 16 of the 20 largest pharmaceutical companies. We also have leading customers in other vertical markets such as consumer products, electric power, pulp and paper, metals and minerals and semiconductors. In addition, all of the leading engineering and construction firms use our design software. We consider our relationships with our existing customers to be an important competitive advantage.

## STRATEGY

Our principal objective is to extend our leadership in providing enterprise optimization solutions for process manufacturers that allow them to optimize the design, operation and management of their manufacturing processes and enterprises. The industries we serve produce products that touch people every day, such as the gasoline that fuels automobiles, the clothes people wear, and the medicines that improve people's health. By helping process manufacturers optimize their enterprises we believe we can help improve the quality of some of these basic products in a way that preserves the environment and makes these products

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available to greater numbers of people worldwide. Our strategy to achieve these objectives includes the following key elements:

MAINTAIN OUR LEADERSHIP POSITION IN FOCUSED TECHNOLOGIES. We believe that we offer the most technologically advanced solutions available for the design, operation and management of manufacturing processes, particularly in the areas of process simulation, advanced process control, real-time optimization, scheduling and planning, process information management and supply chain management. In order to extend the technological leadership of our individual software solutions, we intend to continue to recruit and develop outstanding technical talent, to focus on understanding customer needs, to keep abreast of technological advances in software and communications and engineering, and to focus on creating products that are easy to use. We will continue to invest in research and development and to prioritize product development in accordance with market needs and with our strategy. From time to time we may pursue strategic acquisitions of complementary technologies and expertise. We believe that the use of our individual software solutions in recent years has provided

process manufacturers with increased evidence of the economic benefits that may be obtained from implementation of these focused solutions.

PROVIDE INTEGRATED PLANT-WIDE SOLUTIONS AND ENTERPRISE OPTIMIZATION. We believe that process manufacturers can derive substantial additional value through the integration of our focused solutions. Our strategy is to integrate our focused solutions to support business processes that cut across many disciplines both within the plant and across the manufacturing enterprise. In many situations business processes involve multiple uses of our focused solutions. For example, in a specialty chemical plant one of the business processes is to create the production schedule for the coming week. This business process might involve the our supply chain management products to solve the scheduling problem, and our simulation and production accounting technologies to generate data about the status of inventories. By integrating these technologies and using consistent data and models the planner can perform the business process more efficiently and accurately without an in-depth understanding of each of the supporting focused solutions. We believe that integrated solutions provide value for customers in many ways, including improving human performance, improving plant performance, increasing product quality and lowering information technology costs. We continue to invest in the integration of our products. Specifically, one development effort, the Aspen Framework, is designed to integrate all of our products. The Aspen Framework is based on Microsoft Distributed InterNet Architecture, or DNA. We believe we are well positioned to offer integrated solutions because we own many of the leading technologies in the industry and can therefore make the required changes in each of these products needed to achieve an integrated solution.

CONTINUE THE DEVELOPMENT AND IMPLEMENTATION OF THE ASPEN FRAMEWORK. We plan to continue to develop and implement the Aspen Framework as the backbone of our Plantelligence solution. The Aspen Framework enables integration between a plant's enterprise resource planning system, our products and existing plant software systems. The Aspen Framework is built on the Microsoft DNA and simplifies the deployment of complex solutions by integrating a plant's manufacturing and business processes. As customers increasingly demand integration of their technology to support integrated business and manufacturing processes, the Aspen Framework will be available as the technology base to enable this integration.

FOCUS ON OUR CORE VERTICAL MARKETS. We believe that our customers' needs vary significantly across vertical industries. In order to achieve the full benefits of our focused and integrated solutions, we believe that we will need to offer solutions that are tailored to the needs of our customers within specific vertical industries. In December 1998 we created four industry business units to facilitate the creation of vertically-focused solutions for several of the markets we serve. These industry business units will focus on refining, chemicals and petrochemicals, polymers, and life sciences and specialty chemicals. Our strategy is to define and deliver the integrated solution for each major vertical industry that we serve. We plan to create initial first-of-a-kind implementations of our integrated technologies and then refine and develop our strategy for penetrating each vertical market in conjunction with our partners. The implementation of our Plantelligence solution at Equistar's Matagorda County, Texas polymer production facility in August 1999 is an example of a first-of-a-kind implementation.

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EXPAND OUR NETWORK OF PARTNERS. We plan to expand our network of partners to assist in the sale and implementation of our integrated plant solutions and enterprise optimization solutions. We expect this effort will include working with our customers, hardware vendors, complementary software vendors, business consultants, process licensors, engineering and construction firms, and systems integrators. We believe that these business partners will be helpful in developing, selling, implementing and maintaining our solutions. For example, we have entered into an alliance agreement with Equistar Chemicals, L.P., Lyondell Chemical Company, and BP Amoco, p.l.c. for enterprise optimization, a partnering agreement with Yokagawa Electric Corporation for the provision of optimization solutions to their customers, and collaboration and partnering agreements with OLI Systems, Refining Process Services, Inc., SRI Consulting and Intergraph Corporation for the provision of software solutions.

INCORPORATE THE INTERNET IN SOLUTION DEVELOPMENT, SALE AND DELIVERY. We believe that the Internet is an important component of the development, sale and delivery of our focused solutions, Plantelligence, and enterprise optimization

solutions. Some of our software products, including the Aspen Framework, are already web-enabled, and a product development web initiative has been undertaken to direct the web-enablement of our solutions. A core part of our Internet strategy is the development of electronic commerce, or e-commerce, to market, sell and deliver our products over the Internet through our website and the websites of our partners and complementary technology providers. We currently offer customers the ability to download software patches from our website as part of customer support and we are developing additional on-line technical support as part of the enhancement of our customer support service. We believe that the Internet will enable our customers to use our technology on a collaborative basis within their own enterprise, and with their suppliers and customers, and are otherwise exploring new business models which may be made possible by the Internet.

#### SOFTWARE AND SERVICE SOLUTIONS

We offer a comprehensive suite of software and service solutions that enable process manufacturers to optimize their enterprises and the design, operation and management of their manufacturing processes. Our solutions capture process knowledge in consistent, accurate and reliable models that customers can use as the basis for decision-making across the entire manufacturing life-cycle and provide vital functionality for elements of the manufacturing process that other software applications, such as ERP and DCS software, do not address. A number of our software solutions can be linked with ERP solutions and DCS to improve a customer's ability to gather, analyze and use information across the entire process manufacturing life-cycle. To enable our customers to take full advantage of our software solutions, we also offer comprehensive expert consulting, training and support services. Our solutions can be grouped into three categories: focused solutions, integrated plant solutions and enterprise optimization solutions. Our strategy is to provide a migration path for our customers. So, for example, a customer can start with a single AspenTech focused solution, add additional focused solutions, integrate these solutions through our services and integrated products, and finally incorporate our supply chain solution and optimize their business processes to achieve enterprise optimization. This migration path provides a means by which each customer can implement and absorb technology and improve their business processes at their own rate in accordance with their own pressures and business environment. The following descriptions explain each of our three product categories in greater detail.

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FOCUSED SOLUTIONS. We refer to our individual products and services as our focused solutions, which allow process manufacturers to improve specific aspects of the design, operation and management of their manufacturing enterprises. These products are the building blocks for our integrated plant solutions and enterprise optimization solutions. In many cases these technologies are the market leaders. The reputation of these products for quality and leading-edge technology has been a hallmark of our history. The following tables describe our principal focused software solutions and their applications for the design, operation and management of manufacturing enterprises:

DESIGN:

SOFTWARE SOLUTION	DESCRIPTION	APPLICATIONS
3 Dl	Discours and the state and the	Tank to decime and the second
Aspen Plus	Rigorous steady-state modeling system for simulating chemically-based manufacturing processes involving vapors, liquids, solids and electrolytes with a library of equipment and physical property models.	Used to design processes, evaluate process changes and analyze "what-if" scenarios.
DynaPlus/SPEEDUP	Rigorous modeling system for simulating processes under changing (dynamic) conditions with a library of equipment and controller models.	Used to examine process operability, safety and control as operating parameters fluctuate during plant startup and shutdown and other transient conditions.
Batch Plus	Batch process modeling system for recipe-based processes.	Used to scale-up and design new processes, and to analyze the production of one batch or an

Aspen Zyqad...... System for integrating, automating Used to integrate and automate and managing data, applications and activities in the engineering work process.

entire batch plant. work flow between engineers designing new process plants or improving existing facilities.

We also provide an integrated suite of process design and modeling technology, known as the Aspen Engineering Suite or AES. AES is comprised of eight of our products, including Aspen Plus and Aspen Zygad.

Layered on top of these core, focused solutions are a number of separately licensed modules that focus on specialized types of analysis for modeling polymer processes, heat exchanger equipment, separation systems, batch distillation columns, adsorption processes and other complex systems. All of these process design software solutions can operate in Windows. Aspen Plus and SPEEDUP also run on DEC VMS and UNIX.

We typically license our process design software solutions for a term of three to five years. The annual cost for a single user of one of our process design software solutions ranges from \$10,000 to \$30,000, depending on the solution, the license term and the number of licensed users. The license fee includes a separate maintenance component that covers customer support, upgrades, revisions and enhancements during the term of the license.

Implementation of our process design software solutions does not typically require substantial consulting services, although services may be provided for customized model designs and process synthesis.

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OPERATION:

SOFTWARE SOLUTION	DESCRIPTION	APPLICATIONS
Aspen RT-Opt	Real-time optimization system.	Used to identify plant adjustments in order to optimize operations on a real-time basis.
Aspen IQ	Inferential sensor modeling and online implementation technology.	Used to infer infrequently measured properties from continuous measurements for environmental monitoring and advanced control.
DMCplus	Advanced process control system using multi-variable model-predictive control technology.	Used to tightly control actual plant operations at multiple operating constraints.
OTISS	System for developing operator training simulators.	Used to train operators to better manage daily plant operations and respond to abnormal situations.

Aspen RT-Opt operates on DEC VMS and UNIX. DMCplus operates on Windows, DEC VMS and UNIX. OTISS operates on UNIX, Hewlett-Packard and Sun Solaris.

We typically license our process operation software solutions for terms of 99 years. The list price for a 99-year license of Aspen RT-Opt or DMCplus generally ranges from \$50,000 to \$200,000, depending on the solution and on whether the license covers a single process unit or an entire facility. The list price for a 99-year license of OTISS is approximately \$50,000. Maintenance of process operation software solutions is available under separate contracts.

Implementation of our process operation software solutions typically requires substantial consulting services.

MANAGEMENT:

DESCRIPTION	APPLICATIONS
	DESCRIPTION

system with a real-time database of historical information.

Aspen MIMI..... Supply chain management system, including demand management, inventory control and available-to-promise.

Aspen PIMS...... Linear programming-based economic planning and scheduling system.

Aspen Advisor.... Yield-accounting solution.

1stQuality...... System to address issues in polymer manufacturing.

historical information generated by plant systems to present a unified view of plant operations. Used to identify best supply chain decisions to maximize asset utilization, minimize raw material costs, maximize product values and control inventories. Used to identify short-term and strategic decisions on feedstock purchases, capacity utilization and production planning. Used to track inventory and material movements into, through and out of processing plants, in order to enable manufacturers to report production data accurately to ERP and other business systems. Used to integrate the management, usage and monitoring of operating conditions to reduce transition time, improve product consistency and monitor process compliance.

All of our process management software solutions can operate in Windows.

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We typically license InfoPlus.21, MIMI, Aspen Advisor and 1stQuality for terms of 99 years and typically license Aspen PIMS for a term of 5 years or 25 years. The list price for an entry-level 99-year InfoPlus.21 license is approximately \$40,000 and varies depending on the number of points of data being collected. The list price for an entry-level 99-year multi-user site license for Aspen MIMI is approximately \$220,000. The list price for a license of Aspen PIMS modules ranges from \$10,000 to \$200,000, depending on the solution and the license term. The list price for an entry-level 99-year Aspen Advisor license ranges from \$100,000 to \$200,000, depending on the number of nodes, and the list price for an entry-level 99-year 1stQuality license is approximately \$150,000 per plant.

Implementation of our process management software solutions typically requires consulting services, although not to the same extent as process operation software solutions.

INTEGRATED PLANT SOLUTIONS. Our suite of integrated plant solutions, which are marketed under the Plantelligence name, enables process manufacturers to drive their plant operations to higher levels of profitability. Plantelligence incorporates our focused solutions, and uses the Aspen Framework as a vehicle for integrating these products so they work together to support specific business processes. The Aspen Framework facilitates integration of our products by allowing the various applications to communicate with common databases of design information, real-time information and documents. The Aspen Framework is based on Microsoft DNA technology and includes web-enabled features such as XML and Active Server pages. Plantelligence is designed to integrate with a plant's hardware systems, enterprise resource planning system, and existing information technology systems to optimize operation of the plant.

By uniting our products in a common framework, Plantelligence provides a comprehensive set of business improvements to process plants. We believe the benefits of integration are an essential part of helping process manufacturers become more competitive. Integration of the focused technologies enables process manufacturers to integrate the design, operation and management of their process plants. Integrating the technologies which support business processes can help process manufacturers align their people, their resources, and their business processes to drive their manufacturing enterprises to higher levels of productivity and overall performance. The value of this integration is enhance through the ability of different technology products to share the model of the manufacturing process. By running plants on consistent models that reflect true economic, chemical and physical constraints, manufacturers obtain the critical knowledge they need to develop, execute and evaluate their manufacturing plan and make improvements with each production cycle.

ENTERPRISE OPTIMIZATION. Our enterprise optimization solutions build on Plantelligence with the addition of our supply chain technology and management

of changed business processes. We believe customers can run their enterprises more efficiently and effectively by utilizing our integrated technologies to tightly link their manufacturing operations to the management of their business with their suppliers and customers. Our enterprise optimization solutions enable customers with a wide array of manufacturing plants and assets to coordinate their operations and enable their plants to work together toward common operating and business goals.

In many cases manufacturing facilities have been overlooked as companies pursued large business process reengineering projects over the last decade. To a large extent, the manufacturing plants continue to act as silos that maximize their own efficiency and productivity. However, as the process industries become increasingly global and interconnected, we believe that process manufacturers will need to change their business processes at the plant so that they can optimize their entire manufacturing enterprise rather than the specific plants that comprise their enterprise. Our enterprise optimization solutions are designed to enable process manufacturers to adapt to rapid changes in demand and their business environment, to respond quickly to these changes, act as a single enterprise, optimize use of resources, meet customer requirements and operate more profitably.

CONSULTING SERVICES. We offer implementation, advanced process control, real-time optimization and other consulting services in order to provide our customers with complete solutions. Customers can frequently use our focused process design software solutions without assistance from us or our partners. However, many of the projects in which customers deploy our focused process operation software solutions and process management software solutions are sufficiently complex that customers require assistance from us and our

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partners in order to take full advantage of the benefits of those solutions. Our integrated plant solutions and enterprise optimization solutions also require assistance from us and our partners.

Customers that obtain consulting services from us typically engage us to provide such services over periods of between 1 day and 24 months. We generally charge customers for consulting services on a fixed-price basis, but charge customers for certain services, primarily on-site advanced process control and optimization services, on a time-and-materials basis.

We employ a staff of more than 460 project engineers to provide consulting services to our customers. We believe this large team of experienced and knowledgeable project engineers provides an important source of competitive differentiation. We primarily hire as project engineers individuals who have obtained doctoral or master's degrees in chemical engineering or a related discipline or who have significant relevant industry experience. Our employees include experts in fields ranging from thermophysical properties, distillation, adsorption processes, polymer processes, industrial reactor modeling, the identification of empirical models for process control or analysis, large-scale optimization, supply distribution systems modeling and scheduling methods.

Historically, most licensees of our planning and scheduling solutions and a limited number of licensees of our process information management and supply chain management systems have obtained implementation consulting services from third-party vendors. Our strategy is to continue to develop and expand relationships with third-party consultants in order to provide a secondary channel of consulting services to support our process management software solutions and to provide complementary services.

ACQUISITIONS OF SOFTWARE AND SERVICE SOLUTIONS. As part of our strategy to offer the broadest, most integrated suite of software and service solutions for the design, operation and management of manufacturing processes, from time to time we acquire businesses to obtain technologies and expertise that complement or enhance our core solutions. We typically combine acquired technologies with our pre-existing products in order to offer solutions that include the best features and functionality of both. We provide an upward migration path and support for any discontinued products.

We have completed 17 acquisitions that have provided us with, or significantly enhanced, our capabilities in the areas of process information management, advanced process control and optimization, advanced planning and scheduling, and supply chain management. We have successfully integrated the

BUSINESS ACQUIRED	DATE ACQUIRED	SOLUTION ACQUIRED OR ENHANCED
Prosys Technology Limited	October 16, 1991	SPEEDUP
Industrial Systems, Inc	May 25, 1995	Components of InfoPlus.21
Dynamic Matrix Control Corporation	January 5, 1996	Components of DMCplus and Aspen RT-Opt
Setpoint, Inc	February 9, 1996	Components of DMCplus, Aspen RT-Opt and InfoPlus.21
B-JAC International, Inc	October 1, 1996	Heat exchanger modeler
Process Control Division of Cambridge		
Control Limited	October 8, 1996	Consulting service capabilities for advanced process control and optimization
Basil Joffe Associates, Inc. and PIMS		
division of Bechtel Corporation	December 31, 1996	Aspen PIMS
NeuralWare, Inc	August 27, 1997	Neural network technology and tools integrated with Aspen Plus, DMCplus and InfoPlus.21
The SAST Corporation Limited	August 28, 1997	OTISS and consulting service capabilities

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BUSINESS ACQUIRED		SOLUTION ACQUIRED OR ENHANCED
Cimtech S.A./N.V	- '	Components of InfoPlus.21 Consulting service capabilities for advanced process control and optimization
IISYS, Inc	March 16, 1998 May 27, 1998	Aspen ADVISOR Aspen Zyqad Aspen MIMI Software and consulting service capabilities for advanced process control and optimization
Process Optimization and Emissions Monitoring Division of Callidus		
Technologies, Inc	September 14, 1998	Consulting services capabilities for process optimization and predictive emissions monitoring
Syllogistics, Inc	October 14, 1998	Logistics management software

### TECHNOLOGY AND PRODUCT DEVELOPMENT

Our software and services solutions combine three of our core competencies: our sophisticated modeling capabilities based on fundamental chemical engineering principles, our extensive experience with a broad variety of manufacturing processes in the chemicals, petrochemicals, petroleum, pharmaceuticals, and other industries, and our understanding of how to optimize and streamline key business processes in these same industries. Our technology enables customers to optimize the business processes involved in three main value chains: process innovation, supply chain, and manufacturing operations.

To deliver business process optimization software we focus our product development in three areas. First, we build software that enables our customers to model and manage their manufacturing process. We support sophisticated empirical models generated from advanced mathematical algorithms developed by our employees. In addition, we support rigorous models of chemical manufacturing process and the equipment used in those manufacturing processes. We believe that the development and refinement of highly accurate empirical and rigorous models such as those developed by us require a deep understanding both of the fundamental chemistry underlying the manufacturing process and the technology of modeling. Our models employ advanced mathematical algorithms developed by our employees and others, such as the dynamic matrix control algorithm for

multi-variable, model-based predictive control and the inside-out algorithm for simulating distillation. We have used these advanced algorithms to develop proprietary models that provide highly accurate representations of the chemical and physical properties of a broad range of materials typically encountered in the chemicals, petroleum, and other process industries. Second, we develop software which models key customer work processes and automates the workflow of these processes. This software integrates our broad product line such that the data used in the work process is seamlessly passed between the applications used in each step of the business process. In addition, we have a unique user interface that intuitively guides the user through the business process. Third, we are investing significantly in supply chain and data management software. This software embeds sophisticated optimization technology allowing customers to optimize their entire corporate supply chain and manufacturing activities. In addition, this software embeds key knowledge about the details of how manufacturing and supply chain operations in the process industry function.

Our product development activities are currently focused on strengthening the integration of our key products, expanding the set of business processes our software covers, exploiting web technology, and enhancing and simplifying the user interface. As of June 30, 1999, we employed a product development staff of more than 290 persons.

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#### CUSTOMERS

Our software solutions are installed at more than 1,000 customers worldwide. The following table sets forth a selection of our customers, whose agreements with us produced at least \$250,000 in fees to AspenTech in fiscal 1998 or 1999:

CHEMICALS AND PETROCHEMICALS Air Products & Chemicals, Inc. Allied Signal, Inc. BASF AG Bridgestone/Firestone, Inc. Borealis Exploration Limited Celanese Condea Vista Company DSM N.V. The Dow Chemical Company E.I. du Pont de Nemours & Company, Inc. Elf Atochem Equistar Chemicals LP Formosa Petrochemical Corp. Huntsman Corporation Kuraray Co., Ltd. Messer Griesheim GmbH Mitsubishi Chemical Corporation Mitsui Chemicals Nova Chemicals, Ltd. PCS Systemtechnik GmbH Reliance Industries Ltd. Repsol S.A. Sasol Industries (Pty.) Ltd. Shell International Chemie Mij B.V. Sinopec Union Carbide Chemicals and Plastics Company, Westlake Management Services Corporation

LIFE SCIENCES AND SPECIALTY CHEMICALS
AstraZeneca
Aventis Research & Technologies
Bayer Corporation
Cabot Corporation
E.I. du Pont de Nemours & Company, Inc.
Eli Lilly
Engelhard Corporation
Genentech, Inc.
Hercules, Inc.
Hoffman-LaRoche, Inc.
Imperial Chemical Industries plc
Merck & Co., Inc.

Novartis Pharma A.G. Owens Corning SmithKline Beecham Pharmaceutical UCB Chemicals

REFINING, OIL AND GAS Abu Dhabi National Oil Company Agip Petroli S.p.A. Amoco Corporation Arco Products Company Bharat Petroleum co. Ltd. BP Amoco plc Chevron Corporation Citgo Petroleum Corporation Conoco Inc Equilon Enterprises LLC Exxon Company U.S.A. Kuwaiti National Petroleum Company Lyondell Citgo Refining Company Ltd. Magyar Olaj LS Mobil Oil Corporation Motiva Enterprises LLC Pemex Gas y Petroquimica Basica Petroleos de Venezuela, S.A. Phillips Petroleum Company Repsol Petroleo SA Shell Oil Company Star Enterprise Statoil Sunoco Inc. Total-Fina Valero Refining Company

CPG AND FOODS AND BEVERAGES
Ben & Jerry's Homemade, Inc.
Cargill, Incorporated
General Mills, Inc.
Nestle S.A.
Procter & Gamble
Unilever plc

SEMICONDUCTORS
Mitsubishi Silicon America
Motorola, Inc.
Rockwell Semiconductor Systems
Vishay Silconix

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METALS AND MINERALS
Alcoa of Australia, Ltd.
Gulf States Steel, Inc.
LTV Corporation
Nippon Steel Chemical Co., Ltd.
Sollac S.A.
Wabash Alloys

ENGINEERING AND CONSTRUCTION
ABB Lummus
Bechtel Group
Chiyoda Corporation
Fluor Corporation
Foster Wheeler Corporation
Jacobs Engineering Group Inc.
Johnson Matthey plc
Kellogg Brown & Root/Halliburton
Kvaerner E & C
Linde AG
Lurgi AG
Raytheon Engineers & Constructors
Snamprogetti SpA
Technip Italy SpA

PULP AND PAPER Buckeye Cellulose Corporation Weyerhaeuser Consolidated Papers, Inc.

POWER AND NUCLEAR
ABB Group
Electrabel SA/NV
Electricite de France
The SGN Group
Westinghouse Electric Corporation

For fiscal 1997, 1998 and 1999, international revenues accounted for approximately 50.0% 45.4%, and 53.4%, respectively, of our total revenues. No individual customer represented more than 10% of our total revenues in fiscal 1997, 1998 or 1999. There can be no assurance that any of the customers listed above will continue to license software or purchase services from us beyond the term of any existing agreement.

#### SALES AND MARKETING

We employ a value-based sales approach, offering customers a comprehensive suite of software and service solutions that enhance the efficiency and productivity of their process manufacturing operations. We have increasingly focused on selling our solutions as a strategic investment by our customers and therefore targets our principal sales efforts at senior management levels, including chief executive officers and senior decision-makers in manufacturing, operations and technology.

Because the complexity and cost of our solutions often result in a sales cycle of between six and nine months, we believe that the development of long-term, consultative relationships with our customers is essential to a successful selling strategy. To develop these relationships, we have organized our worldwide sales force by industry and have appointed a single sales account manager to be responsible for our relationship with each customer. In order to market the specific functionality and other complex technical features of our software solutions, each sales account manager leads a specialized team of regional account managers, technical sales engineers and product specialists organized for each sales and marketing effort. Our technical sales engineers typically have advanced degrees in chemical engineering or related disciplines and actively consult with the customer's plant engineers who would be the ultimate users of our solutions. Product specialists share their detailed knowledge of the specific features of our software solutions. Each sales team also includes participants from our business development group who determine the scope and price of service solutions offered to customers.

We believe that our seasoned direct sales force, consisting of more than 100 individuals as of June 30, 1999, and our ability to sell at senior levels within customer organizations are important competitive advantages. We have established direct sales offices in key geographic areas where there are high concentrations of potential business, including New Jersey, Texas, Brussels, Cambridge (England), Dusseldorf, Hong Kong, Paris, Singapore and Tokyo. In geographic areas of lower customer concentration, we use sales agents and other resellers to leverage our direct sales force and to provide local coverage and first-line support.

We also supplement our direct sales efforts with a variety of marketing initiatives, including public relations activities, campaigns to promote awareness among industry analysts, user groups and our triennial conference, AspenWorld. AspenWorld has become a prominent forum for industry participants, including process manufacturing executives and analysts, to discuss emerging technologies and other process engineering solutions and to attend seminars led by industry experts. The AspenWorld 97 conference, held in

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October 1997, attracted more than 1,400 participants. The AspenWorld 2000 conference has been scheduled to be held in February 2000.

We also license our software solutions at a substantial discount to universities that agree to use its solutions in teaching and research. We believe that students' familiarity with our solutions will stimulate future demand once the students enter the workplace. Currently, more than 550

universities use our software solutions in undergraduate instruction.

#### COMPETITION

We face three primary sources of competition: commercial vendors of software products for one or more elements in the design, operation and management of manufacturing processes; vendors of hardware that offer software solutions in order to add value to their proprietary distributed control system; and large companies in the process industries that have developed their own proprietary software solutions. We believe that suppliers of individual software solutions are under intensifying pressure to offer integrated functionality beyond their traditional applications and that, at the same time, process manufacturers are increasingly concluding that it is no longer efficient or economical for them to continue to develop or support internally developed software. Certain competitors also supply related hardware products to our existing and potential customers and may have established relationships that afford those competitors an advantage in supplying software and services to those customers. We believe, however, that customers prefer to select best-in-class software solutions, independent of their selection of underlying industrial automation hardware platforms. We do not offer our solutions with any particular hardware and we design our software products to operate effectively on systems manufactured by all major hardware vendors. As the market for manufacturing enterprise optimization solutions consolidates further, we believe that our exclusive focus on developing and marketing best-in-class software and services will continue to provide a competitive advantage.

Because of the breadth of its software and service offerings, we face competition from different vendors depending on the solution in question. We compete with respect to the largest number of its solutions with Simulation Sciences, Inc., a subsidiary of Invensys plc. With respect to particular software solutions, we also compete with Chemstations, Inc., AEA Technology Engineering Software (a subsidiary of AEA Technology plc), OSI Software, Inc., The Foxboro Company and Wonderware Corporation (both of which are subsidiaries of Invensys plc), the Simcon division of ABB Asea Brown Boveri (Holding) Ltd., and several smaller competitors, such as Pavilion Technologies, Inc. With respect to its supply chain management solutions we compete with vendors such as i2 Technologies, Inc. and Manugistics Group, Inc.

A number of vendors of ERP software products, such as Baan Company N.V., J.D. Edwards Inc., Oracle Corporation, PeopleSoft, Inc. and SAP A.G., are expanding their presence in the market for supply chain management solutions via internal research and development, acquisitions and sales and marketing agreements with independent vendors of supply chain management solutions. We expect to encounter increasing competition from these companies and from DCS vendors, such as Honeywell Inc., as they expand their software and service offerings to include additional aspects of process manufacturing.

In recent years, there has been consolidation in the markets in which we compete that has expanded the breadth of product and service offerings by certain of our competitors, such as the acquisitions by Invensys plc of Simulation Sciences, Inc. the Foxboro Company and Wonderware Corporation. 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 with which we collaborate on other occasions, such as Honeywell Inc. and Invensys plc. There can be no assurance that our efforts to compete and cooperate simultaneously with these or other companies will be successful. The further consolidation of existing competitors or the emergence of new competitors could have a material adverse effect on our business, operating results and financial condition.

Our continued success depends on our ability to compete effectively with our commercial competitors and to persuade our prospective customers to use our products and services instead of, or in addition to,

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software developed internally or services provided by their own personnel. In light of these factors, there can be no assurance that we will be able to maintain our competitive position.

## INTELLECTUAL PROPERTY

copyright, patent, trademark and trade secret laws, license and confidentiality agreements, and software security measures to protect our proprietary rights. We have United States patents for the expert guidance system in our proprietary graphical user interface, the simulation and optimization methods in our optimization software, a process flow diagram generator in our planning and scheduling software, and a process simulation apparatus in our polymers software. We have registered or applied to register certain of our significant trademarks in the United States and in certain other countries.

We generally enter into non-disclosure agreements with our employees and customers, and historically have restricted access to our software products' source codes, which we regard as proprietary information. In a few cases, we have provided copies of the source code for certain products to customers solely for the purpose of special customization of the products and have deposited copies of the source code for certain products in third-party escrow accounts as security for on-going service and license obligations. In these cases, we rely on nondisclosure and other contractual provisions to protect our proprietary rights.

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 the laws of the United States. The laws of many countries in which we license our products protect trademarks solely on the basis of registration. We currently possesses a limited number of trademark registrations in certain foreign jurisdictions and do not possess, and have not applied for, any foreign copyright or patent registrations. In fiscal 1997, 1998 and 1999, we derived approximately 50.0%, 45.4% and 53.4% of our total revenues, respectively, from customers outside the United States.

There can be no assurance that the steps taken by us to protect our proprietary rights will be adequate to deter misappropriation of our technology or independent development by others of technologies that are substantially equivalent or superior to our technology. Any such misappropriation of our technology or development of competitive technologies could have a material adverse effect on our business, operating results and financial condition. We could incur substantial costs in protecting and enforcing our intellectual property rights. Moreover, from time to time third parties may assert patent, trademark, copyright and other intellectual property rights to technologies that are important to us. In such an event, we may be required to incur significant costs in litigating a resolution to the asserted claims. There can be no assurance that such a resolution would not require that we pay damages or obtain a license of a third party's proprietary rights in order to continue licensing our products as currently offered or, if such a license is required, that it will be available on terms acceptable to the Company.

We believe that, due to the rapid pace of innovation within the industry, factors such as the technological and creative expertise of our personnel, the quality of our products, the quality of our technical support and training courses, and the frequency of software product enhancements are more important to establishing and maintaining a technology leadership position within the industry than the various legal protections for our software products and technology. See "Item 1A. Risk Factors -- Dependence on Proprietary Technology."

## EMPLOYEES

As of June 30, 1999, we had a total of 1,448 full-time employees. None of our employees is represented by a labor union. We have experienced no work stoppages and believe that our employee relations are good.

While we substantially expanded the breadth and depth of our management team in recent years, our future success depends to a significant extent on the continued service of Lawrence B. Evans, the principal founder of AspenTech and our Chairman and Chief Executive Officer, our other executive officers, and certain engineering, technical, managerial, sales and marketing personnel. We believe that our future success will also depend on our continuing ability to attract, motivate and retain additional highly skilled engineering,

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#### ITEM 1A. RISK FACTORS

In addition to the other information in this Form 10-K, the following factors should be considered in evaluating the Company and its business.

FLUCTUATIONS IN OUR QUARTERLY OPERATING RESULTS AND CASH FLOW MAY CAUSE OUR STOCK PRICE TO FALL.

Our operating results and cash flow have fluctuated in the past and may fluctuate significantly in the future as a result of a variety of factors, including purchasing patterns, timing of introductions of new solutions and enhancements by us and our competitors, and fluctuating economic conditions. Because license fees for our software products are substantial and the implementation of our solutions often requires the services of our engineers over an extended period of time, the sales process for our solutions is lengthy and can exceed one year. Accordingly, software revenue is difficult to predict, and the delay of any order could cause our quarterly revenues to fall substantially below expectations. Moreover, to the extent that we succeed in shifting customer purchases away from individual software solutions and toward integrated suites of our software and service solutions, the likelihood of delays in ordering may increase and the effect of any delay may become more pronounced.

We ship software products within a short period after receipt of an order and typically do not have a material backlog of unfilled orders of software products. Consequently, revenues from software licenses in any quarter are substantially dependent on orders booked and shipped in that quarter. Historically, a majority of each quarter's revenues from software licenses has come from license agreements that have been entered into in the final weeks of the quarter. Therefore, even a short delay in the consummation of an agreement may cause revenues to fall below expectations for that quarter. Since our expense levels are based in part on anticipated revenues, we may be unable to adjust spending quickly enough to compensate for any revenue shortfall and any revenue shortfalls would likely have a disproportionately adverse effect on net income. We expect that these factors will continue to affect our operating results for the foreseeable future.

Prior to fiscal 1997, and in fiscal 1999, we experienced a net loss for the first quarter of each fiscal year, in part because a substantial portion of our total revenues is derived from countries other than the United States where business is slow during the summer months and also in part because of the timing of renewals of software licenses. We believe that we may continue to experience challenges in growing total revenues and net income in the first fiscal quarter as compared to the immediately preceding fiscal quarter. Because of the foregoing factors, we believe that period-to-period comparisons of our operating results are not necessarily meaningful and should not be relied upon as indications of future performance.

Due to all of the foregoing factors, it is possible that in one or more future quarters our operating results will be below the expectations of public market analysts and investors. In such event, the price of the Common Stock would likely be materially adversely affected. As a result of lower than anticipated license revenue in the fiscal quarter ended September 30, 1998, our operating results for that fiscal quarter were below the expectations of certain public market analysts and investors. As a result of lower-than-anticipated license revenue in the fiscal quarter ended March 31, 1999, our operating results were again below the expectations of certain public market analysts and investors.

## WE MAY SUFFER LOSSES ON FIXED-PRICE ENGAGEMENTS.

We derive a substantial portion of our total revenues from service engagements and a majority of these engagements have been undertaken on a fixed-price basis. We bear the risk of cost overruns and inflation in connection with fixed-price engagements, and as a result, any of these engagements may be unprofitable.

We derive a substantial majority of our total revenues from companies in the chemicals, petrochemicals and petroleum industries. Accordingly, our future success depends upon the continued demand for process manufacturing optimization software and services by companies in these industries. The chemicals, petrochemicals and petroleum industries are highly cyclical. We believe that worldwide economic downturns and pricing pressures experienced by chemical, petrochemical and petroleum companies in connection with cost-containment measures and environmental regulatory pressures have in the past led to worldwide delays and reductions in certain capital and operating expenditures by many of these companies. There can be no assurance that these industry patterns, as well as general domestic and foreign economic conditions and other factors affecting spending by companies in these industries, will not have a material adverse effect on our business, operating results and financial condition.

IF WE ARE UNABLE TO HIRE AND RETAIN QUALIFIED PROJECT ENGINEERS, WE MAY BE UNABLE TO EXECUTE OUR BUSINESS PLAN SUCCESSFULLY.

We derive a substantial portion of our total revenues from services, particularly projects involving advanced process control and optimization and similar projects. These projects can be extremely complex and in general only highly qualified, highly educated project engineers have the necessary training and skills 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 highly qualified, highly educated chemical and other project engineers. We primarily hire as project engineers individuals who have obtained a doctoral or master's degree in chemical engineering or a related discipline or who have significant relevant industry experience. As a result, the pool of potential qualified employees is relatively small, and we face significant competition for these employees, from not only our direct competitors but also our clients, academic institutions and other enterprises. Many of these competing employers are able to offer potential employees significantly greater compensation and benefits or more attractive lifestyle choices, career paths or geographic locations than we can. The failure to recruit and retain a significant number of qualified project engineers could have a material adverse effect on our business, operating results and financial condition. Moreover, increasing competition for these engineers may also result in significant increases in our labor costs, which could have a material adverse effect on our business, operating results and financial condition.

OUR FAILURE TO INTEGRATE ACQUIRED COMPANIES SUCCESSFULLY COULD DISRUPT OUR BUSINESS AND ADVERSELY AFFECT OUR OPERATING RESULTS.

Through our acquisitions of Chesapeake and several smaller companies in 1998, we expanded our product and service offerings, entered new markets and increased our scope of operations and the number of our employees. The successful and timely integration of Chesapeake and these other companies into our operations has been critical to our future financial performance. We continue to need to integrate the software products and technologies from these acquired companies, retain key employees, and manage geographically dispersed operations, each of which could pose significant challenges. To succeed in the market for supply chain management solutions, we must also invest additional resources, primarily in the areas of software development, sales and marketing, and consulting expertise, to extend product range and functionality, to extend name recognition to increase market share, and to implement projects.

OUR FUTURE PERFORMANCE DEPENDS ON THE SUCCESS OF OUR RECENT REORGANIZATION.

In addition, in July 1999, we reorganized the company from being primarily based on individual technology business units, to a more functionally based organization. We now have a single product development organization, a single global solutions organization, a single global customer support organization, an independent supply chain organization and four industry business units that focus on key vertical markets. We believe that this organization will enhance our ability to develop specific industry solutions and market strategies, better integrate our technologies and provide a common look and feel to products, improve on the implementation of our solutions and provide better career paths for engineers, improve the quality of our support services, and rapidly grow our supply chain business. The successful and timely reorganization of

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technologies, improve the implementation of our solutions, improve the quality of our support services or rapidly grow our supply chain business. Any failure to do so could have a material adverse effect on our business, operating results and financial condition.

## WE MAY BE UNABLE TO COMPETE SUCCESSFULLY.

We face three primary sources of competition: commercial vendors of software products for one or more elements in the design, operation and management of manufacturing processes; vendors of hardware that offer software solutions in order to add value to their proprietary distributed control systems or DCS; and large companies in the process industries that have developed their own proprietary software solutions. We believe that suppliers of individual software solutions are under intensifying pressure to offer integrated functionality beyond their traditional applications and that, at the same time, process manufacturers are increasingly concluding that it is no longer efficient or economical for them to continue to develop or support internally developed software. Certain competitors also supply related hardware products to our existing and potential customers and may have established relationships that afford those competitors an advantage in supplying software and services to those customers.

Because of the breadth of our software and service offerings, we face competition from different vendors depending on the solution in question. We compete with respect to the largest number of our solutions with Simulation Sciences, Inc., a subsidiary of Invensys plc. With respect to particular software solutions, we also compete with Chemstations, Inc., AEA Technology Engineering Software (a subsidiary of AEA Technology plc), OSI Software, Inc., The Foxboro Company and Wonderware Corporation (both of which are subsidiaries of Invensys plc), the Simcon division of ABB Asea Brown Boveri (Holding) Ltd., and several smaller competitors, such as Pavilion Technologies, Inc. With respect to our supply chain management solutions we compete with vendors such as i2 Technologies, Inc. and Manugistics Group, Inc.

In recent years, there has been consolidation in the markets in which we compete that has expanded the breadth of product and service offerings by certain of our competitors, such as the acquisitions by Invensys plc of Simulation Sciences, Inc. the Foxboro Company and Wonderware Corporation. In addition, a number of vendors of ERP software products, such as Baan Company N.V., J.D. Edwards Inc., Oracle Corporation, PeopleSoft, Inc. and SAP A.G., are expanding their presence in the market for supply chain management solutions via internal research and development, acquisitions and sales and marketing agreements with independent vendors of supply chain management solutions. We expect to encounter increasing competition from these companies and from DCS vendors, such as Honeywell Inc., as they expand their software and service offerings to include additional aspects of process manufacturing. As a result of this consolidation and the expansion of DCS and ERP vendors into additional markets, from time to time we may compete with divisions of companies with which we collaborate on other occasions, such as Honeywell Inc. and Invensys plc. There can be no assurance that our efforts to compete and cooperate simultaneously with these or other companies will be successful. The further consolidation of existing competitors or the emergence of new competitors could have a material adverse effect on our business, operating results and financial condition.

Some of our competitors also supply related hardware products to our existing and potential customers and may have established relationships that afford those competitors an advantage in supplying software and services to those customers. Our continued success depends on our ability to compete effectively with our commercial competitors and to persuade prospective customers to use our products and services instead of, or in addition to, software developed internally or services provided by their own personnel. In light of these factors, there can be no assurance that we will be able to maintain our competitive position.

FUTURE ACQUISITIONS COULD BE DIFFICULT TO INTEGRATE, DISRUPT OUR BUSINESS, DILUTE STOCKHOLDER VALUE AND ADVERSELY AFFECT OUR OPERATING RESULTS.

An element of our business strategy is to continue to pursue strategic acquisitions that will provide us with complementary products, services and technologies and with additional engineering personnel. The

identification and pursuit of these acquisition opportunities and the integration of acquired personnel, products, technologies and businesses require a significant amount of management time and skill. There can be no assurance that we will be able to identify suitable acquisition candidates, consummate any acquisition on acceptable terms or successfully integrate any acquired business into our operations. In light of the consolidation trend in our industry, we expect to face competition for acquisition opportunities, which may substantially increase the cost of any acquisition consummated by us. There can also be no assurance that any future acquisition will not have a material adverse effect upon our operating results as a result of non-recurring charges associated with the acquisition or as a result of integration problems in the fiscal quarters following consummation of the acquisition. Acquisitions may also expose us to additional risks, including diversion of management's attention, failure to retain key acquired personnel, assumption of legal or other liabilities and contingencies, and amortization of goodwill and other acquired intangible assets, some or all of which could have a material adverse effect on our business, operating results and financial condition. Moreover, customer dissatisfaction with, or problems caused by, the performance of any acquired technologies could have a material adverse impact on our reputation as a whole. In addition, there can be no assurance that acquired businesses will achieve anticipated revenues and earnings. We may use Common Stock or Preferred Stock or may incur long-term indebtedness or a combination thereof for all or a portion of the consideration to be paid in future acquisitions. The issuance of Common Stock or Preferred Stock in acquisitions could result in dilution to existing stockholders, while the use of cash reserves or significant debt financing to fund acquisitions could reduce our liquidity.

OUR FAILURE TO DEVELOP AND SELL NEW AND ADDITIONAL PRODUCTS AND SERVICES COULD IMPAIR OUR FINANCIAL RESULTS AND ADVERSELY AFFECT OUR BUSINESS.

The market for software and services for process manufacturing optimization is characterized by rapidly changing technology and continuing improvements in computer hardware, operating systems, programming tools, programming languages and database technology. Our future success will depend on our ability to 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 have announced our intention to further integrate our software products with each other and to integrate those products with ERP, DCS and other business software solutions. We believe additional development will be necessary before our products are fully integrated with each other and with these other solutions, particularly with respect to ERP solutions. In the past, we have experienced delays in the development and enhancement of new and existing products, and have on occasion postponed scheduled delivery dates for certain of our products. There can be no assurance that we will be able to meet customers' expectations with respect to product development, enhancement and integration or that our software and services will otherwise address adequately the needs of customers. Like many other software products, our software has on occasion contained undetected errors or "bugs." Because new releases of our software products are initially installed only by a selected group of customers, any errors or "bugs" in those new releases may not be detected for a number of months after the delivery of the software. If our products do not perform substantially as expected or are not accepted in the marketplace, our business, operating results and financial condition would be materially adversely affected.

OUR BUSINESS MAY BE HARMED IF WE LOSE THE SERVICES OF OUR CHIEF EXECUTIVE OFFICER OR OTHER KEY PERSONNEL.

Our future success depends to a significant extent on Lawrence B. Evans, our principal founder, Chairman and Chief Executive Officer, our other executive officers, and a number of key engineering, technical, managerial and marketing personnel. The loss of the services of any of these individuals or groups of individuals could have a material adverse effect on our business, operating results and financial condition. None of our executive officers has entered into an employment agreement with us, and we do not have, and are not contemplating securing, any significant amount of key-person life insurance on any of our executive officers or other key employees. In addition to the need to recruit qualified project engineers, we believe that our future success will also depend significantly upon our ability to attract, motivate and retain additional

highly skilled technical, managerial and marketing personnel. Competition for such personnel is intense, and there can be no assurance that we will be successful in attracting, motivating and retaining the personnel we require to continue to grow and operate profitably.

WE MAY BE SUBJECT TO SIGNIFICANT EXPENSES AND DAMAGES BECAUSE OF LIABILITY CLAIMS.

The sale and implementation of certain of our software products and services, particularly in the areas of advanced process control and optimization, may entail the risk of product liability claims. Our software products and services are used in the design, operation and management of manufacturing processes at large facilities, and 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. It is possible, however, that the limitation of liability provisions in our agreements may not be effective as a result of federal, state or local laws or ordinances or unfavorable judicial decisions. A substantial product liability claim against us could have a material adverse effect upon our business, operating results and financial condition.

WE MAY BE UNABLE TO PROTECT OUR INTELLECTUAL PROPERTY, AND WE COULD INCUR SUBSTANTIAL COSTS DEFENDING OUR INTELLECTUAL PROPERTY FROM INFRINGEMENT OR CLAIMS OF INFRINGEMENT.

We regard our software as proprietary and 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. We have United States patents for the expert guidance system in our proprietary graphical user interface, the simulation and optimization methods in our optimization software, a process flow diagram generator in our planning and scheduling software, and a process simulation apparatus in our polymers software. We have registered or have applied to register certain of our significant trademarks in the United States and in certain other countries. We generally enter into non-disclosure agreements with our employees and customers, and historically have restricted access to our software products' source codes, which we regard as proprietary information. In a few cases, we have provided copies of the source code for certain products to customers solely for the purpose of special customization of the products and have deposited copies of the source code for some of our products in third-party escrow accounts as security for on-going service and license obligations. In these cases, we rely on nondisclosure and other contractual provisions to protect our proprietary rights.

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 the laws of the United States. The laws of many countries in which we license our products protect trademarks solely on the basis of registration. We currently possess a limited number of trademark registrations in certain foreign jurisdictions and do not possess, and have not applied for, any foreign copyright or patent registrations. In fiscal 1997, 1998 and 1999, we derived approximately 50.0%, 45.4% and 53.4% of our total revenues, respectively, from customers outside the United States. There can be no assurance that the steps taken by us to protect our proprietary rights will be adequate to deter misappropriation of its technology or independent development by others of technologies that are substantially equivalent or superior to our technology. Any such misappropriation of our technology or development of competitive technologies could have a material adverse effect on our business, operating results and financial condition. We could incur substantial costs in protecting and enforcing our intellectual property rights. Moreover, from time to time third parties may assert patent, trademark, copyright and other intellectual property rights to technologies that are important to us. In such an event, we may be required to incur significant costs in litigating a resolution to the asserted claims. There can be no assurance that such a resolution would not require that we pay damage or obtain a license of a third party's proprietary rights in order to continue licensing our products as currently offered or, if such a license is required, that it will be available on terms acceptable to us, if at all.

We have experienced substantial growth in recent years in the number of our employees, the scope of our operating and financial systems, and the geographic area of our operations. Our operations have expanded

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significantly through both internally generated growth and acquisitions. This growth has resulted in increased responsibilities for the our management. To manage our growth effectively, we must continue to expand our management team, attract, motivate and retain employees, including qualified project engineers, and implement and improve its operating and financial systems. There can be no assurance that our current management systems will be adequate or that we will be able to manage our recent or future growth successfully. Any failure to do so could have a material adverse effect on our business, operating results and financial condition.

#### OUR INTERNATIONAL OPERATIONS FACE ADDITIONAL RISKS.

In fiscal 1997, 1998 and 1999, we derived approximately 50.0%, 45.4% and 53.4% of our total revenues, respectively, from customers outside the United States. We anticipate that revenues from customers outside the United States will continue to account for a significant portion of our total revenues for the foreseeable future. Our operations outside the United States are subject to additional risks, including unexpected changes in regulatory requirements, exchange rates, tariffs and other barriers, political and economic instability, difficulties in managing distributors or representatives, difficulties in staffing and managing foreign subsidiary operations, difficulties or delays in translating products and product documentation into foreign languages, and potentially adverse tax consequences. There can be no assurance that any of these factors will not have a material adverse effect on our business, operating results and financial condition.

The impact of future exchange rate fluctuations on our financial condition and operating results cannot be accurately predicted. In recent years, we have increased the extent to which we denominate arrangements with customers outside the United States in the currencies of the country in which the software or services are provided. From time to time we have engaged in, and may continue to engage in, hedges of a significant portion of installment contracts denominated in foreign currencies. There can be no assurance that any hedging policies implemented by us will be successful or that the cost of such hedging techniques will not have a significant impact on our business, operating results and financial condition.

## OUR FUTURE SUCCESS DEPENDS ON OUR ABILITY TO INCREASE OUR MARKET PENETRATION.

Increased use in the process industries of software and services for process manufacturing optimization in general and of our software products and services in particular is critical to our future growth. We believe that a number of factors will determine our ability to increase market penetration. These factors include product performance, accuracy of results, reliability, breadth and integration of product offerings, scope of applications, and ease of implementation and use. Our failure to achieve increased market penetration in the process industries would substantially restrict our future growth and could have a material adverse effect on our business, operating results and financial condition.

PROBLEMS RELATED TO THE YEAR 2000 ISSUE COULD CAUSE INTERNAL SYSTEM FAILURES THAT IMPAIR OUR OPERATIONS OR COULD REQUIRE THAT WE INCUR SIGNIFICANT REMEDIATION COSTS.

Many currently installed computer systems and software applications are designed to accept only two digit entries in the date code field used to identify years. These date code fields will need to be modified to recognize twenty-first century years. As a result, computer systems and software applications used by many companies may need to be upgraded to comply with Year 2000 requirements. Significant uncertainty exists in the software industry concerning the potential effects of failure to comply with such requirements.

We have implemented a Year 2000 compliance program. This program includes implementation of Year 2000 compliance processes for the software products and services which we provide to customers, as well as processes to ensure compliance of our internal business operations and those of our suppliers. We have tested or modified all current versions of our software products. We have not tested all prior versions of all products or current products used on Year

2000 non-compliant systems. We have implemented procedures to review all service projects performed for customers, to ensure Year 2000 compliant services are provided. We have carried out some testing and remediation of custom applications previously developed by or for our customers, and prior non-compliant versions of standard software products have been or are planned to be replaced with

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either new software products or Year 2000 compliant releases by the end of 1999. There can be no assurance that we will be able to test or remediate all custom applications currently in use by our customers, however, we have attempted to notify all customers who we think should test custom applications. Although we have obtained representations as to Year 2000 compliance from the sellers of certain of our acquired technologies, there can be no assurance that we will not encounter Year 2000 problems arising from these technologies or any other technologies that we may acquire in the future. Moreover, the ability of our software products 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. Any delay by third party vendors in developing or offering, or the failure to develop or offer, Year 2000 compliant products or any necessary updates to existing products which operate with our products, could result in customer delays in purchasing our products and services or in reduced demand for those products and services, and could also result in errors that materially impair the utility of one or more of our products, any of which could have a material adverse effect on our business, operating results and financial condition. Although we do not expect the costs associated with its Year 2000 compliance program to be material, there can be no assurance that unidentified Year 2000 problems will not cause us to incur material expenses in responding to such problems or otherwise have a material adverse effect on our business, operating results and financial condition. Moreover, customer purchasing patterns may be affected by Year 2000 issues as customers delay purchases in anticipation of the future release of Year 2000 compliant products or releases, and as customers expend significant resources to upgrade their current software systems and applications for Year 2000 compliance. These expenditures may result in reduced funds available to purchase software products such as those offered by us.

We have reviewed certain 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. We expect to incur internal staff costs as well as consulting and other expenses related to system enhancements for the year 2000. We believe that the cost of any modifications will not be material. Our ability to implement our information systems plan and to make the necessary modifications or replacements may be adversely affected by a number of factors outside our control, including the ability of our personnel to locate and correct all relevant computer codes in use. We have conducted an assessment of our systems and operations in order to more fully identify and plan for any Year 2000 risks, although we believe that our business would not be materially affected by the failure of any internal systems to be Year 2000 compliant. 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 business, financial condition or results of operations could be materially adversely affected.

OUR COMMON STOCK MAY EXPERIENCE SUBSTANTIAL PRICE AND VOLUME FLUCTUATIONS.

The equity markets have from time to time experienced extreme price and volume fluctuations, particularly in the high technology sector, and those fluctuations have often been unrelated to the operating performance of particular companies. In addition, factors such as our financial performance, announcements of technological innovations or new products by us or our competitors, as well as market conditions in the computer software or hardware industries, may have a significant impact on the market price of our Common Stock.

WE HAVE ANTI-TAKEOVER DEFENSES THAT COULD DELAY OR PREVENT AN ACQUISITION OF OUR COMPANY.

Our Certificate of Incorporation, our By-Laws and certain Delaware laws contain provisions that may discourage acquisition bids for us and that may

deprive stockholders of certain opportunities to receive a premium for their shares as part of an acquisition. Preferred Stock may be issued by us in the future without stockholder approval and upon such terms as the Board of Directors may determine. The rights of the holders of Common Stock will be subject to, and may be adversely affected by, the rights of the holders of any Preferred Stock that may be issued in the future. The issuance of Preferred Stock 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, which may deter or delay attempts to acquire us or accumulate shares of Common Stock.

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#### ITEM 2. PROPERTIES

Our principal offices occupy approximately 110,000 square feet of office space in Cambridge, Massachusetts. The lease of our principal offices expires on September 30, 2002. We and our subsidiaries also own or lease office space in New Providence, New Jersey; Houston, Texas; Midlothian, Virginia; Bothell, Washington; Brussels, Belgium; Calgary, Alberta, Canada; Cambridge, England; Warrington, England; Hong Kong; Tokyo, Japan; Best, The Netherlands; Singapore; and other locations where additional sales and customer support offices are located. We anticipate a consolidation of our Houston, Texas facilities in late fiscal 2000 and have signed a lease agreement for new office space which encompasses approximately 245,000 square feet and has a twelve year commitment. We believe that our existing and planned facilities are adequate for our current needs and our needs for the reasonably foreseeable future and that, if additional space is needed, such space will be available on acceptable terms.

#### ITEM 3. LEGAL PROCEEDINGS

We are a party to lawsuits in the normal course of our business. We believe that we have meritorious defenses in all lawsuits in which we or our subsidiaries are a defendant. We note that (a) securities litigation, in particular, can be expensive and disruptive to normal business operations and (b) the results of complex legal proceedings can be very difficult to predict.

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, the Van Ormer Complaint. The lawsuit seeks an unspecified amount of damages and claims violations of Sections10 (b) and 20(a) of the Securities Exchange Act of 1934, alleging that we issued a series of materially false and misleading statements concerning our financial condition, our operations and integration of several acquisitions. On October 26 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 which was verbatim identical to the Van Ormer Complaint except only for the plaintiff's name, the Clancey Complaint. On November 20, 1998 a third purported class action lawsuit was filed in the same court against the same defendants which was verbatim identical to the Van Ormer and Clancey Complaints except only for the plaintiff's name, the expansion of the class action period from January 27, 1998 to October 2, 1998, and the addition of references to statements made between January 27, 1998 and April 28, 1998, the Marucci Complaint. On January 27, 1999, in response to a motion to dismiss filed by us, the plaintiffs consolidated the three complaints and filed a Consolidated Amended Class Action Complaint. The case was reassigned to a new judge during the summer for the second time and, as of September 23, 1999, she had not taken any action or rendered any decision. We believe we have meritorious legal defenses to the lawsuits and intend to defend vigorously against these actions. We are currently unable, however, to determine whether resolution of these matters will have a material adverse impact on our financial position or results of operations, or reasonably estimate the amount of the loss, if any, that may result from resolution of these matters.

## ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matter was submitted to a vote of security holders during the fourth quarter of fiscal 1999.

#### PART TT

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

#### MARKET INFORMATION

The Company's Common Stock is traded on the Nasdaq National Market under the symbol "AZPN." The following table sets forth, for the periods indicated, the high and low sale prices per share of the Common Stock as reported on the Nasdaq National Market.

	HIGH	LOW
FISCAL 1998:		
FISCAL 1998:  First Quarter.  Second Quarter.  Third Quarter.  Fourth Quarter.  FISCAL 1999:	\$46.250 39.875 43.375 53.125	\$29.500 27.875 23.500 37.750
First Quarter. Second Quarter. Third Quarter. Fourth Quarter.	\$56.875 26.750 18.125 12.875	\$18.500 6.125 9.125 8.250

#### HOLDERS

As of June 30, 1999, there were 1,268 holders of record of Common Stock.

## DIVIDENDS

We have never declared or paid cash dividends on our capital stock, although one of our subsidiaries paid dividends to its stockholders prior to its acquisition by us in fiscal 1995. We currently intend to retain all of our earnings, if any, for use in its business and do not anticipate paying any cash dividends in the foreseeable future. In addition, under the terms of our bank line of credit, we are prohibited from paying any cash dividends. Any future determination relating to dividend policy will be made at the discretion of our Board of Directors and will depend on a number of factors, including our future earnings, capital requirements, financial condition and future prospects and such other factors as the Board of Directors may deem relevant.

## REPRICING OF EMPLOYEE STOCK OPTIONS

On November 11, 1998 our Board of Directors approved the repricing of certain employee stock options with an exercise price in excess of the fair market value of our common stock. The exercise price for 2.6 million shares of employee stock options was reset to \$14.125, the closing market price on November 11, 1998. All such options were adjusted by resetting vesting back one year. Stock options held by executive officers and directors were not eligible for the repricing.

## SALES OF UNREGISTERED SECURITIES

During fiscal 1999, we issued shares of our Common Stock to the former equity holders of Syllogistics, Inc., a one employee company, in exchange for all of the outstanding equity securities of that entity as follows:

		SHARES OF
		COMMON
BUSINESS ACQUIRED	DATE ACQUIRED	STOCK ISSUED
Syllogistics, Inc	October 14, 1999	45,000

under Section 4(2) of the Securities Act of 1933, as amended. All of these shares have been subsequently registered pursuant to shelf

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registration statement filed with the Securities and Exchange Commission on June 8, 1999 in accordance with registration rights arrangements entered into in connection with the acquisition.

On June 17, 1998, AspenTech completed the sale of \$86,250,000 aggregate principal amount of our 5 1/4% Convertible Subordinated Debentures due June 15, 2005 (the "Debentures"). The Debentures were sold by us to Goldman, Sachs, & Co., NationsBanc Montgomery Securities LLC and William Blair & Company, L.L.C., Initial Purchasers, which offered and sold the Debentures to qualified institutional buyers in reliance on Rule 144A under the Securities Act of 1933, as amended. We initially offered \$75,000,000 aggregate principal amount of Debentures and sold an additional \$11,250,000 aggregate principal amount of Debentures pursuant to the Initial Purchasers' exercise of an over-allotment option.

The Debentures were offered at a price of 100% of principal amount, or \$86,250,000. The net proceeds received by us from the sale of the Debentures, after deducting underwriting commissions of \$3,018,750 (but before deducting expenses of the offering), totalled \$83,231,250. We intend to use the net proceeds for working capital and other general corporate purposes. We may use a portion of the net proceeds to acquire or invest in one or more new technologies, products or businesses that expand, complement or are otherwise related to our current business and software and service solutions.

The Debentures are convertible into shares of Common Stock at any time prior to the close of business on the maturity date, unless previously redeemed or repurchased, at a conversion price of approximately \$52.97 per share of Common Stock (equivalent to a conversion rate of 18.9791 shares per \$1,000 principal amount of Debentures), subject to adjustment in certain events.

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#### ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated balance sheet data as of June 30, 1998 and 1999 and the selected consolidated statement of operations data for each of the years ended June 30, 1997, 1998 and 1999 have been derived from the Company's Consolidated Financial Statements, which have been audited by Arthur Andersen LLP, independent public accountants, and are included elsewhere in this Form 10-K. The selected consolidated balance sheet data as of June 30, 1995, 1996 and 1997 and the selected consolidated statement of operations data for the years ended June 30, 1995 and 1996 have been derived from the Company's Consolidated Financial Statements, which also have been audited by Arthur Andersen LLP but are not included in this Form 10-K. The following selected consolidated financial data are qualified by reference to the more detailed Consolidated Financial Statements of the Company and Notes thereto included elsewhere in this Form 10-K, and should be read in conjunction with such Consolidated Financial Statements and Notes and the discussion under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

	YEAR ENDED JUNE 30,				
	1995 1996 1997 1998 1				1999
		(IN THOUSANDS	, EXCEPT PER	SHARE DATA)	
CONSOLIDATED STATEMENT OF OPERATIONS DATA:					
Revenues:					
Software licenses	\$49,479	\$ 70,199	\$103,179	\$139,390	\$ 91,621
Services and other	16,540	44,619	90,891	113,165	127,972
Total revenues	66,019	114,818	194,070	252,555	219,593
Expenses:					

Cost of software licenses	3,080	3,992	5,539	8,178	7,862
Cost of services and other	10,052	27,220	54,006	68,490	83,346
Selling and marketing	24,276	36,610	56,034	74,926	85,249
Research and development	12,652	22,310	33,580	43,553	48,067
General and administrative	5,679	10,715		20,208	23,253
Restructuring and other charges					17,867
Charge for in-process research and					17,007
development		24,421	8,664	8,472	
1				•	
Costs related to acquisitions	950			4,984	
Total expenses		125,268			265,644
Income (loss) from operations	9 330	(10,450)	19 175	23 744	(46,051)
Foreign currency exchange gain	3,330	(10)130)	13,113	23,711	(10,001)
(loss)	34	(223)	12361	(454)	(94)
Income (loss) on equity in joint	24	(223)	(230)	(404)	(94)
ventures	22	10	26	45	19
Interest income		3,745			
Interest expense	(561)	(1,323)	(151)	(377)	(5,677)
Income (loss) from before provision					
for (benefit from) income taxes	11 063	(8,241)	24 370	28,685	(41,846)
Provision for (benefit from) income	11,000	(0,241)	24,570	20,000	(41,040)
taxes	4,854	6,146	10 100	14.049	(16,111)
taxes	4,054	0,140	10,109	14,049	(10,111)
Net income (loss)(1)	\$ 7,109	\$(14,387)	\$ 14,201	\$ 14,636	\$(25,735)
	======	======	=======	=======	=======
Diluted net income (loss) per					
share(2)	\$ 0.42	\$ (0.83)	\$ 0.63	\$ 0.59	\$ (1.04)
Basic net income (loss) per					
share(2)	\$ 0.46	\$ (0.83)	\$ 0.66	\$ 0.63	\$ (1.04)
Weighted average shares	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, (,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, , , , , , ,	( ( )
outstanding diluted(2)	17.113	17,432	22.707	24.883	24.835
Weighted average shares	1.,110	1.,152	22,707	21,000	21,000
outstanding basic(2)	15 321	17,432	21 369	23 /15	24,835
outstanding Dasic(z)	10,021	11,432	21,308	23,413	24,033

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	JUNE 30,				
	1995	1996	1997	1998	1999
			(IN THOUSANDS		
CONSOLIDATED BALANCE SHEET DATA:					
Cash and cash-equivalents	\$ 6,290	\$ 14,773	\$ 18,284	\$ 78,694	\$ 33,456
Working capital	31,377	72,560	73,789	172,866	152,143
Total assets	83,259	168,986	203,545	342,882	322,242
Long-term obligations, less current					
maturities	4,087	706	462	90,635	89,405
Total stockholders' equity	45,824	104,477	137,414	165,016	143,226

<sup>(1)</sup> The Company has never declared or paid cash dividends on its capital stock, although one of the Company's subsidiaries paid dividends to its stockholders prior to its acquisition by the Company in fiscal 1995.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

# OVERVIEW

Since its founding in 1981, the Company has developed and marketed software and services to companies in the process industries. The Company's revenues have increased at an average compounded rate of 34.8% since fiscal 1994, when the Company filed its initial public offering. In addition to internally generated growth, the Company has acquired 17 businesses since May 1995, including Industrial Systems, Inc. ("ISI") in the fourth quarter of fiscal 1995, DMCC and Setpoint in the third quarter of fiscal 1996, and Chesapeake in the fourth

<sup>(2)</sup> Computed as described in Note 2(i) of Notes to Consolidated Financial Statements.

quarter of fiscal 1998.

The Company acquired DMCC, Setpoint and four other, less material businesses in transactions accounted for as purchases. The Company's results of operations include the results of operations of DMCC, Setpoint and these four other companies only for periods subsequent to their respective dates of acquisition. As of result, period-to-period comparisons of the Company's results of operations may not be meaningful. See Note 4 of Notes to Consolidated Financial Statements.

The Company acquired ISI, Chesapeake and eight other businesses in transactions accounted for as poolings of interests. Of these acquisitions, only the acquisitions of ISI and Chesapeake were material to the Company's financial condition and results of operations. Accordingly, the Company has restated its consolidated financial statements to reflect the historic operations of ISI and Chesapeake but not the other, immaterial acquisitions.

The Company's operating results for fiscal 1999 were adversely affected by a lower than expected level of license revenues. The shortfall resulted primarily from delayed decision making driven by economic difficulties among customers in our core vertical markets of refining, chemicals, and petrochemicals. These lower revenues resulted in lower than planned operating results and a net loss for fiscal 1999.

In April 1999, Company management undertook certain actions to restructure its business. In connection with this restructuring, the Company has reduced its staff by approximately 200 employees, about twelve percent of the global workforce and began consolidating facilities, streamlining operations and rationalizing certain non-core products and activities acquired in recent years. As a result of these measures, the Company has recorded a \$17.9 million one-time charge for restructuring and other costs in fiscal 1999.

The Company typically licenses its process design software solutions for terms of 3 to 5 years, its process operation software solutions for terms of 99 years, its planning and scheduling software solutions for terms of 5 or 25 years, and its other process management software solutions for terms of 99 years. See "Item 1. Business -- Software and Service Solutions."

License revenue, including license renewals, consists principally of revenue earned under fixed-term and perpetual software license agreements and is generally recognized upon shipment of the software if collection of the resulting receivable is probable, the fee is fixed or determinable, and vendor-specific objective evidence

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exists to allocate the total fee to all delivered and undelivered elements of the arrangement. The Company uses installment contracts as a standard business practice and has a history of successfully collecting under the original payment terms without making concessions on payments, products or services. The Company recognizes revenues from customer support ratably over the term of the support agreement. If a customer elects to pay for a license in annual installments, the Company charges an implicit amount of interest and recognizes interest income over the term of the license. A substantial majority of the Company's term licenses have been renewed upon expiration. However, there can be no assurance that customers will continue to renew expiring term licenses at the historical rate.

The Company derives a significant portion of its revenue from consulting projects related to the implementation of its software solutions, particularly in connection with projects involving advanced process control, real-time optimization and information management software. For fiscal 1999, the Company derived 41.7% of its total revenues from the licensing of software products and 58.3% of its total revenues from the provision of services. The Company generally charges customers for consulting services on a fixed-price basis, but charges customers for certain services, primarily on-site advanced process control and optimization services and supply chain, on a time-and-materials basis. Service revenues from fixed-price contracts are recognized on the percentage-of-completion method, measured by the portion of costs incurred to date as a percentage of the estimated total (primarily labor) costs for each contract. Service revenues from time-and-materials contracts are recognized as the related services are performed. Training revenues are recognized as services are performed. Services that have been performed but for which billings have not

been made are recorded as unbilled receivables, and billings for which services have not been performed are recorded as unearned revenue in the Company's Consolidated Balance Sheets.

The Company licenses its software in U.S. dollars and certain foreign currencies. The Company hedges all material foreign currency-denominated receivables with specific hedge contracts in amounts equal to those receivables. While the Company has experienced minor foreign currency exchange gains or losses due to foreign exchange rate fluctuations, the impact of such movements has not been material in any period. The Company does not expect fluctuations in foreign currencies to have a significant impact on either its revenues or expenses in the foreseeable future.

The Company's operating costs include the amortization of intangible assets, including goodwill, arising from acquisitions accounted for as purchases. The net balance of these intangible assets as of June 30, 1999 was \$9.1 million and is being amortized over periods ranging from 5 to 12 years. The amortization from acquisitions that was charged to operations was \$2.7 million for fiscal 1998 and \$3.0 million for fiscal 1999. Amortization expense for fiscal 2000 will range from \$611,000 to \$361,000 per quarter, on a declining schedule; fiscal 2001 amortization expense will decline from \$361,000 to \$318,000 per quarter while fiscal 2002 will range from \$318,000 to \$190,000 per quarter. Thereafter amortization expense will continue to decline through its completion in fiscal 2009.

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#### RESULTS OF OPERATIONS

The following table sets forth the percentage of total revenues represented by certain consolidated statement of operations data for the periods indicated:

	YEAR ENDED JUNE 30,			
	1997	1998 	1999	
Revenues:				
Software licenses	53.2%	55.2%	41.7%	
Service and other	46.8	44.8	58.3	
Total revenues	100.0	100.0	100.0	
Expenses:				
Cost of software licenses	2.9	3.2	3.6	
Cost of service and other	27.8	27.1	38.0	
Selling and marketing	28.9	29.7	38.8	
Research and development	17.3	17.2	21.9	
General and administrative	8.8	8.0	10.6	
Restructuring and other charges			8.1	
Charge for in-process research and development	4.5	3.4		
Costs related to acquisitions		2.0		
Total expenses	90.2	90.6	121.0	
Income (loss) from operations	9.8	9.4	(21.0)	
Interest income	2.9	2.3	4.5	
Interest expense	(0.1)	(0.1)	(2.5)	
Other income (expense), net	(0.1)	(0.2)		
Income (loss) before provision for (benefit from) income				
taxes	12.5	11.4	(19.0)	
Provision for (benefit from) income taxes	5.2	5.6	(7.3)	
Net income (loss)	7.3%	5.8%	 (11.7)%	
	=====	=====	=====	

## COMPARISON OF FISCAL 1999 TO FISCAL 1998

REVENUES. Revenues are derived from software licenses and services. Total revenues for fiscal 1999 decreased 28.5% to \$219.6 million from \$252.6 million in fiscal 1998.

Software license revenues represented 41.7% and 55.2% of total revenues for fiscal 1999 and 1998, respectively. Revenues from software licenses in fiscal 1999 decreased 34.3% to \$91.6 million from \$139.4 million in fiscal 1998. Software license revenues are attributable to software license renewals covering existing users, the expansion of existing customer relationships through licenses covering additional users, licenses of additional software products, and, to a lesser extent, to the addition of new customers. The decrease in fiscal 1999 license revenues resulted primarily from delayed decision making driven by economic difficulties among customers in our core vertical markets of refining, chemicals, and petrochemicals.

Total revenues from customers outside the United States were \$117.3 million or 53.4% of total revenues and \$114.7 million or 45.4% of total revenues for fiscal 1999 and 1998, respectively. The geographical mix of revenues can vary from period to period.

Revenues from service and other consist of consulting services, post-contract support on software licenses, training and sales of documentation. Revenues from service and other for fiscal 1999 increased 11.6% to \$128.0 million from \$113.2 million for fiscal 1998. This increase reflects a continued focus during fiscal 1999 on providing high value-added consulting and training services to existing customers. Revenues from service and other for both fiscal 1999 and 1998 was adversely affected by lower-than-planned levels of consultant utilization. The lower fiscal 1999 utilization was attributable to the delay of project starts by clients, while the

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fiscal 1998 utilization shortfall was attributable to temporary mismatches between types and geographies of scheduled projects, the skill sets and locations of available personnel and the timing of certain project starts.

Neither the Company's joint venture or similar activities nor any discounting or similar activities have historically had a material effect on the Company's revenues.

COST OF SOFTWARE LICENSES. Cost of software licenses consists of royalties, amortization of previously capitalized software costs, costs related to delivery of software (including disk duplication and third-party software costs), printing of manuals and packaging. Cost of software licenses for fiscal 1999 decreased 3.9% to \$7.9 million from \$8.2 million in fiscal 1998. Cost of software licenses as a percentage of revenues from software licenses increased to 8.6% for fiscal 1999 from 5.9% for fiscal 1998. This increase was due to relatively flat expenses spread over a lower revenue base.

COST OF SERVICE AND OTHER. Cost of service and other consists of the cost of execution of application consulting services, technical support expenses, the cost of training services and the costs of manuals that are sold as separate items. Cost of service and other for fiscal 1999 increased 21.7% to \$83.3 million from \$68.5 million for fiscal 1998. Cost of service and other as a percentage of revenues from services and other increased to 65.1% for fiscal 1999 from 60.5% for fiscal 1998. This percentage increase reflects a cost base that was increased to support a projected higher revenue level. This higher revenue level was not realized due to lower utilization rates attributable to the delay of project starts by clients.

SELLING AND MARKETING. Selling and marketing expenses for fiscal 1999 increased 13.8% to \$85.2 million from \$74.9 million for fiscal 1998 while increasing as a percentage of revenues to 38.8% from 29.7%. The dollar and percentage increases were attributable to a cost base that was increased to support a higher revenue level that was not achieved. A significant component of the April 1999 restructuring included selective reduction of sales and marketing staff in certain markets and geographic locations. These selective reductions were made to correspond to the customer opportunities in certain of our core vertical markets and customer locations. The Company continues to selectively invest in sales personnel and regional sales offices to improve the Company's geographic proximity to its customers, to maximize the penetration of existing accounts and to add new customers.

RESEARCH AND DEVELOPMENT. Research and development expenses consist of personnel and outside consultancy costs required to conduct the Company's product development efforts. Capitalized research and development costs are

amortized over the estimated remaining economic life of the relevant product, not to exceed three years. Research and development expenses for fiscal 1999 increased 10.4% to \$48.1 million from \$43.6 million for fiscal 1998 while increasing as a percentage of total revenues to 21.9% from 17.2%. The increase in costs principally reflects continued investment in development of the Company's individual software solutions and increased development of the Aspen Framework as the backbone of our Plantelligence solution. The Company capitalized 5.8% of its total research and development costs during fiscal 1999 as compared to 8.2% in fiscal 1998.

GENERAL AND ADMINISTRATIVE. General and administrative expenses consist primarily of salaries of administrative, executive, financial and legal personnel, outside professional fees and amortization of intangibles. General and administrative expenses for fiscal 1999 increased 15.1% to \$23.3 million from \$20.2 million for fiscal 1998, and increasing as a percentage of total revenues to 10.6% from 8.0%. The increase in costs was due primarily to payments to strategic consultants to assist in the realignment of the business, litigation support, and the increase in the reserve for bad debts.

RESTRUCTURING AND OTHER CHARGES. In the fourth quarter of fiscal 1999, the Company undertook certain actions to restructure its business. The restructuring resulted from a lower than expected level of license revenues which adversely affected fiscal 1999 operating results. The license revenue shortfall resulted primarily from delayed decision making driven by economic difficulties in certain of our core vertical markets. The restructuring plan resulted in a pre-tax restructuring charge totaling \$17.9 million. The principal charges in the restructuring plan include: the reduction of workforce, \$4,324; the close-down or consolidation of a number of offices and facilities, \$10,224; the rationalizing of certain non-core products and activities acquired in recent years yielding the writing off of \$3,060 of assets; and, other general cost reductions of \$259.

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INTEREST INCOME. Interest income is generated from the license of software pursuant to installment contracts for process design software and the investment of excess cash in short-term investments. Under these installment contracts, the Company offers customers the option to make annual payments for its term licenses instead of a single license fee payment at the beginning of the license term. A substantial majority of the process design modeling customers elect to license these products through installment contracts. The Company believes this election is made principally because the customers prefer to pay for the Company's process design software out of their operating budgets, rather than out of their capital budgets. Included in the annual payments is an implicit interest established by the Company at the time of the license. The Company sells a portion of the installment contracts to unrelated financial institutions. The interest earned by the Company on the installment contract portfolio in any one year is the result of the implicit interest established by the Company on installment contracts and the size of the contract portfolio. Interest income was \$10.0 million for fiscal 1999 as compared to \$5.7 million in fiscal 1998. The increase reflects the interest income generated from excess cash from the Company's 5 1/4% convertible debentures, which was not issued and outstanding until June 1998.

INTEREST EXPENSE. Interest expense is generated from interest charged on the Company's 5 1/4% convertible debentures, bank line of credit and capital lease obligations. Interest expense in fiscal 1999 increased to \$5.7 million from \$0.4 million in fiscal 1998. The increase is primarily related to the interest expense on the Company's 5 1/4% convertible debentures, which did not exist until June 1998.

PROVISION FOR/BENEFIT FROM INCOME TAXES. The effective tax rate in fiscal 1999 is calculated as a percentage of loss before taxes. The effective tax rate changed for fiscal 1999 to 38.5% of pre-tax loss as compared to 33.6% of net income exclusive of the non-recurring charge for in-process research and development for fiscal 1998. This change was primarily due to utilization of carrybacks of the fiscal 1999 taxable loss to prior years taxable income and the generation of certain tax credits.

## COMPARISON OF FISCAL 1998 TO FISCAL 1997

REVENUES. Revenues are derived from software licenses and services. Total revenues for fiscal 1998 increased 30.1% to \$252.6 million from \$194.1 million in fiscal 1997.

Software license revenues represented 55.2% and 53.2% of total revenues for fiscal 1998 and 1997, respectively. Revenues from software licenses in fiscal 1998 increased 35.1% to \$139.4 million from \$103.2 million in fiscal 1997. The growth in software license revenues was attributable to software license renewals covering existing users, the expansion of existing customer relationships through licenses covering additional users, licenses of additional software products, and, to a lesser extent, to the addition of new customers.

Total revenues from customers outside the United States were \$114.7 million or 45.4% of total revenues and \$97.0 million or 50.0% of total revenues for fiscal 1998 and 1997, respectively. The geographical mix of revenues can vary from quarter to quarter.

Revenues from service and other for fiscal 1998 increased 24.5% to \$113.2 million from \$90.9 million for fiscal 1997. This increase reflects a continued focus during fiscal 1998 on providing high value-added consulting and training services to existing customers. Revenues from service and other for fiscal 1998 was adversely affected by lower-than-planned levels of consultant utilization attributable to temporary mismatches between types and geographies of scheduled projects, the skill sets and locations of available personnel and the timing of certain project starts. During the second half of fiscal 1998 the Company implemented programs intended to mitigate these issues through, for example, targeted sales incentives and improved information flow between sales and consulting personnel.

Neither the Company's joint venture or similar activities nor any discounting or similar activities have historically had a material effect on the Company's revenues.

COST OF SOFTWARE LICENSES. Cost of software licenses for fiscal 1998 increased 47.6% to \$8.2 million from \$5.5 million in fiscal 1997. Cost of software licenses as a percentage of revenues from software licenses increased to 5.9% for fiscal 1998 from 5.4% for fiscal 1997. This increase was due to the generation of a greater portion of sales having third-party software and royalty costs in the fourth quarter of fiscal 1998.

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COST OF SERVICE AND OTHER. Cost of service and other for fiscal 1998 increased 26.8% to \$68.5 million from \$54.0 million for fiscal 1997. Cost of service and other as a percentage of revenues from services and other increased to 60.5% for fiscal 1998 from 59.4% for fiscal 1997. This percentage increase reflects a change in mix to more application consulting services, which have a higher cost base, and, to a lesser extent, special payments made in connection with a transitional incentive compensation plan for consultants based on hours billed.

SELLING AND MARKETING. Selling and marketing expenses for fiscal 1998 increased 33.7% to \$74.9 million from \$56.0 million for fiscal 1997 while increasing slightly as a percentage of revenues to 29.7% from 28.9%. The dollar and percentage increases were attributable in part to compensation earned by sales personnel who exceeded their quotas and earned commissions at higher rates.

RESEARCH AND DEVELOPMENT. Research and development expenses for fiscal 1998 increased 29.7% to \$43.6 million from \$33.6 million for fiscal 1997 while decreasing slightly as a percentage of total revenues to 17.2% from 17.3%. The increase in costs principally reflects continued investment in development of the Company's core modeling products and a common software architecture encompassing the Company's expanded family of software products. The Company capitalized 8.2% of its total research and development costs during fiscal 1998 as compared to 6.6% in fiscal 1997.

GENERAL AND ADMINISTRATIVE. General and administrative expenses for fiscal 1998 increased 18.4% to \$20.2 million from \$17.1 million for fiscal 1997, while decreasing as a percentage of total revenues to 8.0% from 8.8%. These costs did not grow at the same rate as revenues, as the Company's infrastructure was able to support a larger revenue base; however, the increased dollar amounts reflect the growth in the scale and scope of the Company's operations.

CHARGE FOR IN-PROCESS RESEARCH AND DEVELOPMENT. In connection with several acquisitions during fiscal 1998 and 1997, the Company allocated \$8.5 million and \$8.7 million, respectively, of the purchase prices to in-process research and

development based upon independent appraisals. These costs were charged to operations as of the respective acquisition dates, because they related to projects that had not yet reached technological feasibility and that had no alternative future use until completion of development. At the respective times of the acquisitions, these projects required substantial additional development and testing by the Company in order to reach technological feasibility and there was no assurance that these projects would reach technological feasibility or develop into products that could be sold by the Company.

COST RELATED TO ACQUISITIONS. In connection with several acquisitions by the Company during fiscal 1998 that were accounted for as poolings of interests, the Company incurred \$5.0 million in expenses, primarily investment banking and professional service fees related to the transactions.

INTEREST INCOME. Interest income was \$5.7 million for fiscal 1998 as compared to \$5.6 million in fiscal 1997.

INTEREST EXPENSE. Interest expense in fiscal 1998 increased to \$0.4 million from \$0.2 million in fiscal 1997.

PROVISION FOR INCOME TAXES. The effective tax rate in fiscal 1998 is calculated as a percentage of income before taxes, exclusive of the non-recurring charges for in-process research and development. The effective tax rate decreased for fiscal 1998 to 33.6% of pre-tax income from 35.9% for fiscal 1997. This decrease was primarily due to utilization of foreign loss carrybacks, foreign tax credits, and research and development credits.

#### QUARTERLY RESULTS

The Company's operating results and cash flow have fluctuated in the past and may fluctuate significantly in the future as a result of a variety of factors, including purchasing patterns, timing of introductions of new solutions and enhancements by the Company and its competitors, and fluctuating economic conditions. Because license fees for the Company's software products are substantial and the implementation of the Company's solutions often requires the services of the Company's engineers over an extended period of time,

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the sales process for the Company's solutions is lengthy and can exceed one year. Accordingly, software revenue is difficult to predict, and the delay of any order could cause the Company's quarterly revenues to fall substantially below expectations. Moreover, to the extent that the Company succeeds in shifting customer purchases away from point solutions and toward integrated suites of its software and service solutions, the likelihood of delays in ordering may increase and the effect of any delay may become more pronounced.

The Company ships software products within a short period after receipt of an order and usually does not have a material backlog of unfilled orders of software products. Consequently, revenues from software licenses, including license renewals in any quarter are substantially dependent on orders booked and shipped in that quarter. Historically, a majority of each quarter's revenues from software licenses has been derived from license agreements that have been consummated in the final weeks of the quarter. Therefore, even a short delay in the consummation of an agreement may cause revenues to fall below expectations for that quarter. The company's revenues in certain quarters of fiscal 1999 were lower than expected due to delayed decision making of economic difficulties among certain customers. These lower revenues resulted in lower than planned operating results and a net operating loss in each quarter of fiscal 1999. Additionally, since the Company's expense levels are based in part on anticipated revenues, the Company may be unable to adjust spending in a timely manner to compensate for any revenue shortfall and any revenue shortfalls would likely have a disproportionately adverse effect on net income. The Company expects that these factors will continue to affect its operating results for the foreseeable future.

Prior to fiscal 1997, and in fiscal 1999, we experienced a net loss for the first quarter of each fiscal year, in part because a substantial portion of the Company's total revenues is derived from countries other than the United States where business is slow during the summer months and also in part because of the timing of renewals of software licenses. We believe that we may continue to experience challenges in growing total revenues and net income in the first fiscal quarter as compared to the immediately preceding fiscal quarter. Because

of the foregoing factors, we believe that period-to-period comparisons of our operating results are not necessarily meaningful and should not be relied upon as indications of future performance.

Because of the foregoing factors, the Company believes that period-to-period comparisons of its operating results are not necessarily meaningful and should not be relied upon as indications of future performance.

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The following table presents selected quarterly statement of operations data for fiscal 1998 and 1999. These data are unaudited but, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of these data in accordance with generally accepted accounting principles.

	FISCAL 1998				FISCAL 1999				
	SEPT. 30			JUNE 30			MAR. 31		
	(IN THOUSANDS)								
Revenues:									
Software licenses Service and other		\$32,465 27,738			\$ 16,004 30,705	\$28,673 32,982	\$22,191 32,001	\$ 24,753 32,284	
Total revenues		60,203	68,388	74,511	46,709	61,655	54,192		
Expenses:									
Cost of software licenses	1,672	1,752	1,540	3,214	1,667	1,943	2,149	2,103	
Cost of service and other	14,712	16,356	17,274	20,148	19,973	21,040	21,204	21,129	
Selling and marketing	15,186	17,621	19,876	22,243	19,145	21,609	22,207	22,288	
Research and development	10,163	10,358	10,998	12,034	11,604	11,937	12,297	12,229	
General and administrative	4,502	4,839	5,309	5,558	5,475	5,625	6,235	5,918	
Restructuring and other									
charges								17,867	
Charge for in-process research									
and development			8,472						
Costs related to									
acquisitions	509		475	4,000					
Total expenses		50,926	63,944	67,197	57,864	62,154	64,092	81,534	
Income (loss) from operations		9,277		7,314	(11, 155)	(499)	(9,900)	(24, 497)	
Other expense, net	(67)	(91)	(162)			28	(115)	(206)	
Interest income, net				1,192	1,152		1,005	911	
Income (loss) before provision for (benefit from) income									
taxes Provision for (benefit from)	4,095	10,533	5,640	8,417	(9,785)	741	(9,010)	(23,792)	
income taxes		3,791		3,725	(3,425)	260	(3,153)	(9,793)	
Net income (loss)	\$ 2,635	\$ 6,742	\$ 567	\$ 4,692	\$ (6,360)	\$ 481	\$(5,857)		

## LIQUIDITY AND CAPITAL RESOURCES

In recent years, the Company has financed its operations principally through cash generated from sales of securities through private placements and public offerings of its Common Stock and the Debentures, operating activities, the sale of installment contracts to third parties and, at certain times during the year, borrowings under a bank line of credit.

To date, the Company received a total of \$87.0 million of net proceeds from its initial public offering and subsequent public offerings. A portion of the total net proceeds was used for working capital and other general corporate purposes, to pay a portion of the purchase prices of DMCC and Setpoint and to repay outstanding indebtedness under the Company's bank line of credit, subordinated notes and a promissory note issued in conjunction with the purchase of Setpoint. In the fourth quarter of fiscal 1998, the Company received a total of \$82.4 million from its sale of the Debentures. A portion of these net proceeds was used for working capital and other general corporate purposes. The Company evaluates on an ongoing basis potential opportunities to acquire or invest in technologies, products, services, businesses or engineering personnel that expand, complement or are otherwise related to the Company's current business and products.

In fiscal 1997 and 1998 operating activities provided \$3.1 million and \$19.7 million of cash, respectively, primarily as a result of net income and

increases in accounts payable, accrued expenses and deferred revenue, offset in part by increases in long-term installments receivable and accounts receivable. In fiscal 1999, operating activities used \$9.0 million of cash primarily as a result of the net loss, offset in part by increases in accounts payable and accrued expenses and a decrease in long-term installments receivable.

In recent years, the Company has had arrangements to sell long-term contracts to two financial institutions, General Electric Capital Corporation and Fleet Business Credit Corporation (formerly Sanwa Business Credit Corporation). These contracts represent amounts due over the life of existing term licenses.

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During fiscal 1999, installment contracts decreased by \$3.3 million to \$56.6 million, net of \$32.3 million of installment contracts sold to General Electric Capital Corporation and Fleet Business Credit Corporation. During fiscal 1998, installment contracts increased by \$9.8 million to \$59.8 million, net of \$51.3million of installment contracts sold to General Electric Capital Corporation and Fleet Business Credit Corporation. During fiscal 1997, installment contracts increased by \$20.3 million to \$50.0 million, net of \$30.2 million of installment contracts sold to General Electric Capital Corporation and Fleet Business Credit Corporation. The Company's arrangements with these two financial institutions provide for the sale of installment contracts up to certain limits and with certain recourse obligations. At June 30, 1999, June 30, 1998 and June 30, 1997, the balance of the uncollected principal portion of the contracts sold to these two financial institutions was \$91.5 million, \$87.6 million and \$57.8 million, respectively, for which the Company had partial recourse obligations of \$3.8 million, \$4.5 million and \$6.6 million, respectively. The availability under these arrangements will increase as the financial institutions receive payment on installment contracts previously sold.

The Company maintains a \$30.0 million bank line of credit, expiring on December 31, 2000, that provides for borrowings of specified percentages of eligible accounts receivable and eligible current installment contracts. Advances under the line of credit bear interest at a rate (7.75% at June 30, 1999) equal to the bank's prime rate or, at the Company's option, a rate (5.24% at June 30, 1999) equal to a defined LIBOR plus a specified margin. The line of credit agreement requires the Company to provide the bank with certain periodic financial reports and to comply with certain financial tests, including maintenance of minimum levels of consolidated net income before taxes and of the ratio of current assets to current liabilities. Additionally, the line is secured by certain of the Company's marketable securities. As of June 30, 1999, there were no outstanding borrowings under the line of credit.

As of June 30, 1999, the Company had cash and cash-equivalents totaling \$33.5 million, as well as short-term investments totaling \$63.5 million. The Company's commitments as of June 30, 1999 consisted primarily of leases on its headquarters and other facilities. See "Item 1. Business -- Properties." There were no other material commitments for capital or other expenditures. The Company believes its current cash balances, availability of sales of its installment contracts, availability under its bank line of credit and cash flows from its operations will be sufficient to meet its working capital and capital expenditure requirements for at least the next 12 months.

## YEAR 2000 RESERVES

Many currently installed computer systems and software applications are designed to accept only two digit entries in the date code field used to identify years. These date code fields will need to be modified to recognize twenty-first century years. As a result, computer systems and software applications used by many companies may need to be upgraded to comply with Year 2000 requirements. Significant uncertainty exists in the software industry concerning the potential effects of failure to comply with such requirements.

We have implemented a Year 2000 compliance program. This program includes implementation of Year 2000 compliance processes for the software products and services which we provide to customers, as well as processes to ensure compliance of our internal business operations and those of our suppliers. We have tested or modified all current versions of our software products. We have not tested all prior versions of all products or current products used on Year 2000 non-compliant systems. We have implemented procedures to review all service projects performed for customers, to ensure Year 2000 compliant services are

provided. We have carried out some testing and remediation of custom applications previously developed by or for our customers, and prior non-compliant versions of standard software products have been or are planned to be replaced with either new software products or Year 2000 compliant releases by the end of 1999. There can be no assurance that we will be able to test or remediate all custom applications currently in use by our customers, however, we have attempted to notify all customers who we think should test custom applications. Although we have obtained representations as to Year 2000 compliance from the sellers of certain of our acquired technologies, 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. Any delay by third party vendors in developing or offering, or the failure to develop or offer, Year 2000 compliant products or any necessary updates to existing products which operate with our products, could result in customer delays in purchasing

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our products and services or in reduced demand for those products and services, and could also result in errors that materially impair the utility of one or more of our products, any of which could have a material adverse effect on our business, operating results and financial condition. Although we do not expect the costs associated with its Year 2000 compliance program to be material, there can be no assurance that unidentified Year 2000 problems will not cause us to incur material expenses in responding to such problems or otherwise have a material adverse effect on our business, operating results and financial condition. Moreover, customer purchasing patterns may be affected by Year 2000 issues as customers delay purchases in anticipation of the future release of Year 2000 compliant products or releases, and as customers expend significant resources to upgrade their current software systems and applications for Year 2000 compliance. These expenditures may result in reduced funds available to purchase software products such as those offered by us.

We have reviewed certain 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. We expect to incur internal staff costs as well as consulting and other expenses related to system enhancements for the year 2000. We believe that the cost of any modifications will not be material. Our ability to implement our information systems plan and to make the necessary modifications or replacements may be adversely affected by a number of factors outside our control, including the ability of our personnel to locate and correct all relevant computer codes in use. We have conducted an assessment of our systems and operations in order to more fully identify and plan for any Year 2000 risks, although we believe that our business would not be materially affected by the failure of any internal systems to be Year 2000 compliant. 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 business, financial condition or results of operations could be materially adversely affected.

#### INFLATION

Inflation has not had a significant impact on the Company's operating results to date, nor does the Company expect it to have significant impact during fiscal 2000.

#### ITEM 7A. QUANTITATIVE AND QUALITATIVE MARKET DISCLOSURES

Information relating to quantitative and qualitative disclosure about market risk is set forth under the captions "Notes to Consolidated Financial Statements," 2(c), 2(h), 2(k), and 12 and below under the captions "Investment Portfolio" and "Foreign Exchange Hedging".

#### INVESTMENT PORTFOLIO

The Company does not use derivative financial instruments in its investment portfolio. The Company places its investments in instruments that meet high credit quality standards, as specified in the Company's investment policy guidelines; the policy also limits the amount of credit exposure to any one issuer and the types of instruments approved for investment. The Company does not expect any material loss with respect to its investment portfolio. The following table provides information about the Company's investment portfolio.

For investment securities, the table presents principal cash flows and related weighted average interests rates by expected maturity dates.

Principal (Notional) Amounts by Expected Maturity in U.S. Dollars (in 000s, except interest rates)

	FAIR VALUE AT 6/30/99	FY2000	FY2001	FY2002	FY2003	FY2004 & THEREAFTER
Cash Equivalents	\$20,811	\$20,811				
Weighted Average Interest Rate	4.92%	4.92%				
Investments	\$63,512	\$32,688	\$12,867	\$14,959	\$2,998	
Weighted Average Interest Rate	6.08%	5.93%	6.19%	6.33%	6.03%	
Total Portfolio	\$84,323	\$53,499	\$12,867	\$14,959	\$2,998	
Weighted Average Interest Rate	5.80%	5.54%	6.19%	6.33%	6.03%	

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#### IMPACT OF FOREIGN CURRENCY RATE CHANGES

During fiscal 1999, most currencies in Europe and Asia/Pacific fluctuated, with a general weakening of the U.S. dollar in the first two quarters of fiscal 1999 and a strengthened U.S. dollar in the third and fourth quarters of fiscal 1999. However, the translation of the parent Company's intercompany receivables and foreign entities assets and liabilities did not have a material impact on the consolidated results of the company. Foreign exchange forward contracts are only purchased to hedge certain customer accounts receivable amounts denominated in a foreign currency.

Effective January 1, 1999 the functional currency of several foreign subsidiaries was changed from the U.S. dollar to the respective foreign currency. This change was made as significant changes in economic facts and circumstances related to the Company's operations in those foreign countries occurred.

## FOREIGN EXCHANGE HEDGING

The company enters into foreign exchange forward contracts to reduce its exposure to currency fluctuations on customer accounts receivables denominated in foreign currency. The objective of these contracts is to neutralize the impact of foreign currency exchange rate movement on the Company's operating results. The Company does not use derivative financial instruments for speculative or trading purposes. The Company had \$6.4 million of foreign exchange forward contracts denominated in British, French, Japanese, Swiss, German, Belgium and Netherlands currencies which represented underlying customer accounts receivable transactions at the end of fiscal 1999. The gains and losses on these contracts are included in earnings when the underlying foreign currency denominated transaction is recognized. Gains and loss related to these instruments for fiscal 1999 were not material to the company. Looking forward, the Company does not anticipate any material adverse effect on its consolidated financial position, results of operations, or cash flows resulting from the use of these instruments. However, there can be no assurance that these strategies will be effective or that transaction losses can be minimized or forecasted accurately.

The following table provides information about the Company's foreign exchange forward contracts at the end of fiscal 1999. The table presents the value of the contracts in U.S. dollars at the contract exchange rate as of the contract maturity date. The average contract rate approximates the weighted average contractual foreign currency exchange rate and the forward position in U.S. dollars approximates the fair value on the contract at the end of fiscal 1999.

Forward contracts to sell foreign currencies for U.S. Dollars related to customer accounts receivable:

CURRENCY	CONTRACT RATE	FORWARD AMOUNT IN U.S. DOLLARS (IN THOUSANDS)	CONTRACT ORIGINATION DATE	CONTRACT MATURITY DATE
Belgian Franc	29.90	\$ 23	Various: May 98	Various: Jan 00
British Pound				
Sterling	1.57	1,425	Various: Jun 97 - Jan 99	Various: Jul 99 - Aug 00
French Franc	5.48	484	Various: Apr 98 - Jan 99	Various: Feb 00 - Dec 01
German Deutsche Mark	1.58	1,105	Various: Apr 97 - Apr 99	Various: Jul 99 - Jul 01
Japanese Yen	116.52	3,214	Various: Jan 97 - Jun 99	Various: Jul 99 - Jun 02
Netherlands Guilder	1.74	10	Various: Jan 99	Various: Jul 99
Swiss Franc	1.34	124	Various: Jan 99	Various: Feb 00 - Feb 01
Total		\$6,385		
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#### ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Consolidated Financial Statements of the Company are listed in the Index to Financial Statements filed in Item 14(a)(i) as part of this Form 10-K.

## ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

There have been no changes or disagreements with accountants on accounting or financial disclosure matters during the Company's two most recent fiscal years.

#### PART III

#### ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required under this Item is incorporated herein by reference to the Company's definitive proxy statement pursuant to Regulation 14A, to be filed with the Securities and Exchange Commission not later than 120 days after June 30, 1999, under the heading "Election of Directors."

#### ITEM 11. EXECUTIVE COMPENSATION

The information required under this Item is incorporated herein by reference to the Company's definitive proxy statement pursuant to Regulation 14A, to be filed with the Securities and Exchange Commission not later than 120 days after June 30, 1999, under the heading "Executive Officer Compensation."

### ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required under this Item is incorporated herein by reference to the Company's definitive proxy statement pursuant to Regulation 14A, to be filed with the Securities and Exchange Commission not later than 120 days after June 30, 1999, under the heading "Share Ownership of Principal Stockholders and Management."

#### ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required under this Item is incorporated herein by reference to the Company's definitive proxy statement pursuant to Regulation 14A, to be filed with the Securities and Exchange Commission not later than 120 days after June 30, 1999, under the heading "Certain Relationships and Related Party Transactions."

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#### PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

(a) (1) FINANCIAL STATEMENTS

	PAGE
Report of Independent Public Accountants	F-2
Balance Sheets as of June 30, 1998 and 1999 Statements of Operations for the years ended June 30,	F-3
1997, 1998 and 1999	F-4
Statements of Stockholders' Equity for the years ended June 30, 1997, 1998 and 1999	F-5
1997, 1998 and 1999	F-6
Notes to Consolidated Financial Statements	F-7

#### (a) (2) FINANCIAL STATEMENT SCHEDULES

	PAGE
Report of Independent Public Accountants on Schedule	S-1
Schedule II Valuation and Qualifying Accounts	S-2

All other schedules are omitted because they are not required or the required information is shown in the Consolidated Financial Statements or Notes thereto.

#### (a)(3) EXHIBITS

3.1 (1) Certificate of 1	Incorporation of	the Company.
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- 3.2 (1) By-laws of the Company.
- 4.1 (2) Specimen Certificate for Shares of the Company's Common Stock, \$.10 par value.
- 4.2 (1) Rights Agreement dated as of March 12, 1998 between the Company and American Stock Transfer and Trust Company, as Rights Agent, including related forms of the following:

  (a) Certificate of Designation of Series A Participating Cumulative Preferred Stock of the Company.
  (b) Right Certificate.
- 4.3 (3) Indenture dated as of June 17, 1998 between the Company and The Chase Manhattan Bank, as trustee, with respect to up to \$86,250,000 principal amount of 5 1/4% Convertible Subordinated Debentures due June 15, 2005 of the Company.
- 4.4 (3) Form of 5 1/4% Convertible Subordinated Debentures due June 15, 2005 of the Company (included in Sections 2.2, 2.3 and 2.4 of the Indenture filed as Exhibit 4.1).
- 10.1 (4) Lease Agreement between the Company and Teachers Insurance and Annuity Association of America regarding Ten Canal Park, Cambridge, Massachusetts.
- 10.2 (4) System License Agreement between the Company and the Massachusetts Institute of Technology, dated March 30, 1982, as amended.
- 10.4 (4)+ Letter, dated October 19, 1994, from the Company to Koch Engineering Company, Inc., pursuant to which the Company elected to extend the term of the Company's license under the Non-Equilibrium Distillation Model Development and License Agreement.

- 10.7 (4) Subordinated Note and Warrant Purchase Agreement dated as of May 7, 1991 between the Company and Massachusetts Capital Resource Company.
- 10.8 (4) Subordinated Note due 1998 dated as of May 7, 1991 issued by the Company to Massachusetts Capital Resource Company.
- 10.9 (4) Common Stock Purchase Warrant No. 91-1.
- 10.10 (4) Common Stock Purchase Warrant No. 91-2.
- 10.11 (4) Subordinated Note Purchase Agreement dated as of August 22, 1994 between the Company and Massachusetts Capital Resource Company.
- 10.12 (4) Subordinated Note due 1997 dated as of August 22, 1994 issued by the Company to Massachusetts Capital Resource
- 10.13 (4) Security Agreement dated as of July 24, 1989 between the Company and Massachusetts Capital Resource Company, as amended.
- 10.14 (4) Noncompetition, Confidentiality and Proprietary Rights Agreement between the Company and Lawrence B. Evans.
- 10.15 (4) Noncompetition, Confidentiality and Proprietary Rights Agreement between the Company and Joseph F. Boston.
- 10.16 (4) Noncompetition, Confidentiality and Proprietary Rights Agreement between the Company and Paul W. Gallier.
- 10.17 (4) Noncompetition, Confidentiality and Proprietary Rights Agreement between the Company and Herbert I. Britt.
- 10.18 (4) 1988 Non-Qualified Stock Option Plan, as amended. 10.19 (5) 1995 Stock Option Plan.
- 10.20 (5) 1995 Directors Stock Option Plan.
- 1995 Employees' Stock Purchase Plan. 10.21 (5)
- 10.22 (4) Vendor Program Agreement between the Company and General Electric Capital Corporation.
- 10.23 (6) Rider No. 1, dated December 14, 1994, to Vendor Program Agreement between the Company and General Electric Capital Corporation.
- 10.24 (4)+ Letter Agreement between the Company and Sanwa Business Credit Corporation.
- 10.25 (4) Form of Employee Confidentiality and Non-Competition Agreement.
- 10.26 (4) Equity Joint Venture Contract between the Company and China Petrochemical Technology Company.
- 10.27 (7) Amended and Restated Agreement and Plan of Reorganization, dated as of May 12, 1995, by and among the Company, Industrial Systems, Inc. and the stockholders of Industrial Systems, Inc.
- 10.28 (8) Stock Purchase Agreement dated as of December 15, 1995, among the Company, Dynamic Matrix Control Corporation and Charles R. Cutler, June A. Cutler, Charles R. Johnston and Cheryl Lynne Johnston, as shareholders of Dynamic Matrix Control Corporation.
- 10.29 (8) Share Purchase Agreement dated as of January 5, 1996 among the Company, Amelinc Corporation and Cegelec S.A.

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- 10.30 (9) Further Amended and Restated Revolving Credit Agreement dated as of February 15, 1996 among the Company, Prosys Modeling Investment Corporation, Industrial Systems, Inc., Dynamic Matrix Control Corporation and Setpoint, Inc., as the Borrowers, the Lenders Parties thereto, and Fleet Bank of Massachusetts, N.A., as Agent and Lender, together with related forms of the following (each in the form executed by each of such Borrowers):
  - (a) Amended and Restated Revolving Credit Note.
  - (b) Patent Conditional Assignment and Security Agreement.
  - (c) Trademark Collateral Security Agreement.

(d) Security Agreement.

- 10.31(10) 1996 Special Stock Option Plan.
- 10.32(10) Change in Control Agreement between the Company and Lawrence B. Evans dated August 12, 1997.
- 10.33(10) Change in Control Agreement between the Company and Joseph F. Boston dated August 12, 1997.
- 10.34(10) Change in Control Agreement between the Company and David McQuillin dated August 12, 1997.
- 10.35(10) Change in Control Agreement between the Company and Mary A. Palermo dated August 12, 1997.
- 10.36(10) Change in Control Agreement between the Company and Joel B. Rosen dated August 12, 1997.
- 10.37(10) Change in Control Agreement between the Company and Stephen
  J. Doyle dated August 12, 1997.
- 10.38(3) Registration Rights Agreement, dated as of June 17, 1998, between the Company and Goldman, Sachs & Co., NationsBanc Montgomery Securities LLC and William Blair & Company, L.L.C.
- 10.39(11) Declaration of Registration Rights made as of April 27, 1998 by the Company for the benefit of former stockholders of Chesapeake Decision Sciences, Inc.
- 10.40(12) Agreement and Plan of Reorganization dated as of April 28, 1998, among the Company, AT Acquisition Corp., Chesapeake Decision Sciences, Inc. and Dr. Thomas E. Baker
- 10.41(13) Change in Control Agreement between the Company and Lisa W. Zappala dated November 3, 1998.
- 10.42(14) Employment Agreement between Chesapeake Decision Sciences, Inc., a wholly-owned subsidiary of the Company, and Thomas E. Baker dated January 20, 1999.
- 10.43 Change in Control Agreement between the Company and David Mushin dated December 30, 1998.
- 22.1 Subsidiaries of the Company.
- 23.1 Consent of Arthur Andersen LLP.
- 24.1 Power of Attorney (included in signature page to Form 10-K).
- Financial Data Schedules for fiscal year ended June 30, 1999.

(1) Previously filed as an exhibit to the Company's Current Report on Form 8-K dated March 12, 1998 (filed on March 27, 1998), and incorporated herein by reference.

- (2) Previously filed as an exhibit to the Company's Registration Statement on Form 8-A, as amended by Amendment No. 1 thereto (filed on June 12, 1998), and incorporated herein by reference.
- (3) Previously filed as an exhibit to the Company's Current Report on Form 8-K dated June 17, 1998 (filed on June 19, 1998), and incorporated herein by reference.
- (4) Previously filed as an exhibit to the Company's Registration Statement on Form S-1 (Registration No. 33-83916) filed on September 13, 1994, and incorporated herein by reference.
- (5) Previously filed as an exhibit to the Company's Registration Statement on Form S-8 (Registration No. 333-11651) filed on September 9, 1996, and incorporated herein by reference.

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- (6) Previously filed as an exhibit to the Company's Registration Statement on Form S-1 (Registration No. 33-88734) filed on January 29, 1995, and incorporated herein by reference.
- (7) Previously filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 1995, and incorporated herein by reference.
- (8) Previously filed as an exhibit to the Company's Current Report on Form 8-K dated January 5, 1996, as amended by Amendment Nos. 1, 2, 3 and 4 thereto, and incorporated herein by reference.

- (9) Previously filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 1996, and incorporated herein by reference.
- (10) Previously filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended June 30, 1997, and incorporated herein by reference
- (11) Previously filed as an exhibit to the Company's Registration Statement on Form S-3 (Registration No. 333-63483) filed on September 16, 1998, and incorporated herein by reference.
- (12) Previously filed as an exhibit to the Company's Current Report on Form 8-K dated May 27, 1998 (filed June 3, 1998), and incorporated herein by reference.
- (13) Previously filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 1998 and incorporated herein by reference.
- (14) Previously filed as exhibit 10.36 to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 1998 and incorporated herein by reference.
- + Certain portions have been granted Confidential Treatment by the Securities and Exchange Commission at the request of the Company pursuant to Rule 406 under the Securities Act of 1933.
  - (b) REPORTS ON FORM 8-K

On May 10, 1999, the Company filed a Current Report on Form 8-K dated April 27, 1999 with respect to a press release of the Company reporting third fiscal quarter results and announcing a restructuring program intended to reduce costs and improve productivity.

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### SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, as of September 28, 1999.

ASPEN TECHNOLOGY, INC.

By: /s/ LAWRENCE B. EVANS

Lawrence B. Evans

Chairman of the Board and Chief Executive Officer

### POWER OF ATTORNEY

We, the undersigned officers and directors of Aspen Technology, Inc., hereby severally constitute and appoint Lawrence B. Evans, Lisa W. Zappala and Stephen J. Doyle, and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names in the capacities indicated below, the Annual Report on Form 10-K filed herewith and any and all amendments to said Annual Report and generally to do all such things in our names and on our behalf in our capacities as officers and directors to enable Aspen Technology, Inc. to comply with the provisions of the Securities Exchange Act of 1934 and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said Annual Report and any and all amendments thereto.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated as of September 28, 1998.

SIGNATURE TITLE

/s/ LAWRENCE B. EVANS	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)
Lawrence B. Evans	officer (filledpar Executive officer)
/s/ LISA W. ZAPPALA	Chief Financial Officer (Principal Financial and Accounting Officer)
Lisa W. Zappala	(Filmerpal Financial and Accounting Officer)
/s/ JOSEPH F. BOSTON	Director
Joseph F. Boston	
/s/ GRESHAM T. BREBACH, JR.	Director
Gresham T. Brebach, Jr.	
/s/ DOUGLAS R. BROWN	Director
Douglas R. Brown	
/s/ JOAN C. MCARDLE	Director
Joan C. McArdle	
/s/ ALISON ROSS	Director
Alison Ross	
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#### REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

## To Aspen Technology, Inc.:

We have audited the accompanying consolidated balance sheets of Aspen Technology, Inc. (a Delaware corporation) and subsidiaries as of June 30, 1998 and 1999, and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss) and cash flows for each of the three years in the period ended June 30, 1999. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these 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 financial position of Aspen Technology, Inc. and subsidiaries as of June 30, 1998 and 1999, and the results of their operations and their cash flows for each of the three years in the period ended June 30, 1999, in conformity with generally accepted accounting principles.

#### ARTHUR ANDERSEN LLP

Boston, Massachusetts August 4, 1999

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## CONSOLIDATED BALANCE SHEETS (IN THOUSANDS, EXCEPT SHARE DATA)

	JUNE	E 30,
	1998	1999
ASSETS		
Current assets:  Cash and cash equivalents	\$ 78,694 34,987 71,803 18,077	\$ 33,456 63,512 73,858 16,634
of unamortized discount of \$1,016 in 1998 and \$1,478 in 1999  Deferred tax asset	23,643	25,344 2,752
Prepaid expenses and other current assets	10,831	12 <b>,</b> 157
Total current assets	238,035	227,713
Long-term installments receivable, net of unamortized discount of \$7,305 in 1998 and \$5,797 in 1999	36 <b>,</b> 203	31,231
Property and leasehold improvements, at cost: Land. Building and improvements. Computer equipment. Purchased software. Furniture and fixtures. Leasehold improvements.	727 8,790 33,096 16,599 11,746 5,356	727 6,261 35,946 23,449 11,792 4,440
Less Accumulated depreciation and amortization	76,314 33,578	82,615 45,775
	42,736	36,840
Computer software development costs, net of accumulated amortization of \$6,314 in 1998 and \$8,967 in 1999	5 <b>,</b> 696	6,011
Land	925	925
<pre>Intangible assets, net of accumulated amortization of \$6,066 in 1998 and \$9,027 in 1999</pre>	12,857	9,143
Deferred tax asset		4,757
Other assets	6,430	5 <b>,</b> 622

	\$342,882 ======	\$322 <b>,</b> 242
LIABILITIES AND STOCKHOLDERS' EQUITY Current liabilities:	======	
Current flabilities: Current portion of long-term obligations. Accounts payable	\$ 2,187 6,139 32,406 6,008 17,888 541	\$ 2,360 7,798 34,814 10,116 20,482
Total current liabilities	65 <b>,</b> 169	75 <b>,</b> 570
Long-term obligations, less current portion	4,385	3,155
5 1/4% Convertible subordinated debentures	86,250	86,250
Deferred revenue, less current portion	15,074	13,528
Other liabilities	914	513
Deferred income taxes		
Commitments and contingencies (Notes 11, 12, and 13) Stockholders' equity: Common stock, \$.10 par value Authorized 40,000,000 shares Issued 24,729,741 shares in 1998 and 25,166,051 shares in 1999	2,473 148,342 14,922	2,517 154,480 (11,257)
Treasury stock, at cost 230,330 shares in 1998 and 230,430 shares in 1999	(502)	(502)
Accumulated other comprehensive loss	(219)	(2,012)
Total stockholders' equity	165,016 	143,226
	\$342,882 ======	\$322,242 ======

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

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## ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

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

	YEAF	YEARS ENDED JUNE 30,		
	1997	1998	1999	
Revenues:				
Software licenses	\$103 <b>,</b> 179	\$139 <b>,</b> 390	\$ 91,621	
Service and other	90,891	113,165	127,972	
	194,070	252,555	219,593	
Expenses:				
Cost of software licenses	5,539	8,178	7,862	
Cost of service and other	54,006	68,490	83,346	
Selling and marketing	56,034	74,926	85,249	
Research and development	33,580	43,553	48,067	
General and administrative	17,072	20,208	23,253	
Restructuring and other charges			17,867	
Charge for in-process research and development	8,664	8,472		
Costs related to acquisitions		4,984		

	174,895	228,811	
Income (loss) from operations.  Foreign currency exchange loss.  Income on equity in joint ventures.  Interest income.  Interest expense.	19,175 (236) 26 5,556 (151)		(46,051) (94) 19 9,957 (5,677)
Income (loss) before provision for (benefit from) income taxes	10,169	•	(16,111)
Net income (loss)	\$ 14,201	\$ 14,636 ======	\$(25,735)
Net income (loss) per share: Diluted	\$ 0.63	\$ 0.59	\$ (1.04) ======
Basic	\$ 0.66	\$ 0.63 =====	\$ (1.04) ======
Weighted average shares outstanding: Diluted	22 <b>,</b> 707	•	•
Basic		23,415	

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

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## ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

# CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME (LOSS) (IN THOUSANDS, EXCEPT SHARE DATA)

	COMMON S	STOCK	ADDITIONAL.	RETAINED ADDITIONAL EARNINGS	ACCUMULATED OTHER COMPREHENSIVE	TREASURY STOCK	
	NUMBER OF SHARES	\$.10 PAR VALUE	PAID-IN CAPITAL	(ACCUMULATED DEFICIT)	INCOME (LOSS)	NUMBER OF SHARES	COST
BALANCE, JUNE 30, 1996	20,758,343	\$2 <b>,</b> 076	\$110,388	\$ (7,121)	\$ (364)	230,396	\$ (502)
immaterial pooling	104,162	10	165	527			
purchase of businesses Issuance of common stock under	155,740	16	5,892				
employee stock purchase plans Exercise of stock options and	210,085	21	3,549				
warrants	507,545	51	4,152				
ESOP contribution	696,154	70	268				
Retired stock	(89,630)	(9)	(33)				
effected					101		
charity Unrealized market loss on investments, net of \$4 tax						(66)	
effect					(7)		
options			3,963				
Net income Comprehensive net income for the year ended June 30, 1997				14,201			
Datawon	00 240 200	0.005		7.607	(070)		45001
BALANCE, JUNE 30, 1997 Issuance of common stock in		2,235	128,344	7,607	(270)	230,330	(502)
immaterial poolings Issuance of common stock under	766,443	77	2,046	(7,321)			
employee stock purchase plans Exercise of stock options and	115,617	11	3,867				
warrants	525,830	53	7,194				
ESOP contribution	983,145	98	380				
Retired stock	(3,693)	(1)	(1)				
effected Unrealized market loss on investments, net of \$31 tax					98		
effect					(47)		
options			6,512				
Net income Comprehensive net income for the year ended June 30, 1998				14,636			

BALANCE, JUNE 30, 1998	24,729,741	2,473	148,342	14,922	(219)	230,330	(502)
Issuance of common stock in an							
immaterial pooling	45,000	5	443	(444)			
Issuance of common stock under							
employee stock purchase plans	267,324	27	4,371				
Exercise of stock options and	•						
warrants	123,986	12	901				
Purchase of treasury stock						100	
Translation adjustment, not tax							
effected					(1,574)		
Unrealized market loss on							
investments, net of \$135 tax							
effect					(219)		
Tax benefit related to stock							
options			423				
Net loss				(25,735)			
Comprehensive net loss for the							
year ended June 30, 1999							
•							
BALANCE, JUNE 30, 1999	25,166,051	\$2,517	\$154,480	\$(11,257)	\$ (2,012)	230,430	\$ (502)
	========	======			=======	======	=====

	TOTAL STOCKHOLDERS EQUITY	COMPREHENSIVE INCOME (LOSS)
DAT MIGH. HINE 20, 1006	6104 477	
BALANCE, JUNE 30, 1996 Issuance of common stock in an	\$104,477	
immaterial pooling	702	
Issuance of common stock in the purchase of businesses	5,908	
Issuance of common stock under		
employee stock purchase plans Exercise of stock options and	3,570	
warrants	4,203	
ESOP contribution	338 (42)	
Retired stock Translation adjustment, not tax	(42)	
effected	101	\$ 101
Issuance of treasury stock to charity		
Unrealized market loss on		
investments, net of \$4 tax effect	(7)	(7)
Tax benefit related to stock	(7)	(7)
options	3,963	
Net income	14,201	14,201
Comprehensive net income for the		
year ended June 30, 1997		\$ 14,295 ======
BALANCE, JUNE 30, 1997	137,414	
Issuance of common stock in	(F. 100)	
immaterial poolings Issuance of common stock under	(5,198)	
employee stock purchase plans	3,878	
Exercise of stock options and warrants	7,247	
ESOP contribution		
Retired stock	(2)	
Translation adjustment, not tax effected	98	98
Unrealized market loss on		
investments, net of \$31 tax effect	(47)	(47)
Tax benefit related to stock	(47)	(47)
options		14,636
Net income	14,636	14,636
Comprehensive net income for the		
year ended June 30, 1998		\$ 14,687 ======
BALANCE, JUNE 30, 1998	165,016	
Issuance of common stock in an immaterial pooling	4	
Issuance of common stock under	4	
employee stock purchase plans	4,398	
Exercise of stock options and warrants	913	
Purchase of treasury stock		
Translation adjustment, not tax effected	(1,574)	(1,574)
Unrealized market loss on	(1,3/4)	(1,3/4)
investments, net of \$135 tax	(21.0)	(210)
effect Tax benefit related to stock	(219)	(219)
options	423	
Net loss	(25,735)	(25,735)
Comprehensive net loss for the		
year ended June 30, 1999		\$ (27,528)
BALANCE, JUNE 30, 1999		
	=======	

The accompanying notes are an integral part of these consolidated financial

## ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS (IN THOUSANDS)

	YEARS ENDED JUNE 30,		
	1997	1998	1999
Cash flows from operating activities:			
Net income (loss)	\$ 14,201	\$ 14,636	\$ (25,735)
Depreciation and amortization	11,655	14,144	18,310
Charge for in-process research and development  Deferred income taxes	8,664 (1,646)	8,472 (2,749)	
Writeoff of assets related to restructuring Changes in assets and liabilities			3,060
Accounts receivable	(9,107)	(28,728)	(1,367)
Prepaid expenses and other current assets  Long-term installments receivable	(4,686) (20,251)	(388) (9,394)	(2,030) 3,271
Accounts payable and accrued expenses	4,513	14,954	4,560
Unearned revenue	(7,835)	1,713	4,040
Deferred revenue	7,597	5,744	1,057
Net cash provided by (used in) operating			
activities	3,105	18,404	(8,958)
Cash flows from investing activities:			
Purchase of property and leasehold improvements	(20,199)	(19,356)	(7,549)
Increase in computer software development costs	(2,384)	(3,900)	(2,966)
Increase (decrease) in other assets(Decrease) increase in short-term investments	(549) 22 <b>,</b> 194	(3,981) (18,413)	338 (28,744)
Decrease in other liabilities	(815)	(28)	(401)
Cash acquired in immaterial poolings	792	(1,123)	
acquired	(6,232)	(9,911)	(1,200)
Net cash used in investing activities		(56,712)	(40,522)
Cash flows from financing activities: Issuance of common stock under employee stock purchase			
plans	3,570	3,878	4,398
plan	338	478	
Exercise of stock options and warrants	4,203	7,247	913
Repurchase of common stock Proceeds from 5 1/4% convertible subordinated	(42)	(2)	
debentures Payments of long-term debt and capital lease		86,250	
obligations	(571)	769	(947)
Net cash provided by financing activities	7,498	98,620	4,364
Effect of exchange rate changes on cash and cash			
equivalents	101	98	(122)
<pre>Increase (decrease) in cash and cash equivalents</pre>	3,511 14,773	60,410 18,284	(45,238) 78,694
Cash and cash equivalents, end of period	\$ 18,284 ======	\$ 78,694 ======	\$ 33,456
Supplemental disclosure of cash flow information:  Cash paid for income taxes	\$ 4,074	\$ 1,363	\$ 2,985
	======	======	======
Cash paid for interest	\$ 199 =====	\$ 245 ======	\$ 4,709 =====
Supplemental schedule of noncash investing and financing activities:			
Increase in equipment under capital lease obligations	\$	\$ 2,351	\$

Increase in additional paid-in capital and decrease in			
accrued expenses relating to the tax benefit of exercise			
of nonqualified stock options	\$ 3,963	\$ 6,512	\$ 423
	======	======	======
Supplemental disclosure of cash flows related to			
acquisitions:			
The Company acquired certain companies as described in			
Note 4. These acquisitions are summarized as follows			
Fair value of assets acquired, excluding cash	\$ 15,469	\$ 11,316	\$ 1,290
Issuance of common stock related to acquisitions	(5,908)		
Payments in connection with the acquisitions, net of			
cash acquired	(6,232)	(9,911)	(1,200)
•			
Liabilities assumed	\$ 3,329	\$ 1,405	\$ 90
	=======	=======	=======

During the fiscal year 1997, the Company acquired B-JAC International, Inc. During the fiscal year 1998, the Company acquired NeuralWare, Inc., The SAST Corporation Limited, Cimtech S.A./N.V., Contas Process Control S.r.L., Zyqad Limited and Treiber Controls, Inc. During the fiscal year 1999, the Company acquired Syllogistics, Inc. All of these acquisitions were accounted for as poolings of interests. Due to their immateriality to the financial position and results of operations of the Company, the historical financial statements were not restated.

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

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS JUNE 30, 1999

#### (1) OPERATIONS

Aspen Technology, Inc. and subsidiaries (the Company) is a supplier of software and service solutions that companies in the process industries use 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. The Company offers a comprehensive, integrated suite of process manufacturing optimization solutions that help process manufacturers enhance profitability by improving efficiency, productivity, capacity utilization, safety and environmental compliance throughout the entire manufacturing life-cycle, from research and development to engineering, planning and scheduling, procurement, production and distribution. In addition to its broad range of software solutions, the Company offers system implementation, advanced process control, real-time optimization and other consulting services through its staff of project engineers. The Company has operations and customers worldwide.

#### (2) SIGNIFICANT ACCOUNTING POLICIES

#### (a) PRINCIPLES OF CONSOLIDATION

The accompanying consolidated financial statements include the results of operations of the Company and its wholly owned subsidiaries. All material intercompany balances and transactions have been eliminated in consolidation.

#### (b) CASH AND CASH EQUIVALENTS

Cash and cash equivalents are stated at cost, which approximates market, and consist of short-term, highly liquid investments with original maturities of less than three months.

#### (c) SHORT-TERM INVESTMENTS

Securities purchased to be held for indefinite periods of time, and not intended at the time of purchase to be held until maturity, are classified as available-for-sale securities. Securities classified as available-for-sale are included in short-term investments and cash and cash equivalents and are required to be recorded at market value in the accompanying consolidated

financial statements. Unrealized gains and losses have been accounted for as a separate component of consolidated stockholders' equity and comprehensive income (loss).

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

Available-for-sale investments as of June 30, 1998 and 1999 are as follows (in thousands):

		JUNE 3	JUNE 30, 1998		30, 1999
DESCRIPTION	CONTRACTED MATURITY	MARKET VALUE	TOTAL AMORTIZED COST	TOTAL MARKET VALUE	TOTAL AMORTIZED COST
CASH AND CASH EQUIVALENTS: Cash and cash equivalents. Commercial paper. Money market funds. Repurchase agreement.	0-3 months 0-3 months	30,811	30,845	18,570	18,570 2,241
Total cash and cash equivalents		78,694	78 <b>,</b> 728	33,456	33,456
SHORT-TERM INVESTMENTS:  Money market funds  Certificates of deposit  Corporate and foreign bonds  Corporate and foreign bonds	4-11 months 4-12 months	9 1,757	9 1,760	31,238	1,449 31,282
Total short term investments		34,987  \$113,681 ======	\$113,737	63,512  \$96,968 ======	63,787  \$97,243 

## (d) DEPRECIATION AND AMORTIZATION

The Company provides for depreciation and amortization, computed using the straight-line and declining balance methods, by charges to operations in amounts estimated to allocate the cost of the assets over their estimated useful lives, as follows:

ASSET CLASSIFICATION	ESTIMATED USEFUL LIFE
Building and improvements	3-5 years
Furniture and fixtures	3-10 years
Leasehold improvements	Life of lease

## (e) LAND

In connection with the acquisition of Setpoint, Inc. in fiscal 1996, the Company acquired land that is being held for investment purposes. The land was recorded at its appraised value at the date of acquisition.

#### (f) REVENUE RECOGNITION

Effective July 1, 1998, the Company adopted Statement of Position (SOP) No. 97-2, "Software Revenue Recognition". SOP 97-2 was issued by the American Institute of Certified Public Accountants in October 1997 in order to provide

guidance on applying generally accepted accounting principles in recognizing revenue on software transactions. The adoption of SOP 97-2 did not have a material impact on the Company's financial position, results of operations or cash flows. License revenue, including license renewals, consists principally of revenue earned under fixed-term and perpetual software license agreements and is generally recognized upon shipment of the software if collection of the resulting receivable is probable, the fee is fixed or

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

determinable, and vendor-specific objective evidence exists to allocate the total fee to all delivered and undelivered elements of the arrangement. The Company uses installment contracts as a standard business practice and has a history of successfully collecting under the original payment terms without making concessions on payments, products or services.

Service revenues from fixed-price contracts are recognized using the percentage-of-completion method, measured by the percentage of costs (primarily labor) incurred to date as compared to the estimated total costs (primarily labor) for each contract. When a loss is anticipated on a contract, the full amount thereof is provided currently. Service revenues from time and expense contracts and consulting and training revenue are recognized as the related services are performed. Services that have been performed but for which billings have not been made are recorded as unbilled services, and billings that have been recorded before the services have been performed are recorded as unearned revenue in the accompanying consolidated balance sheets.

Installments receivable represent the present value of future payments related to the financing of noncancellable term and perpetual license agreements that provide for payment in installments over a one- to five-year period. A portion of each installment agreement is recognized as interest income in the accompanying consolidated statements of operations. The interest rates utilized for the years ended June 30, 1997, 1998 and 1999 were 8.5% to 11%, 8.5%, and 8.5%, respectively.

### (g) COMPUTER SOFTWARE DEVELOPMENT COSTS

Certain computer software development costs are capitalized in the accompanying consolidated balance sheets. Capitalization of computer software development costs begins upon the establishment of technological feasibility. Amortization of capitalized computer software development costs is provided on a product-by-product basis using the straight-line method, beginning upon commercial release of the product, and continuing over the remaining estimated economic life of the product, not to exceed three years. Total amortization expense charged to operations was approximately \$1,143,000, \$1,263,000 and \$2,653,000 in fiscal 1997, 1998 and 1999, respectively.

### (h) FOREIGN CURRENCY TRANSLATION

The financial statements of the Company's foreign subsidiaries are translated in accordance with Statement of Financial Accounting Standards (SFAS) No. 52, Foreign Currency Translation. The determination of functional currency is based on the subsidiaries' relative financial and operational independence from the Company. Foreign currency exchange and translation gains or losses for certain wholly owned subsidiaries are credited or charged to the accompanying consolidated statements of operations since the functional currency of the subsidiaries is the U.S. dollar. Gains and losses from foreign currency translation related to entities whose functional currency is their local currency are credited or charged to the cumulative translation adjustment account, included in stockholders' equity in the accompanying consolidated balance sheets. Effective January 1, 1999, the functional currency of several foreign subsidiaries was changed from the U.S. dollar to the respective foreign currency. This change was made as significant changes in economic facts and circumstances related to the Company's operations in those foreign countries occurred.

At June 30, 1998 and 1999, the Company had long-term installments receivable of approximately \$4,953,000 and \$3,295,000 denominated in foreign currencies. The June 1999 installments receivable mature through June 2002 and

have been hedged with specific foreign currency contracts. There have been no material gains or losses recorded relating to hedge contracts for the periods presented.

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

#### (i) NET INCOME (LOSS) PER SHARE

Basic earnings per share was determined by dividing net income (loss) by the weighted average common shares outstanding during the period. Diluted earnings per share was determined by dividing net income (loss) by diluted weighted average shares outstanding. Diluted weighted average shares reflects the dilutive effect, if any, of common equivalent shares. Common equivalent shares include common stock options and warrants to the extent their effect is dilutive, based on the treasury stock method.

The calculations of basic and diluted weighted average shares outstanding are as follows (in thousands):

	YEAR	ENDED JUNE	30,
	1997	1998	1999
Basic weighted average common shares outstanding Weighted average potential common shares	•	23,415 1,468	24 <b>,</b> 835
Diluted weighted average shares outstanding	22,707 =====	24,883 =====	24,835 =====

The following potential common shares were excluded from the calculation of dilutive weighted average shares outstanding as their effect would be anti-dilutive (in thousands):

	YEAR	ENDED JUNE	30,
	1997	1998	1999
Convertible debt		•	•
Options and warrants	190		5,301
Total	190	1,623	6,929
	===	=====	=====

#### (j) MANAGEMENT ESTIMATES

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

#### (k) CONCENTRATION OF CREDIT RISK

Financial instruments that potentially subject the Company to concentrations of credit risk are principally cash and cash equivalents, investments, accounts receivable and installments receivable. The Company places its cash and cash equivalents and investments in highly rated institutions. Concentration of credit risk with respect to receivables is limited to certain customers (end users and distributors) to which the Company makes substantial

sales. To reduce risk, the Company routinely assesses the financial strength of its customers, hedges specific foreign receivables and routinely sells its receivables to financial institutions with limited recourse and without recourse. As a result, the Company believes that its accounts and installments receivable credit risk exposure is limited. The Company maintains an allowance for potential credit losses but historically has not experienced any significant losses related to individual customers or groups of customers in any particular industry or geographic area. As of June 30, 1998 and 1999, the Company had one customer and no customers, respectively that represented 10% of total accounts receivable.

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

#### (1) FINANCIAL INSTRUMENTS

Financial instruments consist of cash and cash equivalents, short-term investments, accounts receivable and installments receivable. The estimated fair value of these financial instruments approximates their carrying value and, except for accounts receivable and installments receivable, is based primarily on market quotes.

#### (m) INTANGIBLE ASSETS AND IMPAIRMENT OF LONG-LIVED ASSETS

Intangible assets consist of the following at June 30, 1998 and 1999 (in thousands):

	ESTIMATED	JUNE 30,	JUNE 30,
	USEFUL LIFE	1998	1999
Goodwill. Acquired Technology. Acquired Assembled Workforce. Acquired Uncompleted Contracts. Other Intangible assets.	10 years	\$ 5,397	\$ 5,547
	5 years	7,826	7,162
	5-7 years	2,859	2,748
	Life of contracts	913	913
	5-12 years	1,928	1,800
Less-Accumulated Amortization		18,923 6,066  \$12,857	18,170 9,027  \$ 9,143

The Company evaluates it long-lived assets, which include property and leasehold improvements and intangible assets for impairment as events and circumstances indicate the carrying amount may not be recoverable and at a minimum each balance sheet date. The Company evaluates the realizability of its long-lived assets based on profitability and undiscounted cash flow expectations for the related asset or subsidiary. Management believes that as of each of the balance sheet dates presented none of the Company's long-lived assets were impaired. See Note 3 for discussion regarding restructuring and other charges.

### (n) COMPREHENSIVE INCOME (LOSS)

Comprehensive income (loss) is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. Comprehensive income (loss) is disclosed in the accompanying consolidated statements of stockholders' equity and comprehensive income (loss). The components of accumulated other comprehensive income (loss) as of June 30, 1997, 1998, and 1999 are as follows (in thousands):

	1997	1998	1999
Unrealized loss on investments, net of taxes	\$ (9)	\$ (56)	\$ (275)

Total a	accumulated	other	${\tt comprehensive}$	income	(loss)	\$(270)	\$(219)	\$(2,012)
Cumulat	tive transla	ation a	adjustment	· • • • • • •		(261)	(163)	(1,737)

#### (o) NEW ACCOUNTING STANDARDS

In June 1998, the FASB issued SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. SFAS No. 133 establishes accounting and reporting standards for derivative instruments, including certain derivative instruments embedded in other contracts (collectively referred to as derivatives) and for hedging activities. In June 1999, the FASB issued SFAS No. 137, Accounting for Derivative Instruments and Hedging Activities -- Deferral of the Effective Date of SFAS No. 133. SFAS No. 137 amends the effective

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

JUNE 30, 1999

date of SFAS No. 133 to now be for all fiscal quarters of all fiscal years beginning after June 15, 2000. The Company does not expect adoption of this statement to have a material impact on its consolidated financial position or results of operations.

#### (3) RESTRUCTURING AND OTHER CHARGES

In the fourth quarter of fiscal 1999, the Company undertook certain actions to restructure its business. The restructuring resulted from a lower than expected level of license revenues which adversely affected fiscal year 1999 operating results. The license revenue shortfall resulted primarily from delayed decision making driven by economic difficulties among customers in certain of our core vertical markets. The restructuring plan resulted in a pre-tax restructuring charge totaling \$17.9 million. The principal actions in the restructuring plan include the reduction of workforce, the close-down or consolidation of a number of offices and facilities, the rationalizing of certain non-core products and activities acquired in recent years and other general cost reductions. The restructuring and other charge is broken down as follows:

	RESTRUCTURING AND OTHER CHARGES	WRITE-OFF OF ASSETS, AND OTHER	FISCAL 1999 PAYMENTS	ACCRUED EXPENSES, JUNE 30, 1999
Close-down/consolidation of facilities	\$10,224	\$5,440	\$ 24	\$4,760
related costs	4,324		2,386	1,938
Write-off of assets	3,060	3,060		
Other	259	101	57	101
	\$17,867	\$8,601	\$2,467	\$6,799
	======	======	=====	=====

Close-down/consolidation of facilities: Approximately \$10.2 million of the restructuring charge relates to the termination of facility leases and other lease-related costs. The facility leases have remaining terms ranging from one month to six years. The amount accrued reflects the Company's best estimate of actual costs to buy out the leases in certain cases or the net cost to sublease the properties in other cases. Included in this amount is the write off of certain assets, primarily building and leasehold improvements and adjustments to certain obligations that relate to the closing of facilities.

Employee Severance, Benefits and Related Costs: The reduction in workforce, by function, resulting in the employee severance costs detailed above is as follows:

Services	82
Selling and Marketing	59
Research and Development	38
General and Administrative	26
	205
	===

Write-off of assets: Approximately \$3.1 million of the restructuring and other charge relates to the write-off of certain assets that have been determined to be of no further value to the Company as a direct consequence of the change in the business plans that have been made as a result of the restructuring. These business plan changes are the result of management's assessment and rationalization of certain non-core products and activities acquired in recent years. The write-off was based on management's assessment of the current fair value of certain assets, including intangible assets, and their resale value, if any.

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ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

#### (4) ACQUISITIONS

#### (a) ACOUISITIONS DURING FISCAL YEAR 1997

During fiscal year 1997, the Company acquired B-JAC International, Inc. (B-JAC), the Process Control Division of Cambridge Control Limited (the Cambridge Control Division), the PIMS Division of Bechtel Corporation and Basil Joffe Associates, Inc.

The Company exchanged 104,162 shares of its common stock valued at approximately \$3,400,000 for all outstanding shares of B-JAC, a major supplier of detailed heat exchanger modeling software. The acquisition has been accounted for as a pooling of interests and as a result of its immateriality as compared to the Company's financial position and results of operations, the historical financial statements were not restated.

The Company's acquisitions of the Cambridge Control Division, the PIMS Division and Basil Joffe Associates, Inc. were all accounted for as purchase transactions. Total purchase price for these acquisitions was approximately \$12,217,000 plus approximately \$3,011,000 in assumed liabilities and acquisition related costs. The Cambridge Control Division specialized in advanced process control solutions, specifically aimed toward process manufacturing controls applications for the refining, petrochemical and pulp and paper industries. The PIMS Division and a related software development organization, Basil Joffe Associates, Inc., developed and sold proprietary PIMS software used by companies in process industries for economic planning and scheduling based on linear programming models. Pro forma information related to these acquisitions is not presented as it is not material.

The results of operations of these companies from the dates of acquisition forward are included in the Company's consolidated statements of operations. The fair market value of assets acquired and liabilities assumed was based on an independent appraisal. The portion of the purchase price allocated to in-process research and development represents projects that had not yet reached technological feasibility and had no alternative future use. The purchase price was allocated to the fair value of assets acquired and liabilities assumed as follows (in thousands):

DESCRIPTION	AMOUNT	LIFE
Purchased in-process research and development Acquired technology	600	5 years 5-12 years

	14,794
Net book value of tangible assets acquired, less liabilities	
assumed	(2,429)
	12 <b>,</b> 365
Less Deferred taxes	148
	\$12 <b>,</b> 217
	======

#### (b) ACQUISITIONS DURING FISCAL YEAR 1998

During fiscal year 1998, the Company acquired 100% of the outstanding shares of NeuralWare, Inc., The SAST Corporation Limited, Cimtech S.A./N.V., Contas Process Control S.r.L., Zyqad Limited, and Treiber Controls, Inc. The Company exchanged 766,443 shares of its common stock and paid approximately \$841,000 in cash for all outstanding shares of the acquired companies. These acquisitions were accounted for as poolings

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

of interest and were immaterial to the Company's financial position and results of operations. Accordingly, the historical financial statements of the Company have not been restated.

Additionally, the Company acquired 100% of the outstanding shares of IISYS, Inc. for an aggregate purchase price of approximately \$8,400,000 in cash and the assumption of approximately \$1,600,000 in debt. For financial statement purposes, this acquisition was accounted for as a purchase, and accordingly, the results of operations from the date of acquisition are included in the Company's consolidated statements of operations. The fair market value of assets acquired and liabilities assumed was based on an independent appraisal. The portion of the purchase price allocated to in-process research and development represents projects that had not yet reached technological feasibility and had no alternative future use. Pro forma information related to these acquisitions is not presented as it is not material. The purchase price was allocated to the fair market value of assets acquired and liabilities as follows (in thousands):

DESCRIPTION	AMOUNT	LIFE
Purchased in process research and development	\$ 8,472 2,178 392	5 years years
	11 040	
Net book value of tangible assets acquired, less liabilities	11,042	
assumed	(321)	
Less Deferred taxes	10,721 800	
	\$ 9,921	
	======	

On May 27, 1998, the Company acquired Chesapeake Decision Sciences, Inc. and subsidiaries (CDI), a provider of software and services for the supply chain management market. The Company exchanged 2,961,959 shares of its common stock for all the outstanding shares of CDI common stock. The Company placed 296,196 of these shares into escrow as security for indemnification obligations of CDI relating to representation, warranties and tax matters. This merger was accounted for as a pooling of interests. Accordingly, the consolidated financial statements of the Company have been restated to give retroactive effect to the combination of CDI. The Company incurred approximately \$4.0 million of expenses

related to this acquisition, which were charged to operations in the quarter ending June 30, 1998.

CDI maintained an Employee Stock Ownership Plan and Trust (the Plan) in which CDI made discretionary contributions on an annual basis based on 10% of all eligible employees' base salaries. The common stock shares were then allocated based on a formula determined by management. CDI's discretionary contributions for the years ended June 30, 1997 and 1998 were approximately \$338,000 and \$478,000, respectively. The Plan was frozen as of May 27, 1998 and all outstanding shares were converted into the Company's common stock.

CDI also maintained a defined contribution 401(k) profit sharing plan covering all full-time employees. The plan provided for CDI to make matching contributions under a defined formula. In addition, CDI could make discretionary contributions to the plan determined annually by management. During fiscal years ended June 30, 1997, and 1998 CDI made matching contributions of approximately \$183,000 and \$314,000, respectively. This plan was merged with the Company's plan as of June 1, 1998.

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

The following information details the results of operations of the Company and CDI for the periods before the pooling of interests combination was consummated (in thousands):

	YEARS ENDE	D JUNE 30,
	1997	1998
Revenue		
The Company	\$180,299 13,771	\$234,461 18,094
Combined	\$194 <b>,</b> 070	\$252 <b>,</b> 555
Net income (loss)		
The Company	\$ 13,155 1,046	\$ 14,922 (286)
Combined	\$ 14,201 ======	\$ 14,636 ======
Net income (loss) per share Diluted		
The Company	\$ 0.63 ======	\$ 0.67
CDI	\$ 0.60	\$ (0.11) ======
Combined	\$ 0.63	\$ 0.59
Net income (loss) per share Basic		
The Company	\$ 0.67 =====	\$ 0.72
CDI	\$ 0.60	\$ (0.11)
Combined	\$ 0.66	\$ 0.63

#### (c) ACQUISITIONS DURING FISCAL YEAR 1999

On September 14, 1998, the Company paid \$1.2 million in cash for certain assets and personnel of Callidus Technologies, Inc., a consulting firm that specializes in the modeling of predictive emissions monitoring. This acquisition has been accounted for as a purchase transaction. The purchase price has been allocated to various assets, primarily intangible assets, based on their fair

values. On October 14, 1998 the Company issued 45,000 shares of its common stock for all the outstanding shares of Syllogistics, Inc., a provider of logistics management software. This acquisition was accounted for as pooling of interests. Pro forma information related to these acquisitions is not presented as it is not material.

#### (5) LINE OF CREDIT

The Company has a revolving line-of-credit agreement with a bank, which provides for borrowings up to \$30,000,000, subject to certain limitations. There is an annual commitment fee of \$50,000. At the Company's election, borrowings bear interest on the basis of the applicable LIBOR, as defined (5.24% as of June 30, 1999), or at the bank's prime rate (7.75% as of June 30, 1999). The line is subject to certain covenants, including profitability and operating ratios, as defined. Additionally, the line is secured by certain of the Company's marketable securities. As of June 30, 1999, no amounts were outstanding under this line and approximately \$22,616,000 was available for future borrowings as approximately \$7,384,000 was reserved for certain performance bonds relating to outstanding letters of credit and service contracts. The line of credit expires on December 31, 2000.

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

JUNE 30, 1999

#### (6) LONG-TERM OBLIGATIONS

Long-term obligations consist of the following at June 30, 1998 and 1999 (in thousands):

	JUNE 30, 1998	JUNE 30, 1999
Capital lease obligation due in monthly installments of approximately \$55,000 plus interest at 9.3% per year		
through April 2001	\$2,060 1,339	\$1,062 256
6.75% per year  Note payable of a Belgian subsidiary with payments due of approximately \$1,500,000 in September 1999 and then annual installments ranging from approximately \$98,000 to \$126,000 through June 2012, plus interest ranging from	1,251	1,176
8.5% to 10%, payable in June 2010, 2011, and 2012  Convertible Debenture of a Belgian subsidiary due in 2000, interest payable at an annual rate of 6%. This note is convertible into approximately 7,500 shares of the	953	2,565
Company's common stock at the option of the holder  Note payable due in annual installments of \$125,000 plus	403	385
interest at 9.5% per year	423 143	71 
Less Current maturities	- , -	5,515 2,360
	\$4,385 =====	\$3 <b>,</b> 155

Maturities of these long term obligations are as follows (in thousands):

YEARS ENDING JUNE 30,

AMOUNT

2000. 2001. 2002. 2003. 2004. Thereafter.	1,251 217 202 193
Less Current maturities	5,515 2,360  \$3,155

#### (7) 5 1/4% CONVERTIBLE SUBORDINATED DEBENTURES

In June 1998, the Company sold \$86.3 million of 5 1/4% Convertible subordinated debentures (the Debentures) to qualified institutional buyers in reliance on Rule 144A under the Securities Act of 1933. The Debentures are convertible into shares of the Company's common stock at any time prior to June 15, 2005, unless previously redeemed or repurchased, at a conversion price of \$52.97 per share, subject to adjustment in certain events. Interest on the Debentures is payable on June 15 and December 15 of each year. The Debentures are redeemable in whole or part at the option of the Company at any time on or after June 15,

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

2001 at the following redemption prices expressed as a percentage of principal plus accrued interest through the date of redemption:

12 MONTHS	
BEGINNING	REDEMPTION
JUNE 15 OF	PRICE
2001	
2002	
2003	101.50%
2004.	

In the event of a change of control, as defined, each holder of the Debentures may require the Company to repurchase its Debentures, in whole or in part, for cash or, at the Company's option, for common stock (valued at 95% of the average last reported sale prices for the 5 trading days immediately preceding the repurchase date) at a repurchase price of 100% of the principal amount of the Debentures to be repurchased, plus accrued interest to the repurchase date. The Debentures are unsecured obligations subordinate in right of payment to all existing and future senior debt of the Company, as defined, and effectively subordinate in right of payment to all indebtedness and other liabilities of the Company's subsidiaries. The Company has filed a shelf registration statement in respect of the Debentures and common stock issuable upon conversion thereof.

In connection with this financing the Company incurred approximately \$3.9 million of issuance costs. These costs have been classified as other assets in the accompanying consolidated balance sheets and are being amortized, as interest expense, over the term of the Debentures. Approximately \$3.0 million of issuance costs related to fees paid to investment bankers in connection with the sale of these Debentures.

#### (8) PREFERRED STOCK

The Company's Board of Directors is authorized, subject to any limitations prescribed by law, without further stockholder approval, to issue, from time to time, up to an aggregate of 10,000,000 shares of preferred stock in one or more

series. Each such series of preferred stock shall have such number of shares, designations, preferences, voting powers, qualifications and special or relative rights or privileges, which may include, among others, dividend rights, voting rights, redemption and sinking fund provisions, liquidation preferences and conversion rights, as shall be determined by the Board of Directors in a resolution or resolutions providing for the issuance of such series. Any such series of preferred stock, if so determined by the Board of Directors, may have full voting rights with the common stock or superior or limited voting rights and may be convertible into common stock or another security of the Company.

#### (9) COMMON STOCK

#### (a) WARRANTS

During fiscal 1992, the Company issued warrants to purchase 60,000 shares of common stock to a research consultant at an exercise price of \$3.34 per share. In February 1995, warrants to purchase 27,000 shares of common stock were exercised and sold as part of the Company's offering of common stock. In 1996, warrants to purchase 1,150 shares were exercised. In 1997, warrants to purchase 5,700 shares were exercised and warrants to purchase 774 shares were terminated. In 1998, warrants to purchase 3,513 shares were exercised and warrants to purchase 283 shares were terminated. The remaining warrants to purchase 21,580 shares of common stock are exercisable through June 30, 2001.

During fiscal 1993, the Company issued warrants to purchase 12,000 shares of common stock to two research consultants at an exercise price of \$2.67 per share. In 1997, warrants to purchase 2,250 shares were

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

JUNE 30, 1999

exercised. In 1998, warrants to purchase the remaining 750 shares were exercised. In 1999, warrants to purchase the remaining 9,000 shares were exercised.

In connection with the August 1997 acquisition of NeuralWare, Inc. the Company converted warrants and options to purchase NeuralWare common stock into warrants and options to purchase 10,980 and 6,618 shares of the Company's common stock, respectively. All shares are currently exercisable with exercise prices that range between \$61.73 and \$135.80 per share.

In connection with the March 1998 acquisition of Zyqad Limited, the Company converted warrants to purchase Zyqad common stock into warrants to purchase 47,490 shares of the Company's common stock. All of these warrants were exercised in 1999 at an exercise price of \$28.94 per share.

## (b) STOCK OPTIONS

In November 1995, the Board of Directors approved the establishment of the 1995 Stock Option Plan (the 1995 Plan) and the 1995 Directors Stock Option Plan (the 1995 Directors Plan), which provided for the issuance of incentive stock options and nonqualified options. Under these plans, the Board of Directors may grant stock options to purchase up to an aggregate of 3,827,687 (as adjusted) shares of common stock. Shares available for grant under these plans were increased on July 1, 1996 and 1997 by an amount equal to 5% of the outstanding shares as of the preceding June 30. In December 1997, the shareholders approved an amendment to the 1995 Plan. The amendment provides for three annual increases in the number of shares for which options may be granted, beginning July 1, 1998 by an amount equal to 5% of the outstanding shares on the preceding June 30. On July 1, 1998 and 1999 the number of shares available under the 1995 plan were increased by 1,237,712 and 1,247,711 shares, respectively. In December 1996, the shareholders of the Company approved the establishment of the 1996 Special Stock Option Plan (the 1996 Plan). This plan provides for the issuance of incentive stock options and nonqualified options to purchase up to 500,000 shares of common stock. The exercise price of options are granted at a price not less than 100% of the fair market value of the common stock on the date of grant. Stock options become exercisable over varying periods and expire no later than 10 years from the date of grant. The following is a summary of stock option activity in fiscal 1997, 1998 and 1999:

	NUMBER OF SHARES	WEIGHTED AVERAGE EXERCISE PRICE
Outstanding, June 30, 1996. Options granted. Options exercised. Options terminated.	2,940,758 680,000 (484,205) (157,616)	\$11.65 31.30 8.21 16.61
Outstanding, June 30, 1997.  Options granted.  Options exercised.  Options terminated.	2,978,937 2,092,637 (512,321) (108,064)	16.44 30.00 14.41 18.80
Outstanding, June 30, 1998.  Options granted.  Options exercised.  Options terminated.	4,451,189 1,297,281 (67,496) (379,907)	22.96 13.83 12.85 17.30
Outstanding, June 30, 1999	5,301,067	\$14.14 =====

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### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

As of June 30, 1999, there were  $464,942,\ 42,000$  and 19,874 shares of common stock available for grant under the 1995 Plan, the 1995 Directors Plan and the 1996 Plan, respectively. On July 1, 1999, the number of shares available under the 1995 Plan were increased by 1,247,711.

In connection with the 1995 acquisition of Industrial Systems, Inc. (ISI), the Company assumed the ISI option plan (the ISI Plan). The final 13,040 options that were outstanding under the ISI Plan were exercised in fiscal 1997.

The following tables summarize information about stock options outstanding and exercisable at June 30, 1999:

		WEIGHTED			
	OPTIONS	AVERAGE	WEIGHTED	OPTIONS	WEIGHTED
	OUTSTANDING	REMAINING	AVERAGE	EXERCISABLE	AVERAGE
	AT JUNE 30,	CONTRACTUAL	EXERCISE	AT JUNE 30,	EXERCISE
RANGE OF EXERCISE PRICES	1999	LIFE	PRICE	1999	PRICE
\$ 1.05	143,648	0.9	\$ 1.05	143,648	\$ 1.05
1.83 2.66	178,606	2.6	2.66	178,606	2.66
3.33 4.00	215,564	4.9	3.36	215,564	3.36
7.00 11.50	599,856	7.8	7.90	326,975	7.63
13.12 19.12	3,572,938	8.1	14.39	1,318,420	14.74
24.87 32.25	558,455	7.9	28.95	271,461	29.90
40.18	32,000	7.5	40.19		
June 30, 1999	5,301,067		\$14.14	2,454,674	\$12.69
			=====		=====
Exercisable, June 30, 1998				1,827,859	\$17.25
				=======	=====
Exercisable, June 30, 1997				1,160,258	\$ 9.47
				=======	=====

#### (c) REPRICING OF EMPLOYEE STOCK OPTIONS

On November 11, 1998 the Company's Board of Directors approved the repricing of certain employee stock options with exercise prices in excess of

the fair market value of the Company's common stock. The exercise price for the 2.62 million shares of employee stock options that were repriced was reset to \$14.125, the closing market price on November 11, 1998. In connection with the repricing, the accumulated vesting of options outstanding was reduced by one year. Stock options held by executive officers and directors were not eligible for such repricing. The option data in Note 9(b) has been restated to reflect this repricing.

#### (d) FAIR VALUE OF STOCK OPTIONS

SFAS No. 123 Accounting for Stock-Based Compensation requires the measurement of the fair value of stock options to be included in the statement of income or disclosed in the notes to financial statements. The Company has determined that it will continue to account for stock-based compensation for employees under Accounting Principles Board Opinion No. 25, Accounting for Stock Issued to Employees, and elect the disclosure-only alternative under SFAS No. 123.

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

Had compensation cost for the Company's option plans been determined based on the fair value at the grant dates, as prescribed in SFAS No. 123, the Company's net income (loss), and net income (loss) per share would have been as follows:

	1997	1998	1999 
Net (loss) income (in thousands) As reported Pro forma Net (loss) income per share		\$14,636 2,179	
Diluted As reported Pro forma Basic		\$ 0.59 0.09	
As reported	\$ 0.66 0.45		

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions used for grants during the applicable period:

	1997	1998	1999
Risk free interest rates	None 5 Years 58%	5.60-6.28% None 5 Years 75% \$25.57	4.39-5.49% None 5 Years 136% \$13.37

#### (e) EMPLOYEE STOCK PURCHASE PLANS

In December 1995, the Company's Board of Directors approved the 1995 Employees' Stock Purchase Plan, under which the Board of Directors may grant stock purchase rights for a maximum of 500,000 shares through November 2005. In October 1997, the Company's Board of Directors approved the 1998 Employee Stock Purchase Plan, under which the Board of Directors may grant stock purchase rights for a maximum of 1,000,000 shares through September 30, 2007.

Participants are granted options to purchase shares of common stock on the last business day of each semiannual payment period for 85% of the market price

of the common stock on the first or last business day of such payment period, whichever is less. The purchase price for such shares is paid through payroll deductions, and the current maximum allowable payroll deduction is 10% of each eligible employee's compensation. Under the plans, the Company issued 210,085 shares, 115,617 shares and 267,324 during fiscal 1997, 1998 and 1999, respectively. As of June 30, 1999, there were 732,676 shares available for future issuance under the 1998 Employee Stock Purchase Plan. In addition on July 1, 1999, the Company issued 197,652 shares under the 1998 Employee Stock Purchase Plan. No shares of common stock were available for future issuance under the 1995 Employees' Stock Purchase Plan.

#### (f) STOCKHOLDER RIGHTS PLAN

During fiscal 1998, the Board of Directors of the Company adopted a Stockholder Rights Agreement (the Rights Plan) and distributed one Right for each outstanding share of Common Stock. The Rights were issued to holders of record of Common Stock outstanding on March 12, 1998. Each share of Common Stock

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
JUNE 30, 1999

issued after March 12, 1998 will also include one Right, subject to certain limitations. Each Right when it becomes exercisable will initially entitle the registered holder to purchase from the Company one one-hundredth (1/100th) of a share of Series A Preferred Stock at a price of \$175.00\$ (the Purchase Price).

The Rights will become exercisable and separately transferable when the Company learns that any person or group has acquired beneficial ownership of 15% or more of the outstanding Common Stock or on such other date as may be designated by the Board of Directors following the commencement of, or first public disclosure of an intent to commence, a tender or exchange offer for outstanding Common Stock that could result in the offer or becoming the beneficial owner of 15% or more of the outstanding Common Stock. In such circumstances, holders of the Rights will be entitled to purchase, for the Purchase Price, a number of hundredths of a share of Series A Preferred Stock equivalent to the number of shares of Common Stock (or, in certain circumstances, other equity securities) having a market value of twice the Purchase Price. Beneficial holders of 15% or more of the outstanding Common Stock, however, would not be entitled to exercise their Rights in such circumstances. As a result, their voting and equity interests in the Company would be substantially diluted if the Rights were to be exercised.

The Rights expire in March 2008, but may be redeemed earlier by the Company at a price of \$.01 per Right, in accordance with the provisions of the Rights Plan.

## (10) INCOME TAXES

The Company accounts for income taxes under the provisions of SFAS No. 109, Accounting for Income Taxes. Under the liability method specified by SFAS No. 109, a deferred tax asset or liability is measured based on the difference between the financial statement and tax bases of assets and liabilities, as measured by the enacted tax rates.

Income (loss) before provision for (benefit from) income taxes consists of the following (in thousands):

	YEARS	ENDED JUNE	30,
	1997	1998	1999
Domestic	\$21,312	\$22,068	\$(43,365)
Foreign	3,058	6,617	1,519
Total	\$24,370	\$28,685	\$ (41,846)
	======	=======	

The provisions for (benefit from) income taxes shown in the accompanying consolidated statements of operations are composed of the following (in thousands):

	YEARS ENDED JUNE 30,					
	1997 1998	1997	1997	1997 1998		1999
Federal						
Current						
State	, 011	746	104			
Current Deferred	1,011 198	746 857				
Foreign Current	692	2,368	1,564			
Current						
	\$10,169 =====	\$14,049 =====	\$(16,111) ======			

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### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

The provision for income taxes differs from the federal statutory rate due to the following:

	YEARS ENDED JUNE 30,		
	1997(1)	1998(1)	1999
	PROVISION	PROVISION	BENEFIT
Federal tax at statutory rate.  State income tax, net of federal tax benefit.  Foreign tax.  Tax credits generated.  Permanent differences, net.  Valuation allowance and other.	34.5% 5.6 (0.9) (4.1) 1.3 (0.5)	34.5% 4.2 (1.0) (4.7) 0.6	35.0% 2.1 (2.7) 5.3 (0.7) (0.5)
Provision for/Benefit from income taxes	35.9%	33.6%	38.5%
	====	====	====

<sup>(1)</sup> Calculated based on pretax income, before nondeductible charges for in-process research and development and costs related to acquisitions, of \$26,704,000 and \$41,780,000 for 1997 and 1998, respectively.

The components of the net deferred tax asset (liability) recognized in the accompanying consolidated balance sheets are as follows (in thousands):

	JUNE 30,	
	1998	1999
Deferred tax assets Deferred tax liabilities		
	\$ (6,615) ======	\$7,509 =====

The approximate tax effect of each type of temporary difference and carry forward is as follows (in thousands):

	JUNE 30,	
	1998	1999
Revenue related.  US Income tax credits.  US operating losses carryforward.  Restructuring items.  Nondeductible reserves and accruals.  Intangible assets.  Other temporary differences.	\$ (4,492)   422 (2,720) 175	\$ 2,174 1,896 1,595 4,166 408 (1,561)
Valuation allowance	(6,615)  \$(6,615)	8,852 (1,343)  \$ 7,509

The tax credits and net operating loss carryforwards expire at various dates from 1999 through 2019. Due to the uncertainty surrounding the realization and timing of these tax attributes, the Company has recorded a valuation allowance of approximately \$1,343,000 as of June 30, 1999.

The Tax Reform Act of 1986 contains provisions that may limit the net operating loss and tax credit carryforwards available to be used in a any given year in the event of significant changes in ownership, as defined.

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### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

#### (11) OPERATING LEASES

The Company leases its facilities and various office equipment under noncancellable operating leases with terms in excess of one year. Rent expense charged to operations was approximately \$5,017,000, \$6,383,000 and \$7,185,000 for the years ended June 30, 1997, 1998 and 1999, respectively. Future minimum lease payments under these leases as of June 30, 1999 are as follows (in thousands):

	AMOUNT
Year Ending June 30,	
2000	\$ 7,562
2001	7,900
2002	8,097
2003	5,231
2004	4,892
Thereafter	35,143
	\$68,825
	======

#### (12) SALE OF INSTALLMENTS RECEIVABLE

The Company sold, with limited recourse, certain of its installment contracts to two financial institutions for \$51,304,000 and \$32,349,000 during fiscal 1998 and 1999, respectively. The financial institutions have partial

recourse to the Company only upon nonpayment by the customer under the installments receivable. The amount of recourse is determined pursuant to the provisions of the Company's contracts with the financial institutions and varies depending on whether the customers under the installment contracts are foreign or domestic entities. Collections of these receivables reduce the Company's recourse obligation, as defined.

At June 30, 1999, the balance of the uncollected principal portion of the contracts sold with partial recourse was approximately \$91,536,000. The Company's potential recourse obligations related to these contracts is approximately \$3,799,000 as of June 30, 1999. In addition, the Company is obligated to pay additional costs to the financial institutions in the event of default by the customer.

#### (13) COMMITMENTS AND CONTINGENCIES

The Company has entered into agreements with seven executive officers providing for the payment of cash and other benefits in certain events of their voluntary or involuntary termination within three years following a change in control. Payment under these agreements would consist of a lump sum equal to approximately three years of each executive's annual taxable compensation. The agreements also provide that the payment would be increased in the event that it would subject the officer to excise tax as a parachute payment under the federal tax code. The increase would be equal to the additional tax liability imposed on the executive as a result of the payment.

On October 5, 1998, October 26, 1998 and November 20, 1998, three purported class action lawsuits were filed in the United States District Court for the District of Massachusetts against the Company and certain of its officers and directors, on behalf of purchasers of its common stock between April 28, 1998 and October 2, 1998. The lawsuits seek an unspecified amount of damages and claims violations of Sections 10 (b) and 20(a) of the Securities Exchange Act of 1934, alleging that the Company issued a series of materially false and misleading statements concerning its financial conditions, its operations and integration of several acquisitions. On January 27, 1999, in response to a motion to dismiss filed by the Company, the plaintiffs consolidated the three complaints and filed a Consolidated Amended Class Action Complaint. The case was reassigned to a new judge during the summer for the second time and, as of September 23, 1999, she had not

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### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

taken any action or rendered any decision. The Company believes it has meritorious legal defenses to the lawsuits and intend to defend vigorously against these actions. We are currently unable, however, to determine whether resolution of these matters will have a material adverse impact on its financial position or results of operations, or reasonably estimate the amount of the loss, if any, that may result from resolution of these matters.

### (14) RETIREMENT PLAN

The Company maintains a defined contribution retirement plan under Section 401(k) of the Internal Revenue Code covering all eligible employees, as defined. Under the plan, a participant may elect to defer receipt of a stated percentage of his or her compensation, subject to limitation under the Internal Revenue Code, which would otherwise be payable to the participant for any plan year. The Company may make discretionary contributions to this plan. During 1997, the plan was modified to provide, among other changes, for the Company to make matching contributions equal to 25% of pretax employee contributions up to a maximum of 6% of an employee's salary. During the fiscal years ended June 30, 1997, 1998 and 1999, the Company made matching contributions of approximately \$385,000, \$839,000 and \$1,000,000, respectively.

The Company does not provide postretirement benefits to any employees as defined under SFAS No. 106, Employers' Accounting for Postretirement Benefits Other Than Pensions.

#### (15) JOINT VENTURES

In May 1993, the Company entered into an Equity Joint Venture agreement

with China Petrochemical Technology Company to form a limited liability company governed by the laws of the People's Republic of China. This company has the nonexclusive right to distribute the Company's products within the People's Republic of China. The Company invested \$300,000 on August 6, 1993, which represents a 30% equity interest in the joint venture.

In November 1993, the Company invested approximately \$100,000 in a Cyprus-based corporate joint venture, representing approximately a 14% equity interest. The Company had a two-year option to purchase additional shares in the joint venture corporation, which would increase its equity interest to 22.5%. In December 1995, the Company exercised its option to acquire these additional shares for approximately \$125,000.

The Company is accounting for these investments using the equity method. The net investments are included in other assets in the accompanying consolidated balance sheets. In the accompanying consolidated statements of operations for the years ended June 30, 1997, 1998 and 1999, the Company has recognized approximately \$26,000, \$45,000, and \$19,000, respectively, as its portion of the income from these joint ventures.

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)
JUNE 30, 1999

#### (16) ACCRUED EXPENSES

Accrued expenses in the accompanying consolidated balance sheets consist of the following (in thousands):

	JUNE 30,	
	1998	1999
Income taxes Payroll and payroll-related Royalties and outside commissions Restructuring and other charges Other	\$14,279 8,366 1,985  7,776	\$ 9,635 7,645 2,471 6,799 8,264
	\$32,406 ======	\$34,814 ======

#### (17) RELATED PARTY TRANSACTIONS

Smart Finance & Co., a company of which a director of the Company is the President, provides advisory services to the Company from time to time. In fiscal 1997, 1998 and 1999, payments of approximately \$222,000,\$62,000 and \$279,000,\$ respectively, were made by the Company to Smart Finance & Co. as compensation for services rendered. Included in fiscal 1999 was approximately <math>\$200,000 paid in relation to services rendered at arm's length in fiscal 1998 relating to the  $5\,1/4\%$  Convertible Debenture Offering.

### (18) SEGMENT AND GEOGRAPHIC INFORMATION

The Company adopted SFAS No. 131, "Disclosures about Segments of an Enterprise and Related Information," in fiscal 1999. SFAS No. 131 established standards for reporting information about operating segments in annual financial statements and requires selected information about operating segments in interim financial reports issued to stockholders. It also established standards for disclosures about products and services, and geographic areas. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or decision making group, in deciding how to allocate resources and in assessing performance. The Company's chief operating decision maker is the Chief Executive Officer of the Company.

The Company is organized geographically and by line of business. The

Company has two major line of business operating segments: license and service and other. The Company also evaluates certain subsets of business segments by vertical industries as well as by product categories. While the Executive Management Committee evaluates results in a number of different ways, the line of business management structure is the primary basis for which it assesses financial performance and allocates resources.

The license line of business is engaged in the development and licensing of software. The software can be classified into three broad categories: process design software, process operation software and process management software. The service and other line of business offers implementation, advanced process control, real-time optimization and other consulting services in order to provide its customers with complete solutions.

The accounting policies of the line of business operating segments are the same as those described in the summary of significant accounting policies. The Company does not track assets or capital expenditures by operating segments. Consequently, it is not practical to show assets, capital expenditures, depreciation or amortization by operating segments.

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#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED) JUNE 30, 1999

The following table presents a summary of operating segments (in thousands):

	SERVICE AND		
	LICENSE	OTHER	TOTAL
Year ended June 30, 1997			
Revenues from unaffiliated customers	\$103,179	\$ 90,891	\$194,070
Cost of revenue	5 <b>,</b> 539	54,006	59,545
Research and development	29,961	3,619	33,580
Operating margin(1)	\$ 67,679	\$ 33,266	\$100,945
	======	======	=======
Year ended June 30, 1998			
Revenues from unaffiliated customers		\$113 <b>,</b> 165	\$252 <b>,</b> 555
Cost of revenue	8,178	68,490	76 <b>,</b> 668
Research and development	39,045	4,508	43,553
Operating margin(1)	\$ 92,167	\$ 40,167	\$132,334
W 1 1 T 20 1000	======	======	=======
Year ended June 30, 1999	ė 01 601	6107 070	¢210 E02
Revenues from unaffiliated customers  Cost of revenue	\$ 91,621 7,862	\$127,972 83,346	\$219,593
		•	91,208
Research and development	42,898	5,169	48,067
Operating margin(1)	\$ 40,861	\$ 39,457	\$ 80,318
operating margin(i/	=======	=======	=======

<sup>(1)</sup> The Operating Margins reported reflect only the expenses of the line of business and do not represent the actual margins for each operating segment since they do not contain an allocation for selling and marketing, general and administrative, development and other corporate expenses incurred in support of the line of business.

PROFIT RECONCILIATION (in thousands):

YEA	RS ENDED	JUNE	30	
1997	199	8	1999	

Total operating margin for reportable segments	\$100,945	\$132,334	\$ 80,318
Selling and marketing	(56,034)	(74,926)	(85,249)
General and administrative	(17 <b>,</b> 072)	(20,208)	(23, 253)
Restructuring and other charges			(17,867)
Charge for in-process research and development	(8,664)	(8,472)	
Costs related to acquisitions		(4,984)	
Interest and other income and expense	5,195	4,941	4,205
Income (loss) before provision for (benefit from)			
income taxes	\$ 24,370	\$ 28,685	\$(41,846)
	=======	=======	=======

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### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

JUNE 30, 1999

### GEOGRAPHIC INFORMATION:

Domestic and export sales as a percentage of total revenues are as follows:

	YEARS ENDED JUNE 30,		
	1997	1998	1999
United States Europe Japan Other	50.0% 30.6 8.7 10.7	54.6% 28.4 4.6 12.4	46.6% 35.7 4.5 13.2
	100.0%	100.0%	100.0%

Revenues, income (loss) from operations and identifiable assets for the Company's North American, European and Asian operations are as follows (in thousands). The Company has intercompany distribution arrangements with its subsidiaries. The basis for these arrangements, disclosed below as transfers between geographic locations, is cost plus a specified percentage for services and a commission rate for sales generated in the geographic region.

	NORTH AMERICA	EUROPE	ASIA	ELIMINATIONS	CONSOLIDATED
Year ended June 30, 1997					
Revenues	\$184 <b>,</b> 193	\$33,421	\$ 8,143	\$ (31,687)	\$194,070
Identifiable assets	\$232 <b>,</b> 599	\$ 7,493	\$ 1,191	\$ (53,564)	\$187 <b>,</b> 719
Year ended June 30, 1998	======	======	======	======	======
Revenues	\$224,541	\$52,944	\$ 9,316	\$ (34,246)	\$252,555
Identifiable assets	\$405,606	\$22,231	\$ (1,128)	\$ (102,380)	\$324,329
	======	======	======	=======	======
Year ended June 30, 1999 Revenues	\$183,814	\$62,352	\$13,324	\$ (39,897)	\$219,593
Revenues	======	======	======	=======	======
Identifiable assets	\$344,730	\$55,260	\$ 8,735	\$(101,637)	\$307,088
	======	======		=======	=======

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We have audited, in accordance with generally accepted auditing standards, the consolidated financial statements of Aspen Technology, Inc. and subsidiaries, included in this Form 10-K, and have issued our report thereon dated August 4, 1999. Our audit was made for the purpose of forming an opinion on the basic financial statements taken as a whole. The schedule listed in Item 14(a)-2 is the responsibility of the Company's management, is presented for purposes of complying with the Securities and Exchange Commission's rules and is not part of the basic financial statements. This schedule has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, fairly states, in all material respects, the financial data required to be set forth therein, in relation to the basic financial statements taken as a whole.

ARTHUR ANDERSEN LLP

Boston, Massachusetts August 4, 1999

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SCHEDULE II

#### ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

#### VALUATION AND QUALIFYING ACCOUNTS

DESCRIPTION	BALANCE, BEGINNING OF PERIOD	CHARGED TO COSTS AND EXPENSES	DEDUCTIONS	OTHER	BALANCE, END OF PERIOD
ALLOWANCE FOR DOUBTFUL ACCOUNTS: June 30, 1997(1)	\$ 730 <b>,</b> 685	\$ 120,000	\$ (222,850)	\$211 <b>,</b> 882	\$ 839,717
June 30, 1998(1)	839,717	180,000	(136,000)		1,481,717
June 30, 1999(2)	1,481,717	689,000	(1,107,619)	225,000	1,288,098
June 30, 1997	\$	\$	\$	\$	\$
June 30, 1998					
June 30, 1999		9,266,966	(2,467,816)		6,799,150

<sup>(1)</sup> Other relates to amounts acquired in acquisitions.

<sup>(2)</sup> Other relates to miscellaneous income item classified into the allowance for doubtful accounts.

#### CHANGE IN CONTROL AGREEMENT

AGREEMENT dated as of December 30, 1998 by and between Aspen Technology, Inc., a Massachusetts corporation (the "Company"), and David Mushin (the "Executive").

WHEREAS, the Company considers it essential to the best interests of its stockholders to foster the continuous employment of key management personnel; and

WHEREAS, the Company has determined that appropriate steps should be taken to reinforce and encourage the continued attention and dedication of members of the Company's management, including the Executive, to their assigned duties with the Company without distraction in the face of potentially disturbing circumstances arising from the possibility of a Change in Control (as defined herein);

NOW THEREFORE, in consideration of the premises and the mutual covenants herein contained, and for other valuable consideration, the Company and the Executive hereby agree as follows:

- 1. Defined Terms. The definitions of capitalized terms used in this Agreement are provided in the last section hereof.
- 2. Term of Agreement. This Agreement shall commence on the date hereof and shall continue in effect through June 30, 2002. Thereafter, this Agreement shall be automatically renewed for successive one year terms unless the Company sends written notice of termination to the Executive at least 60 days before the expiration date of this Agreement, which termination will be effective at that expiration date. If a Change in Control shall have occurred during the term of this Agreement, however, this Agreement shall continue in effect for a period of three years beyond the last day of the month in which the Change in Control occurred. Notwithstanding the foregoing provisions of this Section 2, this Agreement shall terminate, unless earlier terminated in accordance with this Agreement, (i) one year after the Executive is notified in accordance with Section 9 hereof that the Compensation Committee, upon recommendation of the Company's chief executive officer, has voted to terminate this Agreement or (ii) if earlier, immediately after the Executive is notified in accordance with Section 9 hereof that the Compensation Committee has determined that the Executive's level of responsibility (other than reporting responsibility) has substantially changed from the Executive's current level of responsibility,

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in either case only if the notification occurs prior to a Potential Change in Control that results in a Change in Control.

- 3. Payments After Change in Control.
- 3.1 If the Executive's employment shall be terminated for any reason following a Change in Control and during the term of this Agreement, the Company shall pay the Executive's full salary to the Executive through the Date of Termination at the rate in effect at the time the Notice of Termination is given, together with all compensation and benefits payable to the Executive through the Date of Termination under the terms of any compensation or benefit plan, program or arrangement maintained by the Company during such period.
- 3.2 Subject to Section 3.3, the Company shall pay to the Executive the payments described in this Section 3.2 (the "Severance Payments") upon the termination of the Executive's employment following a Change in Control and during the term of this Agreement, in addition to the payments and benefits described in Section 3.1, unless such termination is (i) by the Company for Cause, (ii) by reason of death, (iii) by the Executive without Good Reason, or (iv) after the Executive shall have attained age 70. In lieu of any further salary payments to the Executive for periods subsequent to the Date of Termination and in lieu of any severance benefits otherwise payable to the Executive under any then existing broad-based employee severance plan, the Company shall pay to the Executive a lump sum severance payment, in cash, equal to three times the sum of (x) the higher of the Executive's annual base salary

in effect immediately prior to the occurrence of the event or circumstance upon which the Notice of Termination is based or in effect immediately prior to the Change in Control and (y) the higher of the average of the annual bonuses paid to the Executive for the three years (or the number of years employed, if less) immediately preceding the occurrence of the event or circumstance upon which the Notice of Termination is based or the Change in Control. In lieu of any further life, disability, accident and health insurance benefits otherwise due to the Executive, the Company shall pay to the Executive a lump sum amount, in cash, equal to the cost to the Company (as determined by the Company in good faith with reference to its most recent actual experience) of providing such benefits, to the extent that the Executive is eligible to receive such benefits immediately prior to the Notice of Termination, for a period of three years commencing on the Date of Termination.

3.3 The payments provided for in Section 3.2 shall be made not later than the fifth day following the Date of Termination.

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3.4 The Company also shall pay to the Executive all legal fees and expenses incurred by the Executive in seeking to obtain or enforce any benefit or right provided by this Agreement, payable within five business days after delivery of the Executive's written requests for payment accompanied with such evidence of fees and expenses incurred as the Company reasonably may require.

#### 4. CERTAIN ADDITIONAL PAYMENTS BY THE COMPANY.

- 4.1 Notwithstanding any other provisions of this Agreement, in the event that any payment or benefit received or to be received by the Executive in connection with a Change in Control or the termination of the Executive's employment (all such payments and benefits, including the Severance Payments, the "Total Payments") is determined to be subject (in whole or part) to the Excise Tax, then the Executive shall be entitled to receive an additional payment (a "Gross-Up Payment") in an amount such that after payment by the Executive of all taxes (including any interest or penalties imposed with respect to such taxes), including without limitation any income taxes and Excise Tax imposed upon the Gross-Up Payment, the Executive retains an amount equal to the Total Payments. Notwithstanding the foregoing provisions of this Section 4.1, if it shall be determined that the Executive is entitled to a Gross-Up Payment, but that the Total Payments do not exceed 110% of the greatest amount (the "Reduced Amount") that could be paid to the Executive such that the receipt thereof would not give rise to any Excise Tax, then no Gross-Up Payment shall be made to the Executive and the Total Payments shall be reduced to the Reduced Amount.
- 4.2 All determinations required to be made under this Section 4, including whether and when a Gross-Up Payment is required and the amount of such Gross-Up Payment and the assumptions to be utilized in arriving at such determination, shall be made by the Company's accountants or such other certified public accounting firm reasonably acceptable to the Company as may be designated by the Executive (the "Accounting Firm") which shall provide detailed supporting calculations both to the Company and the Executive.

#### 5. TERMINATION PROCEDURES.

5.1 NOTICE OF TERMINATION. After a Change in Control and during the term of this Agreement, any purported termination of the Executive's employment (other than by reason of death) shall be communicated by written Notice of Termination from one party hereto to the other party hereto in accordance with Section 8. Further, a Notice of Termination for

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Cause is required to include a copy of a resolution duly adopted by the affirmative vote of not less than three-quarters of the entire membership of the Board at a meeting of the Board which was called and held for the purpose of considering such termination (after reasonable notice to the Executive and an opportunity for the Executive, together with the Executive's counsel, to be heard before the Board) finding that, in the good faith opinion of the Board, the Executive was guilty of conduct set forth in the definition of Cause.

5.2 Date of Termination. "Date of Termination", with respect to any

purported termination of the Executive's employment after a Change in Control and during the term of this Agreement, shall mean the date specified in the Notice of Termination (which, in the case of a termination by the Company otherwise than for Cause, shall not be less than thirty days and, in the case of a termination by the Executive, shall not be less than fifteen days nor more than sixty days, respectively, from the date such Notice of Termination is given).

- 6. No Mitigation. If the Executive's employment by the Company is terminated during the term of this Agreement, the Executive is not required to seek other employment or to attempt in any way to reduce any amounts payable to the Executive by the Company pursuant to Section 3. Further, the amount of any payment or benefit provided for in Section 3 shall not be reduced by any compensation earned by the Executive as the result of employment by another employer, by retirement benefits, by offset against any mount claimed to be owed by the Executive to the Company, or otherwise.
- 7. Executive's Covenants. The Executive agrees that, subject to the terms and conditions of this Agreement, in the event of a Potential Change in Control during the term of this Agreement, the Executive will remain in the employ of the Company until the earliest of (i) a date which is six months from the date of such Potential Change of Control, (ii) the date of a Change in Control, (iii) the date of termination by the Executive of the Executive's employment for Good Reason (determined by treating the Potential Change in Control as a Change in Control in applying the definition of Good Reason), by reason of death or Retirement; or (iv) the termination by the Company of the Executive's employment for any reason.
  - 8. Successors; Binding Agreement.
- 8.1 In addition to any obligations imposed by law upon any successor to the Company, the Company will require any successor

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(whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company to expressly assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform it if no such succession had taken place. Failure of the Company to obtain such assumption and agreement prior to the effectiveness of any such succession shall be a breach of this Agreement and shall entitle the Executive to compensation from the Company in the same amount and on the same terms as the Executive would be entitled to hereunder if the Executive were to terminate the Executive's employment for Good Reason after a Change in Control, except that, for purposes of implementing the foregoing, the date on which any such succession becomes effective shall be deemed the Date of Termination.

- 8.2 This Agreement shall inure to the benefit of and be enforceable by the Executive's personal or legal representatives. If the Executive shall die while any amount would still be payable to the Executive hereunder (other than amounts which, by their terms, terminate upon the death of the Executive) if the Executive had continued to live, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Agreement to the Executive's representatives.
- 9. Notices. For the purpose of this Agreement, notices and all other communications provided for in the Agreement shall be in writing and shall be deemed to have been duly given when delivered or mailed by United States certified or registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth below, or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notice of change of address shall be effective only upon actual receipt:

To the Company: Aspen Technology, Inc. Ten Canal Park Cambridge, MA 02141

Attention: General Counsel

To the Executive:

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## Hertfordshire AL4 9HR England

- 10. Miscellaneous. No provision of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is agreed to in writing and signed by the Executive and such officer as may be specifically designated by the Board. Except as expressly provided herein, no waiver by either party hereto at any time of any breach by the other party hereto of, or compliance with, any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either party which are not expressly set forth in this Agreement. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the Commonwealth of Massachusetts, and this Agreement shall be an instrument under seal. All references to sections of the Exchange Act or the Code shall be deemed also to refer to any successor provisions to such sections. Any payments provided for hereunder shall be paid net of any applicable withholding required under federal, state or local law and any additional withholding to which the Executive has agreed.
- 11. Settlement of Disputes; Arbitration. All claims by the Executive for benefits under this Agreement shall be directed to and determined by the Board and shall be in writing. Any denial by the Board of a claim for benefits under this Agreement shall be delivered to the Executive in writing and shall set forth the specific reasons for the denial and the specific provisions of this Agreement relied upon. Any further dispute or controversy arising under or in connection with this Agreement shall be settled exclusively by arbitration in Boston, Massachusetts, in accordance with the rules of the American Arbitration Association then in effect. Judgment may be entered on the arbitrator's award in any court having jurisdiction. The Executive shall, however, be entitled to seek specific performance of the Executive's right to be paid until the Date of Termination during the pendency of any dispute or controversy arising under or in connection with this Agreement.
- 12. Definitions. For purposes of this Agreement, the following terms shall have the-meanings indicated below:

"Beneficial owner" shall have the meaning defined in Rule 13d-3 under the Exchange Act.  $\,$ 

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"Board" shall mean the Board of Directors of the Company.

"Cause" for termination by the Company of the Executive's employment, after any Change in Control, shall mean (i) the willful and continued failure by the Executive to substantially perform the Executive's duties with the Company (other than any such failure resulting from the Executive's incapacity due to physical or mental illness or any such actual or anticipated failure after the issuance of a Notice of Termination for Good Reason by the Executive) after a written demand for substantial performance is delivered to the Executive by the Board, which demand specifically identifies the manner in which the Board believes that the Executive has not substantially performed the Executive's duties, or (ii) the willful engaging by the Executive in gross misconduct which is demonstrably and materially injurious to the Company or any of its subsidiaries, monetarily or otherwise. No act, or failure to act, on the Executive's part shall be deemed "willful" unless done, or omitted to be done, by the Executive not in good faith and without reasonable belief that the Executive's act, or failure to act, was in the best interest of the Company.

A "Change in Control" shall be deemed to have occurred if the conditions set forth in any one of the following paragraphs shall have been satisfied:

- (a) Continuing Directors constitute two-thirds or less of the membership of the Board, whether as the result of a proxy contest or for any other reason or reasons; or
- (b) Any Person is or becomes the Beneficial owner, directly or indirectly, of securities of the Company representing twenty-five percent or more of the combined voting power of the Company's then outstanding voting securities; or
- (c) There is a change in control of the Company of a nature that would be required to be reported on Form 8-K or item 6(e) of Schedule 14A of Regulation 14A or any similar item, schedule or form under the Exchange Act, as in effect at the time of the change, whether or not the Company is then subject to such reporting requirement, including without limitation any merger or consolidation of the Company with any other corporation, other than (i) a merger or consolidation

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which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving or parent entity) fifty-one percent or more of the combined voting power of the voting securities (entitled to vote generally for the election of directors) of the Company or such surviving or parent entity outstanding immediately after such merger or consolidation and which would result in those persons who are Continuing Directors immediately prior to such merger or consolidation constituting more than two-thirds of the membership of the Board or the board of such surviving or parent entity immediately after, or subsequently at any time as contemplated by or as a result of, such merger or consolidation or (ii) a merger or consolidation effected to implement a recapitalization of the company (or similar transaction) in which no Person acquired twenty-five percent or more of the combined voting power of the Company's then outstanding securities; or

(d) the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets (or any transaction having a similar effect).

"Code" shall mean the Internal Revenue Code of 1986, as amended from time to time.

"Company" shall mean Aspen Technology, Inc. and any successor to its business and/or assets which assumes or agrees to perform this Agreement, by operation of law or otherwise.

"Compensation Committee" shall mean the Compensation and Nominating Committee of the Board.

"Continuing Director" shall mean any director (i) who has continuously been a member of the Board since not later than the date of a Potential Change in Control or (ii) who is a successor of a director described in clause (i), if such successor (and any intervening successor) shall have been recommended or elected to succeed a Continuing Director by a majority of the then Continuing Directors.

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"Date of Termination" shall have the meaning stated in Section 5.2 hereof. "Exchange Act" shall mean the Securities Exchange Act of 1934, as amended from time to time.

"Excise Tax" shall mean the tax imposed by Section 4999 of the Code.
"Executive" shall mean the individual named in the first paragraph of t

"Executive" shall mean the individual named in the first paragraph of this Agreement.

"Good Reason" for termination by the Executive of the Executive's employment shall mean the occurrence (without the Executive's express written consent) of any one of the following acts or failures to act by the Company unless, in the case of any act or failure to act described in paragraph (a), (e), (f) or (g) below, such act or failure to act is corrected prior to the

Date of Termination specified in the Notice of Termination given in respect thereof or, in the case of paragraph (c) below, such act is not objected to in writing by the Executive within four months after notification by the Company to the Executive of the Company's intention to take the action contemplated by such paragraph (c):

- (a) the assignment to the Executive of any duties inconsistent with the Executive's status as a senior executive officer of the Company or a meaningful alteration, adverse to the Executive, in the nature or status of the Executive's responsibilities) other than reporting responsibilities) from those in effect immediately prior to the Change in Control;
- (b) a reduction by the Company in the Executive's annual base salary as in effect on the date hereof or as the same may be increased from time to time except for across-the-board salary reductions similarly affecting all senior executives of the Company and all senior executives of any Person in control of the Company;
- (c) the Company's requiring the Executive to be based anywhere other than the Boston Metropolitan Area (or, if different, the metropolitan area in which the Company's principal executive offices are located immediately prior to the Change in Control) except for required travel on the Company business to an extent substantially consistent with the Executive's present business travel obligations;

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- (d) the failure by the Company, without the Executive's consent, to pay to the Executive any portion of the Executive's current compensation, or to pay to the Executive any portion of an installment of deferred compensation under any deferred compensation program of the Company, within fourteen days of the date such compensation is due;
- (e) the failure by the Company to continue in effect any compensation plan in which the Executive participates immediately prior to the Change in Control which is material to the Executive's total compensation, or the failure by the Company to continue the Executive's participation therein on a basis not materially less favorable, both in terms of the amount of benefits provided and the level of the Executive's participation relative to other participants, as existed at the time of the Change in Control;
- (f) the failure by the Company to continue to provide the Executive with benefits substantially similar to those enjoyed by the Executive under any of the Company's pension, life insurance, medical, health and accident, or disability plans in which the Executive was participating at the time of the Change in Control, the taking of any action by the Company which would directly or indirectly materially reduce any of such benefits or deprive the Executive of any material fringe benefit enjoyed by the Executive at the time of the Change in Control, or the failure by the Company to provide the Executive with the number of paid vacation days to which the Executive is entitled on the basis of years of service with the Company in accordance with the Company's normal vacation policy in effect at the time of the Change in Control; or
- (g) any purported termination of the Executive's employment which is not effected pursuant to a Notice of Termination satisfying the requirements of Section 5.1.

"Notice of Termination" shall have the meaning stated in Section 5.1.

"Person" shall have the meaning given in Section 3(a)(9) of the Exchange Act, as modified and used in Sections 13(d) and 14(d). thereof; however, a Person shall not include (i) the Company or any of its subsidiaries, (ii) a trustee or other fiduciary holding securities under an

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employee benefit plan of the Company or any of its subsidiaries, (iii) an underwriter temporarily holding securities pursuant to a registered offering of such securities in accordance with an agreement with the Company, or (iv) a

corporation owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company.

"Potential Change in Control" shall be deemed to have occurred if the conditions set forth in any one of the following paragraphs shall have been satisfied:

- (a) the Company enters into an agreement, the consummation of which would result in the occurrence of a Change in Control;
- (b) the Company or any Person publicly announces an intention to take or to consider taking actions which, if consummated, would constitute a Change in Control;
- (c) any Person becomes the Beneficial Owner, directly or indirectly, of securities of the Company representing fifteen percent or more of the combined voting power of the Company's then outstanding securities (entitled to vote generally for the election of directors); or
- (d) the Board adopts a resolution to the effect that, for purposes of this Agreement, a Potential Change in Control has occurred.

"Severance Payments" shall mean those payments described in Section  $3.2\,\mathrm{hereof.}$ 

"Total Payments" shall mean those payments described in Section 4 hereof.

IN WITNESS WHEREOF, the Company and the Executive have executed and delivered this Agreement on the date first written above.

ASPEN TECHNOLOGY, INC.

By: /s/ Lawrence B. Evans
----Lawrence B. Evans

By: /s/ David A.Mushin
----David Mushin

U.S. DOMESTIC SUBSIDIARIES

Syllogistics, Inc.

Aspen Technology (Asia), Inc.

AspenTech EMEA, Inc.  $\,$ 

Lakewood Corporation

AspenTech Securities Corporation

Chesapeake Decision Sciences, Inc.

Chesapeake Properties

NeuralWare, Inc.
S.A.S.T., Inc.

AspenTech, Inc.

IISYS, Inc.

Treiber Controls, Inc.

Industrial Systems, Inc.

FOREIGN SUBSIDIARIES

CimTech S.A./N.V.

Cimtrade Trading S.A.

AspenTech Europe S.A./N.V.

AspenTech Canada Ltd.

Special Analysis and Computing Services Limited

Special Analysis and Simulation Technology Limited

AspenTech Asia, Ltd.

Aspen Technology S.r.l.

AspenTech Japan Co. Ltd.

AspenTech Europe B.V.

Chesapeake Europe, Ltd.

AspenTech, Ltd.

Zyqad Ltd.

The SAST Corporation Limited

Setpoint Systems, Ltd.

SAST Process, Ltd.

California Delaware Delaware Delaware

Massachusetts New Jersey New Jersey

New Jersey Pennsylvania

Texas Texas Texas Texas

Washington

Belgium

Belgium

Belgium

Canada England

England

Hong Kong

Italy

Japan

Netherlands

United Kingdom

United Kingdom

United Kingdom

United Kingdom

United Kingdom United Kingdom

EXHIBIT 23.1

#### CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation of our report included in this Form 10-K, into the Company's previously filed Registration Statements File Nos. 333-44575, 333-80223, 333-80225, 333-21593 and 333-11651.

/s/ Arthur Andersen LLP

Boston, Massachusetts September 28, 1999

## <ARTICLE> 5

<LEGEND>

THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE CONSOLIDATED FINANCIAL STATEMENTS AS OF JUNE 30, 1999 INCLUDED IN THE COMPANY'S FORM 10-K FOR SUCH PERIOD, AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

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