

# 2002 ANNUAL REPORT



We measure success one chip at a time.

## To our stockholders

Fiscal 2002 was an extraordinary year for Synopsys. In the midst of the turbulent economic environment that has continued to present serious challenges for companies and investors alike, Synopsys held a steady course in 2002 that has substantially strengthened our position as a technology leader in the electronic design automation (EDA) industry. When the much-anticipated economic recovery truly begins to unfold within the technology sector, Synopsys is poised to play our most comprehensive role ever in the development of the next wave of semiconductor-driven innovation.

### Record-Setting Financial Results

Synopsys achieved the highest revenues in the company's history in fiscal 2002. We concluded the fiscal year ended October 31, 2002, with revenue of \$906.5 million, an increase of 33.2 percent over the \$680.4 million we reported for the previous fiscal year ended October 31, 2001. Net income in fiscal 2002 was \$155.7 million (or \$2.22 per share) on a diluted (EBG) basis—an increase of 119.4 percent over the \$71.0 million (or \$1.10 per share) we reported for fiscal 2001. (EBG represents earnings on a diluted basis, excluding amortization of intangible assets and in-process research and development, integration and insurance settlement expenses.)

### Powerful Forces Shape the Industry

The recession that has gripped the global semiconductor industry for two years and counting is significantly worse than any prior economic downturn. In the midst of the struggling economy, other powerful forces are also at work.

Moore's Law continues to define the relentless growth of chip complexity to the point where some designers are now packing tens of millions of transistors onto their leading-edge chips. At the same time, the physical size of the components on these chips has shrunk into a realm measured in nanometers, not microns. The effect of these two phenomena on semiconductor design is that engineers are confronted with unprecedented technical challenges at every stage of the design process.

This combination of technical challenges and the toughest business environment ever faced by semiconductor manufacturers is shaking up the industry in multiple ways. Some companies are struggling for their very survival. Others are teaming up to form new partnerships that will make them stronger. New positions are now being defined that will last far into the economic recovery ahead—and all of this is unfolding at a time when Synopsys has created a strong foundation of technology, well-integrated solutions and solid business fundamentals for today and for the future.

### A Complete Solution for Customer Success

With continuous improvement to Synopsys' products and the successful integration of key technologies from Avant! and other recent acquisitions, we have literally transformed our company. For many years, Synopsys was an EDA supplier that offered a subset of IC design solutions built around best-in-class software tools. In fiscal 2002, we fully established Synopsys as a company that offers a complete IC design solution that is the best in the industry. Period.

More than a highly productive portfolio of individual products and tools that engineers rely on to develop complex ICs, Synopsys' front-to-back design solution now consists of well-integrated design flows, or platforms, focused on two fundamental task sets: design implementation and design verification.

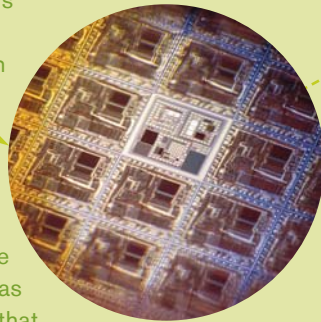
In the implementation phase of IC design, engineering teams focus primarily on the cost, performance, power and manufacturability of the chip they are designing. Throughout the verification phase, designers verify the functional correctness of the chip. By aligning our product offerings around two distinct platforms that efficiently address the unique and complex tasks in each of these design phases, we have elevated our ability to support customer success to even higher levels.



In addition to Synopsys' new platform orientation to our complete IC design solution, we are also continuing to broaden our market. We're building a strong collection of intellectual property blocks, which are reusable pieces of design, as well as the professional services that support our customers on their most ambitious chips. As we enter fiscal 2003, we're also expanding into the design for manufacturability space with our acquisition of Numerical Technologies. Taken together, we believe that Synopsys is uniquely positioned to strengthen and advance our role as the technology leader in EDA.

#### **Customers Rate Synopsys #1**

Quality products, dedicated employees and execution excellence are among the hallmarks of a world-class company. At the end of day, however, customers are always the ones who ultimately determine the long-term success of any business.



Each year, CMP (the media company that publishes *EE Times* and other technology-related publications) conducts in-depth research among thousands of engineers and engineering managers who have purchasing responsibility for EDA software. Their research objectively quantifies the views of this technical community (a group that represents Synopsys' total available market) on a wide range of technology, marketing and business-related issues.



Synopsys was consistently rated number one throughout CMP's most recent EDA research, conducted in May 2002. We were particularly gratified to be rated number one in categories such as Well Managed Company, Technology Leader Today, Technology Leader in Three Years, Clear Vision of the Future, Best After-Sales Support and Most Ethical Company. Of course, as a company that is forever committed to raising the bar in all that we do, we intend to continue performing at our absolute best to earn this level of feedback from current and future customers this year and every year.

#### **Partnering with Local Communities**

As part of our role as the technology leader in EDA, Synopsys is committed to fostering the next generation of technology innovators by supporting education and science programs. To this end, we actively encourage an ongoing partnership between our company, our employees and the communities in which we live and work.

Synopsys' Community Relations program has delivered on a promise we made last year to increase the number of community outreach opportunities we support and to engage more Synopsys offices worldwide. In 2002, we doubled the previous year's involvement by participating in 105 such activities through 22 of our locations around the world.

In addition, the Synopsys Outreach Foundation continued its unprecedented success in its mission to encourage student participation in Santa Clara County science fairs. For the most recent school year, over 26,000 students participated in one of the Outreach Foundation programs, an increase of over 12,000 students compared to the year before.

Synopsys' commitment to the community was recognized in 2002 when we received the prestigious "Outstanding Corporate Grantmaker" award from the Association of Fundraising Professionals in Silicon Valley. Receiving such recognition from others who are working on the front lines of the critical issues facing our communities is a tremendous honor for Synopsys that represents values we will continue striving to fulfill.

**TTM = Trust + Technology + Momentum**

Since the early days of EDA, the industry has delivered on the promise of accelerating "TTM" (Time to Market) for semiconductor makers. At Synopsys, we continue to set the standard for TTM while embracing the additional definition of "Trust, Technology and Momentum." As we enter 2003, the latter meaning of TTM is more relevant than ever.

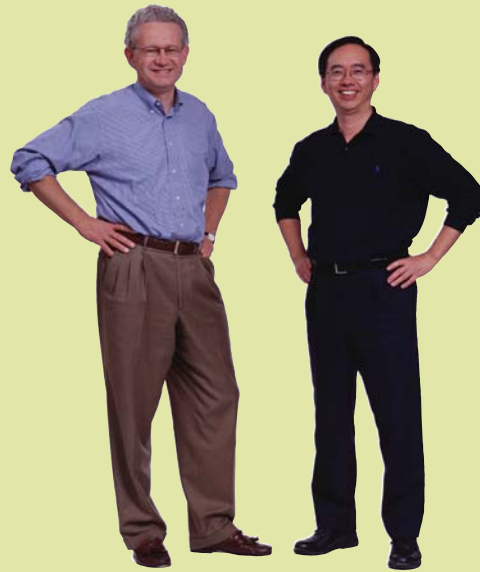
Why? As our customers evaluate which EDA supplier they are willing to *trust* to ensure that their IC designs are successful today and into the future, the *technology* with the strongest track record and the *momentum* generated by a financially solid, well-managed EDA partner are paramount. Our ability to deliver on the combination of trust, technology and momentum provides a compelling case for Synopsys as the safest and best choice when selecting the most capable "design partner of choice" for the long term.

**Conclusion**

Synopsys executed well in fiscal 2002 as we achieved record revenues and fundamentally transformed the company from the leading front-end tool

provider to the company with the best and most complete semiconductor design solutions. Every indicator tells us that we made the right moves in 2002 to position Synopsys for even greater levels of success in the year ahead, and beyond.

We extend our appreciation to all Synopsys employees for their passion, courage, strategic thinking and execution excellence throughout this challenging year. We look forward to leveraging these winning attributes to continue earning the trust of our customers and the confidence of our stockholders. Thank you for continuing to invest in our success.



Dr. Aart J. de Geus  
Chairman and Chief  
Executive Officer

Dr. Chi-Foon Chan  
President and Chief  
Operating Officer

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**Amendment No. 4 to  
FORM 10-K**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

**For the year ended October 31, 2002**

**OR**

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

**Commission File Number 0-45138**

**SYNOPSYS, INC.  
(Exact name of registrant as specified in its charter)**

**Delaware  
(State or other jurisdiction of  
incorporation or organization)**

**56-1546236  
(I.R.S. Employer Identification No.)**

**700 East Middlefield Road, Mountain View, California 94043  
(Address of principal executive offices)**

**(650) 584-5000  
Registrant's telephone number, including area code**

**Securities Registered Pursuant to Section 12(b) of the Act: None**

**Securities Registered Pursuant to Section 12(g) of the Act:  
Common Stock, \$0.01 par value**

**Preferred Share Purchase Rights**

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  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 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.  Yes  No

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act).  Yes  No

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked

price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter: \$1,699,717,300.

The aggregate market value of voting stock held by non-affiliates of the Registrant as of July 7, 2003 was approximately \$3,038,579,800. On July 7, 2003, approximately 77,253,625 shares of the registrant's Common stock, \$0.01 par value, were outstanding.

#### **DOCUMENTS INCORPORATED BY REFERENCE**

None.

#### **Explanatory Note**

This Amendment No. 4 to the Registrant's Annual Report on Form 10-K for the year ended October 31, 2002 is being filed in order to revise the pro forma disclosure information that is required by Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation," for each of the years ended October 31, 2000, 2001 and 2002. For ease of reference, the Registrant has also incorporated the changes from Amendment Nos. 1-3. Except as so indicated, the Registrant has made no other changes to its Annual Report on Form 10-K for the fiscal year ended October 31, 2002.

**SYNOPSYS, INC.**

**ANNUAL REPORT ON FORM 10-K**  
**Year ended October 31, 2002**

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## **PART I**

This Form 10-K, including “Item 1. Business,” includes forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934. These statements include, but are not limited to, statements concerning: the Company’s business strategy; the Company’s expansion into the market for physical design tools; the Company’s intentions regarding its system level design and verification tools; the Company’s intentions regarding development of products that address signal integrity problems; the Company’s intentions regarding design reuse tools and techniques, including the Company’s expectations regarding expanding its inventory of IP cores; the Company’s intentions regarding its physical synthesis line of products; the Company’s expectations regarding research and development, sales and marketing, and general and administrative expenses; the Company’s efforts to enhance its existing products and develop or acquire new products; the Company’s expectations regarding license mix; and the Company’s requirements for working capital. The Company’s actual results could differ materially from those projected in the forward-looking statements as a result of risks and uncertainties that include, but are not limited to, those discussed under the caption “Factors That May Affect Future Results” under Management’s Discussion and Analysis of Financial Condition and Results of Operations included in Part II, Item 7 hereto, as well as factors discussed elsewhere in this Form 10-K.

### **Item 1. Business**

#### **Introduction**

Synopsys, Inc. (Synopsys or the Company) is a leading supplier of electronic design automation (EDA) software to the global electronics industry. The Company’s products are used by designers of integrated circuits (ICs), including system-on-a-chip ICs, and the electronic products (such as computers, cell phones, and internet routers) that use such ICs to automate significant portions of their chip design process. ICs are distinguished by the speed at which they run, their area, the amount of power they consume and the cost of production. The Company’s products offer its customers the opportunity to design ICs that are optimized for speed, area, power consumption and production cost, while reducing overall design time. Synopsys also provides consulting services to assist customers with their IC designs, as well as training and support services. Synopsys was incorporated in Delaware in 1987.

#### **The Role of EDA in the Electronics Industry**

Over the past three decades, technology advances in the semiconductor industry have dramatically increased the size, speed and capacity of ICs:

- The number of transistors that can be placed on a chip has doubled roughly every 18 months, a phenomenon known as “Moore’s Law”. A state-of-the-art IC may hold over 50 million transistors. This is made possible in large part because the width of the features on the chip is steadily shrinking. Mainstream IC designs today are produced at a 0.18 micron process, with advanced chips being produced at a 0.13 micron process. Over the next several years, it is expected that the bulk of production will shift to 0.13 micron or below. Chip manufacturers are beginning to design and/or produce chips at a 0.09 micron process.
- The speed at which chips operate has steadily increased. Microprocessors operating at more than 2 gigahertz, a speed that was unheard of a few years ago, are available today.
- Chips are also becoming more economical in their power consumption, which is necessary to drive more and more powerful handheld devices.
- Increasingly, functions that formerly were performed by multiple ICs attached to a printed circuit board are being combined in a single chip, referred to as a system-on-a-chip.



Combined, these changes have fostered the development of computers, wireless communications networks, hand-held personal digital assistants, Internet routers, and many other goods and services with tremendous capabilities at relatively low cost.

While the capabilities of ICs have increased, competition and continuing innovation have shortened the life cycle of electronic products, so time-to-market is crucial to the success of a product. Time-to-market for a product is in part determined by the time it takes to design the chip that will run such product. EDA software plays a critical role in reducing time-to-market for new products by providing IC designers with tools and techniques to (a) reduce the time and manual effort required to design, analyze and verify individual ICs, (b) improve the performance and density of complex IC designs, (c) enhance the reliability of the IC design and (d) improve the manufacturability of the design.

## **The Design Process**

In simplified form, the design of an integrated circuit consists of five basic steps:

*System Design.* First, a designer describes the functions that the chip is to perform in a specialized high-level computer language. During this phase, designers perform high level architectural design tradeoffs, to determine, for example, which algorithms to use to implement the design, and the portions of the functionality to implement in hardware versus software. At the completion of this phase, the designer produces a “register transfer level” or “RTL” description of the chip. Most of this process is completed manually, although there is a small but growing market for products that help automate design and verification at the system level.

*Logic Synthesis.* After the designer is satisfied with the RTL code, a logic synthesis program converts the RTL code into a logical diagram of the chip. Related programs insert the circuitry that will be required to test the chip after manufacture. A “gate level” (so called because it describes the various groups of transistors, or “gates”, required to implement the chip) data file, or “net list”, is produced. In addition, in a growing number of designs, the logic synthesis phase is performed together with a portion of physical design. This combined process, known as “physical synthesis”, produces a file containing “placed gates”, which describes the logic blocks and includes information about where they will be physically located, or “placed”, on a chip. See discussion below under “Current Issues Facing IC Designers”. In a growing number of system-on-a-chip ICs, in which multiple functions previously captured on multiple chips are combined in a single chip, designers are increasingly performing “design planning”, either before or in conjunction with logic synthesis. In design planning, the designer determines the location of the functional “blocks” that will be captured on the system-on-a-chip and plans the principal wire connections between the blocks. Logic synthesis is then performed, more or less independently, on each block, before the blocks are “stitched” back together.

*Functional Verification.* At this stage the designer uses simulation and related programs to verify that the design successfully performed the functions that the designer intended, by feeding an exhaustive array of potential inputs into a specialized program, “simulating” the functioning of the chip as designed, and checking to confirm that the outputs match what was expected. Techniques that use advanced mathematical calculations rather than simulation are also used. The designer also uses a timing analysis program to confirm that the chip as designed will operate at the speed the designer intended.

*Physical Design.* If the designer is satisfied with the results of high level verification, the transistors, and all of the wires connecting each one of them, are mapped out in a series of transformations that gradually gets more and more detailed. First, the location on the chip die of each block of the chip is finalized, and the location of each transistor within each block is determined — a process known as “placement” — then all of the connections between the transistors are determined — a process known as “routing”. The result is one or more data files that can be read by physical verification programs (see below) or by the equipment used to manufacture the chip.

*Physical Verification.* Before sending the design data file to a chip manufacturer for fabrication, a series of further verification steps are undertaken. The designer must confirm that the chip as placed and routed will operate at the speed anticipated during the logic design phase. The designer also must check for unintended electrical effects

that may arise as a consequence of placing certain portions of the chip, or routing certain of its “wires”, too close together or otherwise inefficiently. In addition, the designer must verify that the final design complies with all of the design rules set forth by the party that will manufacture the chip. Finally, the designer may need to add features to the design to ensure that the chip can be manufactured successfully.

The foregoing discussion has been greatly simplified. In the actual design of a chip each of these steps has a number of different elements. The steps, or the different elements within the steps, may be undertaken in a different order or repeated multiple times. And, as described below, several of the steps, especially logic design and physical design are becoming more integrated with each other. In any event, if at any stage of the process the chip does not perform as intended, then the designer must go back one or more steps to either redesign the RTL, redesign the logic, re-run the verification or redo the physical design of the chip. Each iteration takes time, and the more time the process takes, the more expensive the process becomes, and the more difficult it will be for the designer to meet his or her time-to-market goals.

### **Current Issues Facing IC Designers**

As chip technology continues to advance, and particularly as the state-of-the-art in chip design moves to a 0.13 micron and below process, Synopsys’ customers are facing a number of difficult design challenges:

*Timing Closure.* Ensuring that a chip will run at the desired speed becomes substantially more difficult when transistor sizes are 0.18 micron and below. At larger transistor feature sizes, IC designers could use standard estimates of chip timing during the logic design phase, and be confident that the timing characteristics would be preserved through the physical design phase. At 0.18 micron and below, these estimates become increasingly unreliable. To address this problem, designers will increasingly need products that integrate logic design and physical design. As a result of Synopsys’ merger with Avant! Corporation, Synopsys now offers its customers a complete portfolio of logic and physical design products. Synopsys is currently working to integrate these products with a single chip implementation platform based on a common database, common timing, constraints and libraries. Integration of logic and physical design products will greatly improve the correlation between original timing estimates after logic design and timing results after physical design.

*Signal Integrity Closure.* Signal integrity refers to a variety of electrical effects that can cause circuits to behave in undesirable ways. The electrical characteristics of ICs of 0.13 micron and below cause previously insignificant effects to become problematic. These effects include cross-talk, voltage drop, and electro-migration. Cross-talk, in particular, is becoming a major problem for advanced designs today. In order to address signal integrity problems designers need products that help them analyze, prevent and repair errors caused by signal integrity issues.

*Verification.* Verification is the process of ensuring, at various stages of the design process, that a chip will perform as intended. As the number of transistors on a chip grows, the verification problem grows geometrically. In fact, with today’s chips, verification often is the single most time consuming and resource intensive aspect of the overall design process. Verification products must offer customers a combination of speed, accuracy and the ability to focus on the portions of the chip most likely to cause problems.

*Manufacturing Closure.* As the features on a chip continue to shrink, it has become more difficult to faithfully translate the design as produced by EDA tools into the intricate pattern of wires and transistors on the chip. Chips are produced by a process known as photolithography or optical lithography, which consists of shining a light through a photomask (a template on which the design has been drawn) onto the surface of the semiconductor. Beginning at 0.18 microns, the wavelength of light used is larger than the features on the chip, resulting in degraded image quality. A number of EDA products help address this and other manufacturability issues.

*Designer Productivity.* Historically, finding, hiring and retaining qualified design engineers has been one of the most difficult problems that our customers face. Without enough designers it is difficult for a company to meet ambitious development schedules, and to get its products to market in a timely manner. Although hiring qualified designers has become less difficult in the current economic environment, the increase in IC complexity and time to market pressures have resulted in a continuing emphasis on designer productivity. For EDA companies, this creates

opportunities both in providing full-featured, integrated design flows, that reduce the number of iterations required during the design process, and in offering pre-designed, pre-verified design “building blocks” that can be re-used in multiple designs.

## **Synopsys Overview**

Synopsys provides products and services that help customers meet the challenges of designing leading edge ICs and the products that incorporate them. As of the beginning of fiscal 2002, Synopsys offered customers a comprehensive suite of products used in the logic synthesis and functional verification phases of chip design, including a broad array of reusable design building blocks. We also offered a growing set of physical synthesis and physical design products and a number of physical verification products. As a result of our merger with Avant!, which was completed in June 2002, Synopsys substantially filled out its portfolio of physical design and physical verification products. Through our acquisition of inSilicon, completed in September 2002, we significantly augmented our portfolio of IP components. As of the end of fiscal 2002, we offered customers all of the principal products required to design a chip from concept to the point at which it is handed to the manufacturer for fabrication, and the broadest array of design building blocks of any company in the EDA or intellectual property (IP) industry.

Synopsys also offers a full range of professional services, including turnkey design services, design assistance and methodology consulting.

Synopsys markets its products on a worldwide basis and offers comprehensive customer service, education, consulting, and support as integral components of its product offerings. Products are marketed primarily through its direct sales force. Synopsys has licensed its products to most of the world’s leading semiconductor, computer, communications and electronics companies.

## **Strategy**

Synopsys’ strategy is to develop and offer to its customers a broad and integrated array of tools and services required to enable design of complex ICs, especially system-on-a-chip ICs. The Company is seeking to build and enhance products that help customers address the most pressing problems of IC design at 0.13 micron and below: timing closure, signal integrity and closure, verification, designer productivity and design for manufacturability. To that end, Synopsys has organized its products into two distinct product “platforms” – a “design implementation” platform and a “design verification” platform. The design implementation platform includes all of the products required to design a chip from concept down to the handoff from the designer to the manufacturer. The design implementation platform incorporates Synopsys’ intellectual property, logic design, physical design, design analysis, timing analysis, and design rule checking products. Many of these individual products, or “point tools”, are the leading products in their category. Synopsys’ strategy is to integrate these products tightly together through the use of a common database and a common timing engine, among other things, and to develop new products that incorporate technologies from multiple products. The design verification platform includes products required to verify the functionality of a chip at each phase of the design – at the system, RTL, gate and transistor levels. Many of the point tools in the verification platform are also the leading products in their category. Synopsys’ strategy is to integrate its verification tools to provide a comprehensive verification environment to its customers, with particular emphasis on mixed-signal (analog and digital) chip verification.

## **Organization**

Synopsys is currently organized into four product development groups — IC Implementation; Verification Technology; Nanometer Analysis and Test; and Intellectual Property and Design Services.

- The IC Implementation group develops the Company’s logic design, physical synthesis and place and route and related products;
- The Verification Technology group develops the Company’s logic verification, simulation and system level design and verification tools;

- The Nanometer Analysis and Test group develops a variety of analysis and verification products, including products for timing analysis, formal and mixed signal verification, transistor-level design and test;
- The Intellectual Property and Professional Services group develops and markets pre-designed IP blocks for chip designers and provides turnkey design services for design, verification and implementation of IC's.

In addition to these groups, Synopsys maintains a Corporate Applications and Marketing group, encompassing all product marketing functions and corporate applications support for the Company, a World Wide Sales group, a World Wide Application Services group, a Finance group, a Human Resources and Facilities group and a Technology and Information Systems group.

## **Products**

Synopsys products and services are focused on the principal needs of semiconductor designers and, at a business level, are divided into the four categories specified above — IC Implementation, Verification, Nanometer, Analysis and Test and Intellectual Property and Professional Services. The products and services included in these categories are discussed below. Financial information regarding Synopsys' products and services is included under Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations — "Results of Operations — Revenue — Product Groups."

### *IC Implementation Products*

Synopsys' IC Implementation products include most of the products used in the logic synthesis and physical design phases of IC design, including the Company's logic synthesis, physical synthesis, design planning, place and route, extraction and reliability analysis products. The Company's IC Implementation products include the largest proportion of the products acquired from Avant!

Historically, the key technologies for IC implementation were logic synthesis and place-and-route. Logic synthesis is the process by which a high-level description of desired chip functions is mapped into a connected collection of logic gates and other circuit elements that perform the desired functions. Place and route is the process by which an IC designer takes the logical description of an IC design created by Design Compiler and translates it into a physical design.

Design Compiler(TM) is the market-leading logic synthesis tool and is used by a broad range of companies engaged in the design of ICs to optimize their designs for performance and area. Design Compiler was introduced in 1988 and has been updated regularly since then. Design Compiler 2002 features significant enhancements, including improved optimization algorithms, run-times and capacity. Design Compiler Expert is the Company's basic logic synthesis product. Customers seeking additional features can purchase the higher-priced Design Compiler Ultra. An upgrade path from Design Compiler Expert to Design Compiler Ultra is also available.

Design Compiler has become a cornerstone of IC designers' design methodology, and the Company expects that it will continue to be an important element in designers' overall suite of design tools, especially for performing logic synthesis on non-timing-critical portions of a design. As the size of the transistors on a chip shrink and the number of transistors on a chip increase, however, designers are increasingly faced with problems that are best addressed by physical design tools, or by physical synthesis products, which combine elements of logic and physical design. Consequently, the Company believes that its orders and revenue from Design Compiler peaked in fiscal year 2001. Orders for this product as a percentage of Synopsys orders declined from 29% to 18% in 2001 and 2002, respectively, and may decline further.

The Company released its first physical synthesis product, Physical Compiler, in fiscal 2000. Physical Compiler unites logic synthesis and placement functionality, and was designed to address the critical timing problems encountered in designing advanced ICs and systems-on-a-chip. Prior to the Avant! merger, the Company was developing routing and related physical design technologies, and its Route Compiler and Clock Tree Compiler products had been released to beta customers. The Company also offered separate point tools for physical analysis (Arcadia), top level routing (FlexRoute) and floor planning (Chip Architect and Floorplan Compiler). Our strategy

was to transition customers from Design Compiler to Physical Compiler and to introduce additional physical design products integrated with Physical Compiler that enabled customers to more efficiently complete the design of their system-on-a-chip products.

In the merger with Avant!, the Company acquired Avant!'s full suite of physical design products, including the place and route products Apollo and Astro (Avant!'s successor place-and-route product), the floor planning product Jupiter, the analysis product Star RC, the reliability testing product Mars Rail and the chip finishing product Saturn. Based on a full technical evaluation, we have decided to base the physical synthesis and physical design portions of our Implementation Platform on Physical Compiler and Astro. During 2002 we made progress on integrating these products, while beginning development of new products that unify logic and physical design. Route Compiler is no longer being sold to customers and we are determining how to integrate some of its features into Astro. With respect to other products containing overlapping functions, we determined the products on which to focus our efforts and began developing smooth transition paths to these products for our customers.

Most of the products acquired from Avant! shared data through a common proprietary database known as Milkyway. Milkyway enables these products to exchange critical data, algorithms and language in a highly efficient manner. The Milkyway database facilitates faster convergence of critical design properties including timing, area, power and signal integrity by allowing certain point tools to directly access critical data. Use of the Milkyway database is a critical element in the integration plan for the Synopsys and Avant! products. We are actively working on putting Milkyway functionality into the core products of the Company's Implementation platform, and expect this project to be completed during fiscal 2003.

The Company's IC Implementation products also include logic synthesis products for field programmable gate arrays (FPGAs) and complex programmable logic devices (CPLDs).

#### *Verification Products*

The Company's Verification products consist of high level, or logic, simulation and verification products and system level design and verification tools. These products enable IC designers to quickly and reliably verify the behavior of a design before it is committed to the expensive and time-consuming process of gate level design and IC fabrication and also assist in the testing of the chip after manufacturing.

*Simulation and related products.* Simulation software "exercises" an IC design by running it through a series of tests and comparing the actual outputs from the design with the expected output. The goal of simulation is to make sure that the functionality of the design meets the original specifications of the chip. Synopsys offers two products for high-level simulation: VCS(TM), for designs written in Verilog (one of the two principal languages) and Scirocco(TM), for designs written in VHDL (the other principal language). Simulation products are distinguished principally by their runtime and capacity — i.e., how fast they can fully simulate a proposed design and how large a design they can handle. The Company is focused on providing the industry's fastest and highest-capacity simulation technology and believes that both VCS and Scirocco are industry leaders in performance and capacity. VCS is supported by all major semiconductor manufacturers and many third-party EDA software providers. VCS 7.0, which is expected to be released during the first calendar quarter of 2003, will increase VCS' capabilities by integrating significant new functionality, including advanced assertion verification, testbench capability and next generation coverage. These capabilities are integrated into a single open platform that is also highly automated, which improves designer productivity.

In addition to focusing on building the fastest simulator, Synopsys is focused on developing a suite of products that help simulation products work "smarter". The Company estimates that IC designers spend more time writing verification "testbenches" than creating the design description. Testbenches, which create stimuli for chips and check the results, are used in conjunction with simulation tools to verify that a design functions as expected. Synopsys' VERA® is a tool that automates the design of testbenches, thereby offering the IC designer significant reductions in overall design and verification time. VERA is integrated with the Company's other simulation products to provide increased productivity benefits. In addition, Synopsys' acquisition of Co-Design Automation, Inc. provides the company with next generation hardware language verification technology that will be used in

future releases of its verification products. Synopsys has bundled verification tools such as VCS and VERA to provide a comprehensive verification environment for its customers, with particular emphasis on mixed signal (analog and digital) chip verification.

*Systems Design and Verification Products.* Currently, automated design generally begins at the register transfer level, with logic synthesis. The goal of “system-level” products is to permit designers to design and verify their products at a level of abstraction above RTL. Synopsys’ systems products consist of the CoCentric(TM) family of tools and methodologies for concurrent design, validation, refinement and implementation of an electronic system.

The Company offers two principal products based on “SystemC, <sup>TM</sup>” a standard language developed by Synopsys and now available under an open source license. SystemC enables designers to create, validate and share system level models of a complex IC or system incorporating the chip, and therefore can be used to explore and verify design alternatives at an early stage of the design process. CoCentric System Studio is a system-level design environment for the rapid creation of executable system specifications that can be verified and implemented as hardware and software functions. System Studio enables designers to use hierarchical graphical and language modeling to capture system complexity in a unified environment based on C, C++ and SystemC. CoCentric SystemC Compiler is a synthesis tool that allows designers to implement complex circuits from SystemC, enabling design to progress from an initial C/C++ executable specification into a database readable by Synopsys’ Design Compiler.

Through the acquisition of Avant!, Synopsys acquired its Saber product, which offers mixed signal system level design tools for the power, test, automotive, telecommunications and military/aerospace markets.

#### *Nanometer, Analysis and Test Products*

Synopsys’ Nanometer, Analysis and Test products include a broad range of software tools in the areas of physical verification, timing analysis, gate level circuit simulation, power management and parasitic extraction. These products, which are used after the completion of physical design, help customers analyze the increasingly important electrical effects resulting from designing at 0.18 micron and below, and to locate implementation errors that can be costly and time-consuming to correct during or after production. As the logic and physical design phases of IC Implementation grow more and more integrated, the Company is also integrating many of its nanometer, analysis and test products with its high level verification products, particularly in the areas of simulation, timing, and power analysis.

*Static Timing Analysis.* Synopsys provides a complete tool suite to help designers perform static timing analysis at the gate and transistor levels and analyze signal integrity issues such as cross talk. Synopsys’ gate level analysis tool is called PrimeTime®. PrimeTime is a full-chip, gate-level static timing analysis tool targeted for complex multimillion gate designs, which is used by designers to verify, at various stages of the design process, the speed at which a design will operate when it is fabricated. PrimeTime’s analysis of a design’s speed is accepted as a “sign off” tool by virtually all major semiconductor manufacturers, which means that they accept its analysis as determinative. In fiscal 2001, Synopsys extended PrimeTime’s capabilities with the introduction of PrimeTime-SI, which analyzes the effect of cross talk on timing, an increasingly important issue at chip geometries below 0.18 micron. PrimeTime-SI is sold as an add-on to PrimeTime.

Synopsys’ transistor level tools include PathMill®, PathMill Plus and AMPS®. PathMill is a transistor-level static timing analysis tool for custom microprocessor and DSP designs. PathMill’s analysis provides SPICE-level accuracy with 1000x performance improvement over traditional SPICE. PathMill Plus extends PathMill to offer advanced modeling, model merging and verification to speed characterization of custom IP blocks. The combination of PrimeTime and PathMill offers full-chip static timing analysis that covers transistor- to gate-level designs.

*Formal Verification.* Formal verification is a method for comparing two versions of a design to determine if they are equivalent. Usually an RTL version of the design is validated using simulation and other dynamic verification tools, establishing it as the golden version. Subsequent versions (i.e., after each step of the design process) are then compared to the golden version, using mathematical algorithms, to determine if they are functionally equivalent.

The use of formal verification greatly reduces the need to perform simulation, which is substantially more time-consuming, at each stage of the design process, thus potentially saving a significant amount of time in the overall design process. Synopsys' formal verification product is Formality®. Formality was one of the industry's first commercial equivalency checkers to employ a multi-solver architecture, which enables the verification of complex multimillion-gate system-on-a-chip designs in days or minutes.

*Circuit Simulation.* While Synopsys' high level verification tools such as VCS simulate an IC design at a logical or higher level of abstraction, Synopsys' circuit simulation products perform simulation at the gate and transistor level. These products include the Taurus and HSPICE tools acquired in the Avant! and the NanoSim product, which Synopsys introduced during fiscal 2001. Taurus is a TCAD tool used for new process simulation at semiconductor foundries. The HSPICE product is a highly accurate circuit simulation tool used to simulate designs at transistor level. NanoSim is an advanced circuit simulator for memory and mixed-signal verification, which offers circuit simulation, timing, and power analysis in a single tool. NanoSim is tightly integrated with Synopsys' VCS simulator to deliver high-speed, high-capacity verification of complex ICs. NanoSim and VCS together address verification challenges at RTL, gate- and transistor-levels, and enable mixed-signal multi-level verification of complex ICs. In addition, through the acquisition of StarSim and StarSim XT from Avant!, Synopsys' suite of circuit simulation tools has expanded to include simulators for nanometer-level processes and applications such as graphics, memory, communications and mixed-signal IC designs. Synopsys is offering customers a smooth migration path from StarSim and StarSim XT to Nanosim while adding some of the key features from StarSim into NanoSim.

*Power Management.* Synopsys delivers a complete solution to help designers manage and verify power consumption at different levels of the design process, based principally on Power Compiler, which offers "push button" power optimization and is fully integrated into the Design Compiler environment. In addition, through the acquisition of StarMTB from Avant!, Synopsys extends its solution in this area by offering library characterization capability with power information complementing the existing Power Arc product.

*Test Automation.* In order to meet today's stringent quality requirements, chips must pass through rigorous testing after manufacturing. Synopsys' design-for-test (DFT) tools offer a complete DFT solution. Synopsys' DFT Compiler, the industry-standard 1-pass test synthesis product, inserts all functional and test logic required to enable efficient, high-coverage testing of the chip after manufacturing, while complying with the customer's design rules and constraints (timing, area, power, etc.). Automatic test pattern generation (ATPG) is the other component of Synopsys' complete DFT solution. TetraMAX(TM) ATPG, the Company's ATPG product is optimized for ease-of-use, capacity, speed, coverage and vector compaction. TetraMAX ATPG works in concert with DFT Compiler to enable total automation of the DFT flow. Synopsys test methodology also includes software to facilitate the failure diagnosis of chips after manufacturing test, expediting the time-consuming and expensive post-fabrication activities required to determine the cause of manufacturing defects.

*Physical Verification.* Synopsys offers class-leading physical verification products that provide geometric and electrical verification of physical design layouts in designs containing hundreds of millions of transistors. These products verify a design at the gate level rather than at the higher, RTL level of abstraction. Synopsys' physical verification product family is called Hercules.

*Design for Manufacturing.* Synopsys markets products for optical proximity correction, circuit packaging and final design validation used in order to help ensure the final IC design will be manufacturable by the semiconductor foundry. Synopsys' OPC product family is called Proteus. In addition, in January 2003, Synopsys entered into an agreement to acquire Numerical Technologies, Inc., a developer of subwavelength lithography solutions. This acquisition is expected to complement Synopsys' existing design for manufacturing tools.

#### *Intellectual Property (IP) and Systems Level Design*

The Company's IP products include our DesignWare IP library and systems design and verification products, as well as the physical library products acquired from Avant! Synopsys also offers a full range of professional services to help customers improve their internal design methodologies, as well as design services ranging from specialized assistance to turnkey design.

*Intellectual Property Products.* As IC designs continue to grow in size, reusing design blocks is becoming a more important method for reducing overall design cycle time. By reusing portions of a design, and particularly those that implement basic or standardized functions, a company can let its IC design team focus on designing the chip features that will give its product a competitive advantage. It can also reduce its verification risk by ensuring that these portions of the chip are of high quality. Enabling reuse of intellectual property (IP) requires a significant methodology shift from traditional IC design. In the past, designs were intimately tied to a particular semiconductor process technology or design methodology, making reuse of design blocks from one chip design to the next, both difficult and costly.

Synopsys' DesignWare<sup>®</sup> library products provide IC designers with a single library of pre-designed and pre-verified synthesizable IP cores as well as over 22,500 verification IP models. Both groups of cores range in complexity from the simple to the very complex, giving designers access to a broad range of models to assist them with verification of their designs. During 2002, Synopsys introduced a complete AMBA On-Chip-Bus to DesignWare, providing designers with access to the most popular bus architecture for designers using microprocessor cores from third party vendors.

Through the acquisition of inSilicon Corporation in September 2002, Synopsys expanded its offering of standards-based connectivity IP to include USB, IEEE 1394, 802.11 and other products. These cores are sold on a per-use basis, sometimes with a royalty based on the number of chips produced, rather than as perpetual licenses or technology subscription licenses (TSLs), as DesignWare foundation libraries are sold. The Company expects to expand its inventory of cores sold on a per use basis during 2003.

In 2001 Synopsys announced its Star IP program in which DesignWare users can gain access to popular microprocessors from MIPS Technologies, Infineon Technologies, NEC and other providers.

### *Professional Services*

Synopsys Professional Services provides a comprehensive portfolio of consulting services covering all critical phases of the system-on-a-chip development process, as well as systems development in wireless and broadband applications. Customers are offered a variety of engagement models ranging from project assistance — which helps a customer design, verify and/or test its chips and improve its design process — to full turn-key development. Fiscal 2002 was a challenging year for the professional services business, as customers continued to reduce their use of outside consultants as part of their own cost-cutting efforts.

### **Customer Service and Support**

Synopsys devotes substantial resources to providing customers with technical support, customer education, and consulting services. The Company believes that a high level of customer service and support is critical to the adoption and successful utilization of its products. In fiscal 2002, service revenue as a percentage of total revenue decreased to 32% as compared to 50% in fiscal 2001, and overall revenue from services declined from \$341.8 million to \$287.7 million. Factors contributing to the decrease in services revenue are discussed in Management's Discussion and Analysis of Financial Condition and Results of Operations – "Results of Operations – Revenue."

### **Technical Support**

Technical support for the Company's products is provided through both field- and corporate-based technical application engineering groups. Technical support is bundled with the license fee when a customer purchases a TSL and may be purchased separately when the customer purchases a perpetual license. Technical support includes minor enhancements to the products developed during the year, bug fixes and access to Synopsys application consultants, our worldwide network of product experts, for problem resolution. Customers also have access via electronic mail and the World Wide Web to SolvNet<sup>®</sup>, a direct-access service available worldwide, 24 hours per day, that lets customers quickly seek answers to design questions or more insight into design problems. SolvNet combines Synopsys' complete design knowledge database with sophisticated information retrieval technology.



Updated daily, it includes documentation, design tips, and answers to user questions. During fiscal 2002, Synopsys introduced the "DirectConnect" feature to its technical support offerings. Using DirectConnect, Synopsys support engineers in a Synopsys facility can view a customer's computer screen in the customer's facility to more rapidly and efficiently diagnose and resolve the customer's product issues.

### **Customer Education Services**

Synopsys offers training workshops designed to increase customer design productivity with the Company's products. An extensive curriculum covers the tools and methodology required to successfully complete the full design implementation and verification process. Areas covered include system design, design synthesis, physical design, simulation and test. Regularly scheduled workshops are offered in Mountain View, California; Austin, Texas; Burlington, Massachusetts; Reading, England; Rungis, France; Munich, Germany; Tokyo and Osaka, Japan; Seoul, Korea and other locations. On-site workshops are available worldwide at customers' facilities or other locations. Over 6,800 design engineers attended Synopsys workshops during fiscal 2002.

### **Product Warranties**

Synopsys generally warrants its products to be free from defects in media and to substantially conform to material specifications for a period of 90 days. Synopsys has not experienced significant returns to date.

### **Support for Industry Standards**

Synopsys actively creates and supports standards it believes will help its customers increase productivity and solve design problems, including key interfaces and modeling languages that promote system-on-a-chip design and facilitate interoperability of tools from different vendors. Standards in the EDA industry can be established by formal accredited committees, by licensing made available to all, or through open source licensing.

Synopsys' products support many formal standards, including the two most commonly used hardware description languages, VHDL and Verilog HDL, and numerous industry standard data formats for the exchange of data between Synopsys' tools and other EDA products.

Synopsys is a board member and/or participant in the following major EDA standards organizations: Accellera, a not-for-profit formal standards organization that drives language-based standards for systems, semiconductor, and design tools companies; the interoperability committee of the EDA Consortium, which helps promote interoperability among EDA products from different vendors; and the Virtual Socket Interface Alliance (VSIA), an industry group formed to promote standards that facilitate the integration and reuse of functional blocks of intellectual property.

Synopsys' TAP-in program provides interface standards to all companies through an open source licensing model. Interface formats and reference implementations, such as parsers and screeners, are available to everyone at no cost through the Internet. Synopsys manages changes and enhancements that come from the community of licensees. The open source standards and reference implementations are used by Synopsys, other EDA companies and EDA customers to interface tools with each other to produce flexible design flows. The standards provided by Synopsys as open sources include Liberty for library modeling, SDC for design constraints, and OpenVera for hardware verification.

Synopsys is a member of the Board of Directors of the Open SystemC Initiative (OSCI), a not-for-profit organization that manages SystemC, a language developed by Synopsys and donated to OSCI. OSCI includes representation from the systems, semiconductor, IP, embedded software and EDA industries. The OSCI Board of Directors is composed of representatives from ARM Ltd., Cadence Design Systems, CoWare, Fujitsu Microelectronics, Mentor Graphics, Motorola, NEC, and Synopsys.

Synopsys' products are written mainly in the C and C++ languages and utilize industry standards for graphical user interfaces. Synopsys' software runs under UNIX operating systems, such as Solaris and HP-UX, and most

products also run on the open source Linux operating system. Synopsys' products are offered on the most widely used hardware platforms, including those from Sun Microsystems, Hewlett-Packard, IBM, and Intel microprocessor-based PCs.

### **Sales, Distribution and Backlog**

Synopsys markets its products and services primarily through its direct sales and application service forces in the United States and principal foreign markets. Synopsys employs highly skilled engineers and technically proficient sales persons in order to understand our customer's needs and to explain and demonstrate the value of Synopsys' products.

For fiscal 2002, 2001 and 2000, foreign sales represented 35%, 37% and 42%, respectively, of Synopsys' total revenue. Additional information relating to domestic and foreign operations is contained in Note 8 of Notes to Synopsys' Consolidated Financial Statements.

The Company has sales/support centers throughout the United States, in addition to its Mountain View, California headquarters. Outside the United States, the Company has sales/support offices in Canada, Denmark, Finland, France, Germany, Hong Kong, India, Israel, Italy, Japan, Korea, the People's Republic of China, Singapore, Sweden, Taiwan and the United Kingdom, including foreign headquarters offices in Ireland. The Company's offices are further described under "Item 2 – Properties."

The Company utilizes a distributor for sales of certain products in Korea. See Part III, "Item 13 Certain Relationships and Related Transactions" below.

Synopsys' backlog on December 1, 2002 was approximately \$1.3 billion, compared to approximately \$802.7 million on December 1, 2001.

This backlog consists of orders for system and software products sold under perpetual licenses and TSLs with customer requested ship dates within three months which have not been shipped, orders for customer training and consulting services which are expected to be completed within one year, and subscription services, maintenance and support with contract periods extending up to fifteen months. In the case of a TSL, backlog includes the full amount of the committed non-cancelable order, less any amount of revenue that has been recognized on such TSL.

The Company has not historically experienced significant cancellations of orders. Customers frequently reschedule or revise the requested service performance dates for service orders, however, which can have the effect of deferring recognition of service revenue for these orders beyond the expected time period.

### **Research and Development**

The Company's future performance depends in large part on its ability to maintain and enhance its current product lines, develop new products, maintain technological competitiveness and meet an expanding range of customer requirements. In addition to research and development conducted within each business unit, the Company maintains an advanced research group that is responsible for exploring new directions and applications of its core technologies, migrating new technologies into the existing product lines and maintaining strong research relationships outside the Company within both industry and academia.

During fiscal 2002, 2001 and 2000, research and development expenses, net of capitalized software development costs, were \$225.5 million, \$189.8 million and \$189.3 million, respectively. Synopsys capitalized software development costs of approximately \$1.6 million, \$1.0 million and \$1.0 million in fiscal 2002, 2001 and 2000, respectively. The Company anticipates that it will continue to commit substantial resources to research and development in the future.

## **Manufacturing**

Synopsys' manufacturing operations consist of assembling, testing, packaging and shipping its system and software products and documentation needed to fulfill each order. Manufacturing is currently coordinated through contract vendors located near Synopsys' Mountain View, California and Dublin, Ireland facilities. The contract vendors provide the majority of CD-ROM replication and on-demand printing and distribution of product media and documentation. Synopsys delivers an increasing proportion of its software products by electronic means rather than by shipping disks. When specified by the customer or required by law, Synopsys delivers disks to the customer's site. Synopsys typically delivers its software products within 10 days of acceptance of customer purchase orders and execution of software license agreements unless the customer has requested otherwise.

## **Competition**

The EDA industry is highly competitive. We compete against other EDA vendors, and with customers' internally developed design tools and internal design capabilities for a share of the overall EDA budgets of our potential customers. In general, competition is based on product quality and features, post-sale support, interoperability with other vendors' products, price, payment terms and, as discussed below, the ability to offer a complete design flow. Our competitors include companies that offer a broad range of products and services, such as Cadence Design Systems, Inc. and Mentor Graphics Corporation, as well as companies that offer products focused on a discrete phase of the integrated circuit design process. In the current economic environment, price and payment terms have increased in importance as a basis for competition. During fiscal 2002, we have increasingly agreed to extended payment terms on our TSLs, which has had a negative effect on cash flow from operations. In addition, in certain situations our competitors are offering aggressive discounts on their products. As a result, average prices may fall.

Increasingly, EDA companies compete on the basis of design flows involving integrated logic and physical design products rather than on the basis of individual point tools performing a discrete phase of the design process. The need to offer an integrated design flow will become increasingly important as ICs grow more complex. After the acquisition of Avant!, we offer all of the point tools required to design an IC, some of which integrate logic and physical design capabilities. Our products compete principally with design flow products from Cadence and Magma Design Automation, which in some respects may be more integrated than our products. Our future success depends on our ability to integrate Synopsys' logic design and physical synthesis products with the physical design products acquired from Avant!, which will require significant engineering and development work. Success in this project is especially important as the Company believes that its orders and revenue from Design Compiler, which has accounted for 29% and 18% of Synopsys orders in 2001 and 2002, respectively peaked in fiscal year 2001, as predicted, and are likely to continue to decline over time. There can be no guarantee that we will be able to offer a competitive complete design flow to customers. If we are unsuccessful in developing integrated design flow products on a timely basis or if we are unsuccessful in developing or convincing customers to adopt such products, our competitive position could be significantly weakened.

In order to sustain revenue growth over the long term, we will have to enhance our existing products, introduce new products that are accepted by a broad range of customers and to generate growth in our consulting services business. In addition to the development of integrated logic and physical design products, Synopsys is attempting to integrate its verification products into a comprehensive functional verification platform, and is expanding its offerings of intellectual property design components. Product success is difficult to predict. The introduction of new products and growth of a market for such products cannot be assured. In the past we, like all companies, have introduced new products that have failed to meet our revenue expectations. There can be no assurance that we will be successful in expanding revenue from existing or new products at the desired rate, and the failure to do so would have a material adverse effect on our business, financial condition and results of operations.

## **Product Sales and Licensing Agreements**

Synopsys typically licenses its software to customers under non-exclusive license agreements that transfer title to the media only and that restrict use of the software to specified purposes within specified geographical areas. The Company currently licenses the majority of its software as a network license that allows a number of individual

users to access the software on a defined network. License fees are dependent on the type of license, product mix and number of copies of each product licensed.

Synopsys currently offers its software products under either a perpetual license or a TSL. Under a perpetual license a customer pays a one-time license fee for the right to use the software. The vast majority of customers buying perpetual licenses also purchase annual software support services, under which they receive minor enhancements to the products developed during the year, bug fixes and technical assistance. During the past two years a number of customers have discontinued software support on perpetual licenses. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Results of Operations — Revenue”. A TSL operates like a rental of software and includes software support services for the TSL term. A customer pays a fee for license and support over a fixed period of time, and at the end of the time period the license expires unless the customer pays for a renewal. TSLs are offered with a range of terms; the average length of TSLs sold during fiscal 2002 was approximately 3.3 years. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Results of Operations — Revenue”.

During fiscal 2002, orders for TSLs accounted for 73% of total product orders, compared to 80% in fiscal 2001.

During fiscal 2003, Synopsys has established a target for ratable license orders as a proportion of total license orders of between 73% and 78%, and for perpetual license orders as a proportion of total product orders of between 22% to 27%. This range may be subject to change in market conditions during the year.

Synopsys offers its hardware modeler products for sale or lease.

### **Proprietary Rights**

The Company primarily relies upon a combination of copyright, patent, trademark and trade secret laws and license and nondisclosure agreements to establish and protect proprietary rights in its products. The source code for Synopsys’ products is protected both as a trade secret and as an unpublished copyrighted work. However, it may be possible for third parties to develop similar technology independently. In addition, effective copyright and trade secret protection may be unavailable or limited in certain foreign countries. The Company currently holds U.S. and foreign patents on some of the technologies included in its products and will continue to pursue additional patents in the future.

Although the Company believes that its products, trademarks and other proprietary rights do not infringe on the proprietary rights of third parties, there can be no assurance that infringement claims will not be asserted against the Company in the future or that any such claims will not require the Company to enter into royalty arrangements or result in costly and time-consuming litigation.

### **Employees**

As of November 2, 2002, Synopsys had a total of 4,254 employees, of whom 2,849 were based in North America and 1,405 were based outside of North America. Synopsys’ future financial results depend, in part, upon the continued service of its key technical and senior management personnel and its continuing ability to attract and retain highly qualified technical and managerial personnel. Competition for such personnel is intense. Our success is dependent on technical and other contributions of key employees. We participate in a dynamic industry, with significant start-up activity, and our headquarters is in Silicon Valley, where skilled technical, sales and management employees are in high demand. There are a limited number of qualified EDA and IC design engineers, and the competition for such individuals is intense. Experience at Synopsys is highly valued in the EDA industry and the general electronics industry, and our employees are recruited aggressively by our competitors and by start-up companies in many industries. In the past, we have experienced, and may continue to experience, significant employee turnover. There can be no assurance that Synopsys can retain its key managerial and technical employees or that it can attract, assimilate or retain other highly qualified technical and managerial personnel in the future. None of Synopsys’ employees is represented by a labor union. Synopsys has not experienced any work stoppages and considers its relations with its employees to be good.

## **ITEM 2. Properties**

Synopsys' principal offices are located in four adjacent buildings in Mountain View, California, which together provide approximately 400,000 square feet of available space. This space is leased through February 2015. Within one half mile of these buildings, in Sunnyvale, California, Synopsys occupies approximately 200,000 square feet of space in two adjacent buildings, which are under lease through 2007, and approximately 85,000 square feet of space in a third building, which is under lease until April 2007. In addition, Synopsys leases 16,000 square feet of space in Pleasanton and Fremont, California as telecommute centers.

The Company owns two buildings with approximately 236,000 square feet in Hillsborough, Oregon, which are used for administrative, marketing, research and development and support activities. In addition, the Company leases approximately 82,000 square feet of space in Marlboro, Massachusetts for sales and support, research and development and customer education activities. This facility is leased through March 2009.

Synopsys owns a fourth building in Sunnyvale, with approximately 120,000 square feet, which is leased to a third party through June 2003. Synopsys also owns thirty-four acres of undeveloped land held for sale in San Jose, California and 13 acres of undeveloped land in Marlboro, Massachusetts

The Company currently leases 27 other offices throughout the United States primarily for sales and support.

The Company leases approximately 45,000 square feet in Dublin, Ireland for its foreign headquarters and for research and development purposes. This space is leased through April 2025. In addition, Synopsys leases 32 foreign sales and service offices in Canada, Denmark, Finland, France, Germany, Hong Kong, India, Israel, Italy, Japan, Korea, the People's Republic of China, Singapore, Sweden, Switzerland, Taiwan and the United Kingdom. The Company also leases research and development facilities in France, Germany, India and the People's Republic of China.

## **Item 3. Legal Proceedings**

### *Avant! Litigation*

Avant!, which upon completion of the Synopsys-Avant! merger became a wholly-owned subsidiary of Synopsys, is or was a party to a number of material civil litigation matters.

On November 13, 2002, Synopsys entered into a settlement agreement by and among Synopsys, Cadence Design Systems, Inc., Avant! Corporation LLC and the individuals named in the litigation entitled *Cadence Design Systems, Inc. et al. v. Avant! Corporation et al.* pursuant to which Cadence, Avant! and such individuals agreed to dismiss all pending claims and counterclaims in such litigation and to release all claims they made or could have made in the litigation. Under the agreement, Cadence has been paid \$265 million and the litigation has been dismissed by all parties. In addition, under the settlement agreement, Cadence, Avant! and Synopsys, as the acquirer of Avant!, have granted each other reciprocal licenses covering the intellectual property that was at issue in the litigation.

The payment was made by Illinois National Insurance Company, a subsidiary of the American International Group (AIG), insurer for Synopsys, under an insurance policy purchased by Synopsys upon the completion of its acquisition of Avant!

As a result of the payment, Synopsys recorded expense in the fourth quarter of its fiscal year 2002 of approximately \$240.8 million, which is equal to the contingently refundable portion of the insurance premium recorded as a long-term restricted asset on the Company's balance sheet plus interest earned on the restricted asset. The expense and the reversal of the restricted asset are reflected in the financial statements included in this Annual Report on Form 10-K. See Note 3 of Notes to Synopsys' Consolidated Financial Statements.

Prior to the merger, Avant! leased five buildings in Fremont, California for its headquarters. After the merger, the functions performed in the buildings were consolidated into Synopsys' Mountain View and Sunnyvale facilities, the Fremont buildings were closed, and Avant! stopped paying rent on the underlying leases. In November 2002, Synopsys settled all claims of the landlord of two of the buildings. The other three buildings, located at 46859, 46871 and 46897 Bayside Parkway and owned by Renco Investment Company, are the subject of litigation. As of October 31, 2002, Synopsys maintained an accrual of \$54.2 million with respect to closure of these three buildings. Synopsys believes that the amount accrued will be sufficient to satisfy any current or future claims relating to former Avant! facilities, but cannot assure stockholders that this will be the case.

On February 7, 2002 Renco filed suit in Alameda County Superior Court claiming damages against Avant! on account of rejection of the lease on the premises at 46897 Bayside Parkway by Comdisco, Inc. Comdisco occupied the premises pursuant to an assignment dated September 14, 2000 between Avant! and Comdisco. Comdisco filed Chapter 11 bankruptcy in July 2001 and rejected the lease in the bankruptcy proceeding in September 2001. Renco is alleging that under the assignment, Avant! remained obligated to pay rent and common area maintenance charges on its underlying lease with Renco; Renco is arguing that the assignment documentation obligated Avant! to guarantee Renco's portion of the additional rent to be owed by Comdisco. Accordingly, Renco's complaint asks for rent damages in the sum of approximately \$37.2 million and approximately \$5.9 million in build out damages. Avant! is vigorously defending these claims, though no assurances can be given regarding the outcome of the litigation or the amount that Avant! may ultimately be required to pay to Renco. The court in the Comdisco bankruptcy proceeding has reserved \$6.2 million in aggregate for rent payable to Renco or Avant!. There is no assurance that Avant! and Renco will ultimately be able to collect such amount in such proceeding, but the reserve acts as a cap on their collective recovery from Comdisco.

Renco has declared a default on the Avant! leases on 46859 and 46871 Bayside Parkway based on the cross-default provisions in those leases and in November 2002, Renco filed suit to recover unpaid rent on those buildings.

On August 10, 2001, Silicon Valley Research, Inc. (SVR) filed an action against Avant! in the United States District Court for the Northern District of California. The complaint purports to state claims for statutory unfair competition, receipt, sale and concealment of stolen property, interference with prospective economic advantage, conspiracy, false advertising, violation of the Lanham Act and violation of 18 U.S.C.A. ss. 1962 (R.I.C.O.). In the complaint, SVR alleges that Avant!'s use of Cadence trade secrets damaged SVR by allowing Avant! to develop and market products more quickly and cheaply than it could have otherwise. The complaint seeks an accounting, the imposition of a constructive trust, and actual and exemplary damages. In September 2002, the court granted motions to dismiss filed by Avant! and co-defendant Stephen Wu and in October 2002, SVR filed an amended complaint substantially repeating its prior claims. Avant! has moved to dismiss the complaint and each of the claims and each of the co-defendants has joined that motion. The motion to dismiss is currently scheduled to be heard in February 2003.

Avant! believes it has defenses to SVR's claims and intends to defend itself vigorously. These defenses include, but are not limited to, defenses based on the authority granted to Avant! by the written release agreement signed between Cadence and Avant! in 1994 and the Settlement Agreement signed in November 2002, Avant!'s denial of any post-release misappropriation of Cadence trade secrets, Avant!'s belief that any use by Avant! of Cadence trade secrets did not confer any competitive advantage on Avant! over SVR, and Avant!'s belief that SVR's loss of market share resulted from factors other than any use by Avant! of Cadence trade secrets. Should SVR's claims succeed, however, Avant! could be required to pay monetary damages to SVR. Accordingly, an adverse judgment could seriously harm Avant!'s business, financial position and results of operations.

Between July and October 2001, three derivative actions were filed against Avant! and certain of its officers and directors: *Scott v. Muraki, et al.*, No. 01-017548 (Cal. Superior Ct.); *Louisiana School Employees' Retirement System v. Muraki, et al.*, C.A. No. 19091 (Del. Chancery Ct.); and *Peterson v. Hsu, et al.*, C.A. No. 19178 (Del. Chancery Ct.). The actions allege, in substance, that certain present and former Avant! officers and directors caused damage to Avant! by misappropriating trade secrets from competitors, making false representations to investors and the public, and causing Avant! to award lucrative employment contracts, bonuses, stock option grants, and valuable consulting contracts and ownership interests in companies affiliated with Avant!. The Louisiana School Employees'

Retirement System case was dismissed in August 2002. Also in August 2002, the plaintiffs in the remaining actions have agreed to a settlement involving payment of attorneys fees only for the plaintiffs.

#### *Other Litigation*

In July 2001, Synopsys entered into an agreement to acquire IKOS Systems, Inc. In December 2001, Mentor Graphics, Inc. (Mentor) submitted an unsolicited offer to acquire IKOS and, in connection therewith, filed a lawsuit in the Court of Chancery of the State of Delaware (C.A. No. 19299) against IKOS, the members of IKOS' board of directors, Synopsys and Synopsys' subsidiary Oak Merger Corporation ("Oak"). The lawsuit claimed that certain provisions of the Synopsys - IKOS Merger Agreement ("Merger Agreement"), were entered into in breach of the IKOS directors' fiduciary duties, and that Synopsys and Oak aided and abetted those breaches. A second lawsuit was filed by an alleged shareholder of IKOS on essentially the same grounds. In March 2002, Synopsys and IKOS entered into a termination agreement by which they mutually agreed to terminate the Merger Agreement. Subsequently, Mentor acquired IKOS. As a result, the Company believes this suit to be moot and expects it to be dismissed during the first half of 2003. A third lawsuit relating to this matter, filed in California Superior Court in Santa Clara County, California, was dismissed with prejudice in August 2002.

There are no other material legal proceedings pending against the Company or Avant!.

#### **Item 4. Submission of Matters to a Vote of Security Holders**

No matters were submitted for a vote of security holders during the fourth quarter of the fiscal year covered by this Report.

#### **Executive Officers of the Company**

The executive officers of the Company and their ages, as of January 1, 2003, are as follows:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Aart J. de Geus	48	Chief Executive Officer and Chairman of the Board of Directors
Chi-Foon Chan	52	President, Chief Operating Officer
Vicki L. Andrews	47	Senior Vice President, Worldwide Sales
Steven K. Shevick	46	Senior Vice President, Finance and Chief Financial Officer

*Dr. Aart J. de Geus* co-founded Synopsys and currently serves as Chief Executive Officer and Chairman of the Board of Directors. Since the inception of Synopsys in December 1986, he has held a variety of positions including Senior Vice President of Engineering and Senior Vice President of Marketing. From 1986 to 1992, Dr. de Geus served as Chairman of the Board. He served as President from 1992 to 1998. Dr. de Geus has served as Chief Executive Officer since January 1994 and has held the additional title of Chairman of the Board since February 1998. He has served as a Director since 1986. From 1982 to 1986, Dr. de Geus was employed by General Electric Corporation, where he was the Manager of the Advanced Computer-Aided Engineering Group. Dr. de Geus holds an M.S.E.E. from the Swiss Federal Institute of Technology in Lausanne, Switzerland and a Ph.D. in electrical engineering from Southern Methodist University.

*Dr. Chi-Foon Chan* joined Synopsys as Vice President of Application Engineering & Services in May 1990. Since April 1997 he has served as Chief Operating Officer and since February 1998 he has held the additional title of President. Dr. Chan also became a Director of the Company in February 1998. From September 1996 to February 1998 he served as Executive Vice President, Office of the President. From February 1994 until April 1997 he served as Senior Vice President, Design Tools Group and from October 1996 until April 1997 as Acting Senior Vice President, Design Reuse Group. Additionally, he has held the titles of Vice President, Engineering and General Manager, DesignWare Operations and Senior Vice President, Worldwide Field Organization. From March 1987 to May 1990, Dr. Chan was employed by NEC Electronics, where his last position was General Manager,

Microprocessor Division. From 1977 to 1987, Dr. Chan held a number of senior engineering positions at Intel Corporation. Dr. Chan holds an M.S. and Ph.D. in computer engineering from Case Western Reserve University.

*Vicki L. Andrews* joined Synopsys in May 1993 and currently serves as Senior Vice President, Worldwide Sales. Before holding that position, she served in a number of senior sales roles at Synopsys, including Vice President, Global and Strategic Sales, Vice President, North America Sales and Director, Western United States Sales. She has more than 18 years of experience in the EDA industry. Ms. Andrews holds a B.S. in biology and chemistry from the University of Miami.

*Steven K. Shevick* joined Synopsys in July 1995 and currently serves as Senior Vice President, Finance and Chief Financial Officer, and as the Company Secretary. Mr. Shevick was appointed Senior Vice President and Chief Financial Officer in January 2003. From October 1999 to January 2003, he was Vice President, Investor Relations and Legal and Secretary. From March 1998 to October 1999, he was Vice President, Legal, General Counsel and Assistant Corporate Secretary. From July 1995 to March 1998 he served as Deputy General Counsel and Assistant Corporate Secretary. Mr. Shevick holds an A.B. from Harvard College and a J.D. from Georgetown University Law Center.

There are no family relationships among any executive officers of the Company.



## Part II

### Item 5. Market for Registrant's Common Equity and Related Stockholder Matters

The information required by this item is set forth on page 84 of this Synopsys 2002 Annual Report on Form 10-K.

### Item 6. Selected Financial Data

#### Financial Summary

	Fiscal Year Ended (2)				
	October 31,		September 30,		
	2002	2001	2000	1999	1998 (1)
	<i>(in thousands, except per share data)</i>				
Revenue	\$ 906,534	\$ 680,350	\$ 783,778	\$ 806,098	\$ 717,940
(Loss) income before income taxes and extraordinary items (3)	(288,940)	83,533	145,938	251,411	116,861
(Benefit) provision for income taxes	(88,947)	26,731	48,160	90,049	55,819
Extraordinary items, net of income tax expense (4)	—	—	—	—	28,404
Net (loss) income	(199,993)	56,802	97,778	161,362	89,446
(Loss) earnings per share:					
Basic	(2.99)	0.94	1.43	2.30	1.34
Diluted	(2.99)	0.88	1.38	2.20	1.29
Working capital	151,946	254,962	331,857	627,207	504,759
Total assets	1,978,714	1,128,907	1,050,993	1,173,918	951,633
Long-term debt	6,547	73	564	11,642	13,138
Stockholders' equity	1,113,481	485,656	682,829	865,596	664,941

- (1) Amounts and per share data for periods presented have been retroactively restated to reflect the mergers accounted for under the pooling-of interests method with Viewlogic Systems, Inc, effective December 4, 1997, and Everest Automation, Inc., effective November 21, 1998.
- (2) Synopsys has a fiscal year that ends on the Saturday nearest October 31. Fiscal years 2002, 2000, and 1999 were 52-week years while fiscal years 2001 and 1998 were 53-week years. For presentation purposes, the consolidated financial statements refer to the calendar month end. Prior to fiscal year 2000, Synopsys' fiscal year ended on the Saturday nearest to September 30. The period from October 1, 1999 through October 31, 1999 was a transition period. During the transition period, revenue, loss before income taxes, benefit for income taxes and net loss were \$23.2 million, \$25.5 million, \$9.9 million, and \$15.5 million, respectively, and basic and diluted loss per share was \$0.22. The net loss during the transition period is due to the fact that sales in the first month following a quarter end are historically weak. As of October 31, 1999, working capital, total assets, long-term debt, and stockholders' equity were \$621.9 million, \$1.2 billion, \$11.3 million and \$872.6 million, respectively.
- (3) Includes charges of \$87.7 million, \$1.7 million, \$21.2 million and \$33.1 million for the fiscal years ended October 31, 2002 and 2000 and September 30, 1999 and 1998 respectively, for in-process research and development. Includes merger-related and other costs of \$128.5 million and \$51.0 million for the years ended October 31, 2002 and September 30, 1998, respectively. Includes insurance premium costs of \$335.8 million for the fiscal year ended October 31, 2002 related to the Avant! merger.
- (4) On October 2, 1998, Synopsys sold a segment of the Viewlogic business for \$51.9 million in cash. As a result of the transaction, Synopsys recorded an extraordinary gain of \$26.5 million, net of income tax expense, in the fourth quarter of fiscal 1998.

## **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

The following discussion contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934. For example, statements including terms such as "projects," "expects," "believes," "anticipates" or "targets" are forward-looking statements. Actual results could differ materially from those anticipated in such forward-looking statements as a result of certain factors, including those set forth under "Factors That May Affect Future Results."

### **Critical Accounting Policies**

The discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to revenue recognition, bad debts, investments, intangible assets and income taxes. Our estimates are based on historical experience and on various other assumptions we believe are reasonable under the circumstances. Actual results may differ from these estimates.

The accounting policies described below are those that most frequently require us to make estimates and judgments, and are therefore critical to understanding our results of operations.

*Revenue Recognition.* Our revenue recognition policy is detailed in Note 2 of the Notes to Consolidated Financial Statements. Management has made significant judgments related to revenue recognition; specifically, in connection with each transaction involving our products (referred to as an "arrangement" in the accounting literature) we must evaluate whether our fee is "fixed or determinable" and we must assess whether "collectibility is probable". These judgments are discussed below.

The Fee is Fixed or Determinable. With respect to each arrangement, we must make a judgment as to whether the arrangement fee is fixed or determinable. If the fee is fixed or determinable, then revenue is recognized upon delivery of software (assuming other revenue recognition criteria are met). If the fee is not fixed or determinable, then the revenue recognized in each quarter (subject to application of other revenue recognition criteria) will be the lesser of the aggregate of amounts due and payable or the amount of the arrangement fee that would have been recognized if the fees had been fixed or determinable.

Except in cases where we grant extended payment terms to a specific customer, we have determined that our fees are fixed or determinable at the inception of our arrangements based on the following:

- The fee our customers pay for our products is negotiated at the outset of an arrangement and is generally based on the specific volume of products to be delivered.
- Our license fees are not a function of variable-pricing mechanisms such as the number of units distributed or copied by the customer or the expected number of users of the product delivered.

A determination that an arrangement fee is fixed or determinable also depends upon the payment terms relating to such an arrangement. Our customary payment terms - supported by historical practice - require that a minimum of 75% of the arrangement fee is due within one year or less. Arrangements with payment terms extending beyond the customary payment terms are considered not to be fixed or determinable. A determination of whether the arrangement fee is fixed or determinable is particularly relevant to revenue recognition on perpetual licenses.

Collectibility is Probable. In order to recognize revenue, we must make a judgment of the collectibility of the arrangement fee. Our judgment of the collectibility is applied on a customer-by-customer basis pursuant to our credit review policy. We typically sell to customers for which there is a history of successful collection. New customers are subjected to a credit review process, which evaluates the customers' financial positions and ability to pay. New

customers are typically assigned a credit limit based on a formulated review of their financial position. Such credit limits are only increased after a successful collection history with the customer has been established. If it is determined from the outset of an arrangement that collectibility is not probable based upon our credit review process, revenue is recognized on a cash-collected basis.

*Valuation of Strategic Investments.* As of October 31, 2002, the adjusted cost of our strategic investments totaled \$25.1 million, excluding unrealized gains and losses. We review our investments in non-public companies on a quarterly basis and estimate the amount of any impairment incurred during the current period based on specific analysis of each investment, considering the activities of and events occurring at each of the underlying portfolio companies during the quarter. Our portfolio companies operate in industries that are rapidly evolving and extremely competitive. For equity investments in non-public companies where there is not a market in which their value is readily determinable, we assess each investment for indicators of impairment at each quarter end based primarily on achievement of business plan objectives and current market conditions, among other factors, and information available to us at the time of this quarterly assessment. The primary business plan objectives we consider include achievement of planned financial results, completion of capital raising activities, the launching of technology, the hiring of key employees and overall progress on the portfolio company's business plan. If it is determined that an impairment has occurred with respect to an investment in a portfolio company, in the absence of quantitative valuation metrics, management estimates the impairment and/or the net realizable value of the portfolio investment based on public- and private-company market comparable information and valuations completed for companies similar to our portfolio companies. Based on these measurements, impairment losses aggregating \$11.3 million were recorded during fiscal 2002. Future adverse changes in market conditions, poor operating results of underlying investments and other information obtained after our quarterly assessment could result in additional losses or an inability to recover the current carrying value of the investments thereby requiring a further impairment charge in the future.

*Valuation of Intangible Assets.* Intangible assets, net of accumulated amortization, totaled \$355.3 million as of October 31, 2002. We periodically evaluate our intangible assets for indications of impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Intangible assets consist of goodwill, purchased technology, contract rights intangibles (as defined under "Results of Operations – Acquisition of Avant! Corporation – Contract Rights Intangible"), customer installed base/relationship, trademarks and tradenames, covenants not to compete, customer backlog and capitalized software. Factors we consider important which could trigger an impairment review include significant under-performance relative to expected historical or projected future operating results, significant changes in the manner of our use of the acquired assets or the strategy for our overall business or significant negative industry or economic trends. If this evaluation indicates that the value of the intangible asset may be impaired, an assessment of the recoverability of the net carrying value of the asset over its remaining useful life is made. If this assessment indicates that the intangible asset is not recoverable, based on the estimated undiscounted future cash flows of the entity or technology acquired over the remaining amortization period, the net carrying value of the related intangible asset will be reduced to fair value and the remaining amortization period may be adjusted. Any such impairment charge could be significant and could have a material adverse effect on our reported financial statements. Based on these measurements, we recorded an impairment charge of approximately \$0.1 million during fiscal 2002 and an impairment charge of \$3.7 million related to the Avant! merger as described under "Integration Costs" below.

*Allowance For Doubtful Accounts.* As of October 31, 2002, our allowance for doubtful accounts totaled \$11.6 million. Management estimates the collectibility of our accounts receivable on an account-by-account basis. In addition, we provide for a general reserve on all accounts receivable, using a specified percentage of the outstanding balance in each aged group. Management specifically analyzes accounts receivable and historical bad debt experience, customer creditworthiness, current economic trends, international exposures (such as currency devaluation), and changes in our customer payment terms when evaluating the adequacy of the allowance for doubtful accounts. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. During the current year, write-offs (net of recoveries) and additional allowances totaled \$6.5 million and \$7.0 million, respectively.

*Income Taxes.* Our effective tax rate is directly affected by the relative proportions of our domestic and foreign revenue and income. We are also subject to changing tax laws in the multiple jurisdictions in which we operate. As of October 31, 2002, deferred tax assets and liabilities totaled \$382.2 million and \$105.9 million, respectively. We believe that it is more likely than not that the results of future operations will generate sufficient taxable income to utilize these net deferred tax assets. While we have considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for any valuation allowance, should we determine that we would not be able to realize all or part of our net deferred tax assets in the future, an adjustment to the deferred tax assets would be charged to income in the period such determination was made.

## **Results of Operations**

*Mergers and Acquisitions.* On June 6, 2002, we completed our merger with Avant!. Avant! was a leader in the development of software used in the physical design and physical verification phases of chip design. As a result of the merger, we are now able to offer a comprehensive array of products for the design and verification of chips. Products obtained in the merger are key components of the implementation and verification platforms discussed above. Under the terms of the merger agreement between Synopsys and Avant!, Avant! merged with and into a wholly-owned subsidiary of Synopsys. The aggregate merger consideration, including the fair value of stock issued, was approximately \$1.0 billion, and was determined primarily as a result of competitive bidding with other potential acquirors. As a result of the merger, we recorded goodwill of \$369.5 million, which is reflected on the consolidated balance sheet as of October 31, 2002. We believe that the value of the products acquired from Avant!, when combined with the pre-merger Synopsys products, justifies the price paid. The results of operations of Avant! are included in the accompanying consolidated financial statements for the period from June 6, 2002 through October 31, 2002.

On September 6, 2002, we completed our acquisition of Co-Design, a private company which was developing simulation software used in the high level verification stage of the chip design process, and a new design language that permits designers to describe the behavior of their chips more efficiently than current standard languages. The aggregate purchase price for Co-Design was \$32.3 million, which was determined principally by competitive bidding with another potential acquiror. As a result of the merger we recorded goodwill of \$27.7 million, which is reflected on the consolidated balance sheet as of October 31, 2002. We believe that we will derive a competitive advantage through the use of Co-Design's new design language in our design and verification products and the expertise of its employees, and therefore the price is justified. The results of operations of Co-Design are included in the accompanying consolidated financial statements for the period from September 6, 2002 through October 31, 2002.

On September 20, 2002, we completed our acquisition of inSilicon, a company that developed, marketed and licensed an extensive portfolio of complex "intellectual property blocks", or pre-designed, pre-verified subportions of a chip that can be used as building blocks for complex systems-on-a-chip, and therefore accelerate the development of such chips. The aggregate purchase price for inSilicon was \$74.6 million. As a result of the merger, we recorded goodwill of \$22.2 million which is reflected on the consolidated balance sheet as of October 31, 2002. We believe that the combination of inSilicon's portfolio of intellectual property with our own portfolio will provide us with a competitive advantage over other providers of intellectual property blocks, and therefore justifies the price. The results of operations of inSilicon are included in the accompanying consolidated financial statements for the period from the September 20, 2002 through October 31, 2002.

*Revenue.* Revenue consists of fees for perpetual and ratable licenses of our software products, post-contract customer support (PCS), customer training and consulting. We classify revenues as product, service or ratable license. Product revenue consists primarily of perpetual software licenses. Service revenue consists of PCS under perpetual licenses and fees for consulting services and training. Ratable license revenue consists of all revenue from our TSLs and from time-based licenses sold prior to the adoption of TSLs in August 2000 that include extended payment terms or unspecified additional products.

*Adoption of Subscription Licenses; Impact on Revenue.* In the fourth quarter of fiscal 2000 we introduced a new type of license called a technology subscription license. A TSL is a license to use one or more of our software

products, and to receive support services (such as hotline support and updates) for a limited period of time, usually one to three years. Since TSLs include bundled products and services, both product and service revenue is generally recognized ratably over the term of the license, or, if later, as payments become due. The terms of TSLs, and the payments due thereon, may be structured flexibly to meet the needs of the customer. In certain situations, customers have limited rights to new technology through reconfiguration clauses under their agreements.

Prior to the adoption of TSLs, we sold perpetual licenses and “term” licenses (a type of time-based license). Under these types of licenses, software support is purchased separately. Revenue from the license sale is generally recognized in the quarter that the product is shipped (or “upfront”) and revenue from software support is recognized ratably over the support period. Term licenses were discontinued when TSLs were introduced.

Due to the different treatment of TSLs and perpetual/term licenses under applicable accounting rules, each type of license has a different impact on our financial statements. When a customer buys a TSL, relatively little revenue is recognized during the quarter the product is initially delivered. The remaining amount not recognized will either be recorded as deferred revenue on our balance sheet or considered backlog by us and not recorded on the balance sheet. The amount recorded as deferred revenue is equal to the portion of the license fee that has been invoiced or paid but not recognized. The amount considered backlog moves out of backlog and is recorded as deferred revenue as invoiced or as additional payments are made. Deferred revenue is reduced as revenue is recognized. Under perpetual licenses (and term licenses), a high proportion of all license revenue is recognized in the quarter that the product is delivered, with relatively little recorded as deferred revenue or as backlog. Therefore, an order for a TSL will result in significantly lower current-period revenue than an equal-sized order under the prior form of time-based licenses. Conversely, an order for a TSL will result in higher revenues recognized in future periods than an equal-sized order for a perpetual or term license. For example, a \$120,000 order for a perpetual license will result in \$120,000 of revenue recognized in the quarter the product is shipped and no revenue in future quarters. The same order for a 3-year TSL shipped at the beginning of the quarter will result in \$10,000 of revenue recognized in the quarter the product is shipped and in each of the 11 succeeding quarters.

On an aggregate basis, the introduction of TSLs has had, and will continue to have, a significant impact on our reported revenue and on our balance sheet. In the quarter immediately following the adoption of TSLs, reported revenue dropped significantly. In each quarter since adoption, ratable revenue has grown, as TSL orders received in each quarter contribute revenue that is “layered” over the revenue recognized from TSL orders received in prior quarters. This effect will repeat itself each quarter in varying degrees until the TSL model is fully phased in; during this transition period ratable revenue will continue to grow even if the overall level of TSL orders does not grow, and could grow even if the overall level of TSL orders declines. The phase in period of the TSL model is difficult to predict. Absent any acquisitions, the model would be substantially phased in approximately 3.25 years following the adoption of the model. The phase in period has been extended by the acquisition of Avant!, and will be extended to some extent by any future acquisitions we make. Over the long term, as the TSL model becomes more fully phased in, average revenue growth will closely track average orders growth.

Synopsys’ license revenue in any given quarter is dependent upon the volume of perpetual orders shipped during the quarter and the amount of TSL revenue amortized from deferred revenue, recognized out of backlog and, to a small degree, recognized on TSL orders received during the quarter. We set our revenue targets for any given period based, in part, upon an assumption that we will achieve a certain level of orders and a certain license mix of perpetual licenses and TSLs. The precise mix of orders is subject to substantial fluctuation in any given quarter or multiple quarter periods, and the actual mix of licenses sold affects the revenue we recognize in the period. If we achieve the target level of total orders but are unable to achieve our target license mix, we may not meet our revenue targets (if we deliver more-than-expected TSLs) or may exceed them (if we deliver more-than-expected perpetuals). If we achieve the target license mix but the overall level of orders is below the target level, then we will not meet our revenue targets.

Since our introduction of TSLs, the average TSL duration has been approximately 13 quarters. Our historical license order mix from August 2000 to the present (i.e., since our adoption of TSLs), has been 24% perpetual licenses and 76% ratable licenses. Our target license mix for total new software license orders for the first quarter of fiscal year 2003 is 18% to 23% perpetual licenses and 77% to 82% ratable licenses. The precise mix of orders is

subject to substantial fluctuation in any given quarter or multiple quarter periods. In the fourth quarter of fiscal 2002, the license mix was approximately 27% perpetual licenses and 73% TSLs, in comparison to 14% perpetual licenses and 86% TSLs in the fourth quarter of fiscal 2001. The license mix for full fiscal 2002 was approximately 27% perpetual licenses and 73% TSLs, in comparison to 20% perpetual licenses and 80% TSLs for fiscal 2001. Our target license mix for new software license orders for fiscal 2003 is 22% to 27% perpetual licenses and 73% to 78% ratable licenses. This range may be subject to change based on market conditions during the year.

*Revenue.* Total revenue for fiscal 2002 increased 33% to \$906.5 million as compared to \$680.4 million for fiscal 2001. The increase in total revenue for fiscal 2002 as compared to fiscal 2001 is due primarily to the Avant! acquisition, and to the additional quarters that the TSL license model has been used.

Total revenue for fiscal 2001 decreased 13% to \$680.4 million as compared to \$783.8 million for fiscal 2000. The decrease in total revenue for fiscal 2001 as compared to fiscal 2000 is due to the utilization for the full 2001 fiscal year of the TSL license model and the related inherent decrease in current period revenue due to the timing of revenue recognition under this license model.

Product revenue for fiscal 2002 increased 50% to \$245.2 million as compared to \$163.9 million for fiscal 2001. The increase in product revenue for fiscal 2002 as compared to fiscal 2001 is due to an increase in perpetual licenses delivered during the period, which resulted in large part from the increased volume of perpetual licenses after the Avant! merger. During the second quarter of 2002, we began offering variable maintenance arrangements (VMP) to certain customers that entered into perpetual license technology arrangements in excess of \$2.0 million. Under these arrangements, the annual fee for PCS is calculated as a percentage of the net license fee rather than a fixed percentage of the list price.

Product revenue for fiscal 2001 decreased 62% to \$163.9 million as compared to \$434.1 million for fiscal 2000. The decrease in product revenue for fiscal 2001 as compared to fiscal 2000 was due to the adoption of the TSL model (under which, as explained above, revenue is recognized ratably) from a license model under which virtually all license revenue was recognized in the quarter shipped.

Service revenue for fiscal 2002 decreased 16% to \$287.7 million as compared to \$341.8 million for fiscal 2001. The decrease in service revenue for fiscal 2002 as compared to fiscal 2001 is due to economic factors and the impact of our adoption of TSLs. Economic conditions have led our customers to reduce their costs by curtailing their use of outside consultants and, in some cases, discontinuing maintenance on their perpetual licenses. As a result, we received a lower volume of new consulting orders and maintenance renewal orders than expected. In addition, certain projects in our consulting backlog were deferred or cancelled. Customer expenditures on training have also been reduced, which has accordingly reduced revenue from training. These conditions are expected to continue at least until research and development spending by the semiconductor industry returns to historic levels of growth. The shift to TSLs has impacted service revenue in two ways. First, new licenses structured as TSLs include bundled PCS, which means that revenue attributable to PCS is recognized as ratable license revenue. If such licenses were perpetual licenses or time-based licenses similar to the type formerly offered, the PCS revenue relating to such licenses would be recognized as service revenue. Second, customers with existing perpetual licenses are entering into new TSLs rather than renewing the PCS on the existing perpetual licenses. In each case, revenue attributable to PCS that otherwise would have been reflected in service revenue is now reflected in ratable license revenue.

The decline in service revenue was partly offset by revenue recognized from services contracts acquired in the Avant! merger. Synopsys recognized less revenue on these contracts than Avant! would have recognized due to the fact that under purchase accounting rules the deferred revenue balance of these contracts was significantly reduced upon acquisition.

Service revenue for fiscal 2001 remained relatively flat at \$341.8 million as compared to \$340.8 million in fiscal 2000, as growth in consulting services business in the first half of the year was offset by reduction in business attributable to cost-cutting efforts by customers.

Ratable license revenue for fiscal 2002 increased 114% to \$373.6 million as compared to \$174.6 million in fiscal 2001. The increase in ratable license revenue for fiscal 2002 compared to fiscal 2001 is due to the additional quarters that the TSL license model has been used.

Ratable license revenue for fiscal 2001 increased to \$174.6 million as compared to \$8.9 million in fiscal 2000. The increase in ratable license revenue for fiscal 2001 compared to fiscal 2000 is due to the fact that we introduced TSLs in the fourth quarter of fiscal 2000 (August 2000) and therefore, relatively little TSL revenue was recognized in fiscal 2000 because under the TSL model relatively little revenue is recognized in the quarter the product is initially delivered.

*Related Party Transaction.* Approximately 8% of fiscal 2002 revenues were derived from a company whose Chief Financial and Enterprise Officer serves on the Synopsys Board of Directors. Management believes the transactions between the two parties were carried out under the Company's normal terms and conditions.

*Revenue Seasonality.* Our revenue is seasonal. In general, revenue in the first quarter of our fiscal year is the lowest of any quarter, and revenue in the fourth quarter is the largest of any quarter, with revenue in the second and third quarters roughly in the middle of the first and fourth quarters. This seasonal pattern may be attributed to a variety of factors, including customer buying patterns, the timing of major contract renewals and sales compensation incentives.

*Revenue - Product Groups.* For management reporting purposes, our products have been organized into four distinct product groups -- Design Implementation, Verification and Test, Design Analysis, Intellectual Property (IP) -- and a services group -- Professional Services. The following table summarizes the revenue attributable to the various groups as a percentage of total Company revenue for the last eight quarters. Revenue attributable to products acquired from Avant! that was recognized by Avant! prior to June 6, 2002 is not reflected in the following tables. Revenue attributable to such products from June 6, 2002 through October 31, 2002 is included in fiscal 2002 revenue. As a result of the Avant! merger, we redefined our product groups, effective in the third quarter of fiscal 2002. Prior period amounts have been reclassified to conform to the new presentation.

Revenue	Q4-2002	Q3-2002	Q2-2002	Q1-2002	Q4-2001	Q3-2001	Q2-2001	Q1-2001
Design Implementation	46%	45%	42%	40%	42%	39%	39%	38%
Verification and Test	25	26	34	37	33	34	32	31
Design Analysis	19	17	6	6	6	6	5	7
IP	6	6	9	9	10	10	9	10
Professional Services	4	6	9	8	9	11	15	14
Total Company	100%	100%	100%	100%	100%	100%	100%	100%

*Design Implementation.* Design Implementation includes products used in the logic design and physical design phases of chip design (as described above under Business – Products – IC Implementation products) for the design of a chip from a high level functional description to a complete description of the transistors and connections that implement such functions that can be delivered to a semiconductor company for manufacturing. Design Implementation technologies include logic synthesis, physical synthesis, floor planning and place-and-route products and technologies. The principal products in this category as of the end of fiscal 2002 are Design Compiler, Physical Compiler, Chip Architect, Floorplan Compiler, Jupiter, Apollo and Astro. As a percent of revenue, Design Implementation fluctuated between 38% and 42% in the period from the first quarter of fiscal 2000 through the second quarter of fiscal 2002, and exhibited a generally increasing trend from the first quarter of fiscal 2001 through the second quarter of fiscal 2002. This trend reflects the Company's growing portfolio of Design Implementation products during the period, most notably the introduction of Physical Compiler. The 3% increase from the second quarter of fiscal 2002 to the third quarter of fiscal 2002 is due principally to the addition of Avant! products to this category, since the largest portion of Avant!'s revenue was derived from products (including its principal place and route products) that were added to the Design Implementation category.

*Verification and Test.* Verification and Test includes products used for verification and analysis performed at the system level, register transfer level (RTL) and gate level of design, including simulation, system level design and

verification, timing analysis, formal verification, test and related products. The principal products in this category are VCS, Polaris, Vera, PathMill, CoCentric System Studio, PrimeTime, Formality, Design Verifier, DFT Compiler and TetraMax, which are used in several different phases of chip design. As a percent of revenue, revenue from this product family fluctuated between 31% and 37% in the period from the first quarter of fiscal 2001 through the second quarter of fiscal 2002, principally attributable to the mix of perpetual versus TSL orders received for Verification and Test products during any given quarter. Beginning in the third quarter of fiscal 2002, Verification and Test revenues as a percent of total Company revenue were lower, principally because the Verification and Test product group does not include many products acquired from Avant!.

*Design Analysis.* Design Analysis includes products used for verification and analysis performed principally during the physical verification phase of chip design, including analog and mixed signal circuit simulation, design rule checking, power analysis, customer design, semiconductor process modeling and reliability analysis. The principal products in this category are NanoSim, StarSim, HSPICE, StarRC, Arcadia, TCAD, Hercules, Venus, OPC, PrimePower and Cosmos. Revenue from this product group as a percentage of total revenues has ranged between 5% and 7% since the introduction of TSLs as a result of the mix of perpetual versus time-based license orders received during a particular quarter. During the third quarter of fiscal 2002, revenue from this product group as a percentage of total revenues increased to 17%, due primarily to the Avant! acquisition, as the second largest portion of Avant!'s revenue was derived from products that were added to the Design Analysis category.

*Intellectual Property.* Our IP products include the DesignWare library of design components and verification models, and the products acquired in the inSilicon transaction (effective in the fourth quarter of 2002). IP revenue as a percent of total revenue was relatively stable from the fourth quarter of fiscal 2000 to the second quarter of fiscal 2002, reflecting growth consistent with the Company average. Beginning with the third quarter of fiscal 2002, IP revenues as a percent of total Company revenue decreased principally because the IP product group does not include many products acquired from Avant!

*Professional Services.* The Professional Services group includes consulting and training activities. This group provides consulting services, including design methodology assistance, specialized telecommunications systems design services and turnkey design. Revenue from professional services as a percentage of total revenues has declined from 14% in the first quarter of fiscal 2001 to 6% in the third quarter of fiscal 2002, reflecting, as described above under "Revenue", the impact of the economic environment.

*Cost of Revenue.* Cost of revenue consists of the cost of product revenue, cost of service revenue, cost of ratable license revenue and amortization of intangible assets and deferred stock compensation. Cost of product revenue includes personnel and related costs, production costs, product packaging, documentation, and amortization of capitalized software development costs and purchased technology. The cost of internally developed capitalized software is amortized on the straight-line method over the software's estimated economic life of approximately two years. Cost of service revenue includes consulting services, personnel and related costs associated with providing training and PCS on perpetual licenses. Cost of ratable license revenue includes the costs of product and services related to our TSLs (TSLs include bundled product and services). Cost of product revenue, cost of service revenue and cost of ratable license revenue during any period are heavily dependent on the mix of software orders received during such period.

Cost of revenue amortization of intangible assets and deferred stock compensation includes the amortization of the contract rights intangible and customer backlog assets associated with certain executory contracts, as discussed under "*Acquisition of Avant! Corporation*" and "*Acquisition of inSilicon Corporation*", respectively, below, and the amortization of core/developed technology acquired in the Avant!, inSilicon and Co-Design mergers. Total amortization of intangible assets, which commenced on the date of the respective acquisition, included in cost of revenues for fiscal 2002 was \$33.7 million which includes \$26.5 million and \$7.2 million for core developed technology and contract rights intangible, respectively. Cost of revenue amortization also includes the amortization of deferred stock compensation as discussed below under "*Amortization of Intangible Assets*" totaling \$0.2 million for the year ended October 2002.



Total cost of revenue as a percentage of total revenue for fiscal 2002 remained relatively flat at 19% as compared to fiscal 2001. Cost of goods sold (which excludes amortization of intangible assets and deferred stock compensation) as a percentage of total revenue decreased due to the increase in quarterly amortization of deferred revenue and backlog, which is an inherent result of the use of the ratable license model and due to the fact that other cost of goods sold components remained relatively flat. However, the decrease in cost of goods sold as a percentage of total revenue in fiscal 2002 was offset by the commencement of amortization of the contract rights intangible and core/developed technology recorded as a result of current year acquisitions.

Total cost of revenue as a percentage of total revenue for fiscal 2001 increased to 19% as compared to 16% in fiscal 2000. This 19% increase in cost of revenue as a percentage of total revenue for fiscal 2001 as compared to fiscal 2000 is due to the write-off of intangible assets relating to a discontinued product totaling \$1.8 million and an increase in the inventory reserve totaling \$1.3 million related to our hardware modeling product.

*Work Force Reduction.* During the first quarter of fiscal 2002, as part of an overall cost reduction program, we implemented a workforce reduction affecting all departments, both domestic and foreign. As a result, our workforce was reduced by approximately 175 employees and a charge of approximately \$3.9 million was included in operating expenses during the second quarter of fiscal 2002. This charge consists of severance and other special termination benefits. These costs are reflected in the statement of operations as follows:

<i>(in thousands)</i>	
Cost of revenue	\$ 678
Research and development	1,081
Sales and marketing	1,078
General and administrative	1,033
Total	<u>\$ 3,870</u>

*Research and Development.* Research and development expenses for fiscal 2002 increased 19% to \$225.5 million as compared to \$189.8 million for fiscal 2001. The increase in expenses is due to increases of \$28.7 million in compensation and compensation-related costs as a result of an increase in research and development headcount due to the Avant! acquisition, \$11.3 million in human resources, technology and facilities costs as a result of increased research and development staffing and \$4.2 million in depreciation expense. These increases were offset by decreases of \$5.4 million in consulting expenses and \$4.3 million of other expenses including facilities, travel, communications, supplies and recruiting as a result of our cost reduction programs.

Research and development expenses for fiscal 2001 remained relatively flat at \$189.8 million as compared to \$189.3 million in fiscal 2000. Research and development expenses increased in fiscal 2001 as compared to fiscal 2000 due to increases in personnel related costs, recruiting costs and depreciation expense. These increases were offset by a decrease in facilities expense due to the fact that during the fourth quarter of fiscal 2000 we closed certain facilities acquired in the Gambit acquisition and to decreases in equipment repairs, advertising expenses and travel and entertainment costs.

*Sales and Marketing.* Sales and marketing expenses for fiscal 2002 decreased 3% to \$264.8 million as compared to \$274.0 million in fiscal 2001. The overall decrease is due to decreases of \$8.4 million in human resources, technology and facilities costs as a result of a decrease in sales and marketing headcount as a percentage of total headcount, \$1.3 million in employee functions, \$1.4 million in consulting expenses and \$2.8 million in other expenses including communications and supplies, charitable contributions, professional services, subscriptions and memberships as a result of our cost reduction efforts. These decreases are offset by increases of \$4.8 million in compensation and related costs attributable to an increase in sales and marketing headcount resulting from the Avant! Merger and \$1.9 million in travel relating to customer visits to discuss the potential integration of Synopsys and Avant! products.

Sales and marketing expenses for fiscal 2001 decreased 5% to \$274.0 million as compared to \$288.8 million in fiscal 2000. The decrease in fiscal 2001 compared to fiscal 2000 was due to decreases in annual commissions,

bonuses, travel, consulting expenses, recruiting, advertising and depreciation expense. These decreases were offset in part by an increase in personnel-related costs.

*General and Administrative.* General and administrative expenses for fiscal 2002 increased 13% to \$78.5 million as compared to \$69.7 million in fiscal 2001. The overall increase is due to increases of \$11.1 million in facilities costs as a result of an increased number of sites due to the Avant! merger, \$7.0 million in compensation and compensation-related costs as a result of increased headcount due to the Avant! merger, \$5.6 million in professional service fees, \$2.2 million in communications costs, \$1.6 million in equipment to update licenses for our internal enterprise application systems, \$1.4 million in depreciation and \$2.9 million in other expenses including travel and property tax assessments. These increases were offset by decreases of \$20.0 million as a result of decreased general and administrative headcount as a percentage of total headcount and \$3.9 million in consulting costs as a result of our cost reduction efforts.

General and administrative expenses for fiscal 2001 increased 18% to \$69.7 as compared to \$59.2 million. The increase in fiscal 2001 as compared to fiscal 2000 was due to increases in bad debt expense, facility expenditures and consulting services related to the upgrade of our current computer systems. These increases are offset by a decrease in personnel costs.

*Integration Costs.* Non-recurring integration costs incurred relate to merger activities which are not included in the purchase consideration under Emerging Issues Task Force Number 95-3 (EITF 95-3), *Recognition of Liabilities in Connection with a Purchase Business Combination*. These costs are expensed as incurred. During fiscal 2002, integration costs totaled \$128.5 million. These costs consisted primarily of (i) \$95.0 million related to the premium for the insurance policy acquired in conjunction with the Avant! merger, (ii) \$14.7 million related to write-downs of Synopsys facilities and property under the management approved facility exit plan for the Avant! merger, (iii) \$10.0 million and \$0.7 million related to severance costs for Synopsys employees who were terminated and costs associated with transition employees as a result of the Avant! and inSilicon mergers, respectively, (iv) \$1.3 million related to the write-off of software licenses owned by Synopsys which were originally purchased from Avant!, (v) \$3.7 million goodwill impairment charge related to a prior Synopsys acquisition as a result of the acquisition of Avant! and (vi) \$1.2 million and \$1.9 million of other expenses including travel and certain professional fees for the Avant! and Co-Design mergers, respectively.

*In-Process Research and Development.* The following paragraphs contain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, including statements and assumptions regarding percentage of completion, expected product release dates, dates for which we expect to begin generating benefits from projects, expected product capabilities and product life cycles, costs and efforts to complete projects, growth rates, royalty rates and projected revenue and expense information used by us to calculate discounted cash flows and discount rates. These forward-looking statements involve risks and uncertainties, and the cautionary statements set forth below and in “*Factors that May Affect Future Results*” identify important factors that could cause actual results to differ materially from those predicted in any such forward-looking statement.

Purchased in-process research and development (IPRD) of \$87.7 million and \$1.7 million in fiscal 2002 and 2000, respectively, represents the write-off of in-process technologies associated with our acquisitions of Avant! and inSilicon in fiscal 2002 and Leda in fiscal 2000. There were no acquisitions during fiscal 2001. At the date of each acquisition, the projects associated with the IPRD efforts had not yet reached technological feasibility and the research and development in process had no alternative future uses. Accordingly, these amounts were charged to expense on the respective acquisition dates of each of the acquired companies. Also see Note 3, Business Combinations, of Notes to Synopsys’ Consolidated Financial Statements.

*Valuation of IPRD.* The value assigned to acquired in-process technology is determined by identifying products under research in areas for which technological feasibility had not been established. The value of in-process technology is then segmented into two classifications: (i) developed technology – completed and (ii) in-process technology – to-be-completed, giving explicit consideration to the value created by the research and development efforts of the acquired business prior to the date of acquisition and to be created by Synopsys after the acquisition.

These value creation efforts were estimated by considering the following major factors: (i) time-based data, (ii) cost-based data and (iii) complexity-based data.

The value of the in-process technology was determined using a discounted cash flow model similar to the income approach, focusing on the income-producing capabilities of the in-process technologies. Under this approach, the value is determined by estimating the revenue contribution generated by each of the identified products within the classification segments. Revenue estimates were based on (i) individual product revenues, (ii) anticipated growth rates, (iii) anticipated product development and introduction schedules, (iv) product sales cycles and (v) the estimated life of a product's underlying technology. From the revenue estimates, operating expense estimates, including costs of sales, general and administrative, selling and marketing, income taxes and a use charge for contributory assets, were deducted to arrive at operating income. Revenue growth rates were estimated by management for each product and gave consideration to relevant market sizes and growth factors, expected industry trends, the anticipated nature and timing of new product introductions by us and our competitors, individual product sales cycles, and the estimated life of each product's underlying technology. Operating expense estimates reflect Synopsys' historical expense ratios. Additionally, these projects will require continued research and development after they have reached a state of technological and commercial feasibility. The resulting operating income stream was discounted to reflect its present value at the date of the acquisition. These estimates are subject to change, given the uncertainties of the development process, and no assurance can be given that deviations from these estimates will not occur or that we will realize any anticipated benefits of the acquisition.

The rate used to discount the net cash flows from purchased in-process technology is our weighted average cost of capital (WACC), taking into account our required rates of return from investments in various areas of the enterprise, and reflecting the inherent uncertainties in future revenue estimates from technology investments including the uncertainty surrounding the successful development of the acquired in-process technology, the useful life of such technology, the profitability levels of such technology, if any, and the uncertainty of technological advances, all of which are unknown at this time.

*Avant!*. The IPRD expense related to the Avant! merger was \$82.5 million. At the date of the Avant! merger, the principal in-process technologies were identified based on the following Avant! product families: Physical Products Division (PPD), Verification Products Division (VPD), Analysis Products Division (APD), Logical Products Division (LPD), MTB, Technology Computer-Aided Design (TCAD) and Analogy. For purposes of valuing the IPRD in accordance with the methodology discussed above, the following estimates were used: revenue growth ranging from 16% beginning in year two to 10% in year nine; cost of sales -- 7% of revenue in each year; general and administrative expenses -- 5% of revenue in each year; and sales and marketing -- 28% of revenue in each year. In addition, it was assumed there would be no expense reduction due to economic synergies as a result of the acquisition. The rate used to discount the net cash flows from the purchased in-process technology was in the range of 27%. The technologies were approximately 40% to 90% complete at the acquisition date. The nature of the efforts to complete these projects related, in varying degrees, to the completion of all planning, designing, prototyping, verification, and testing activities that are necessary to establish that the proposed technologies met their design specifications, including functional, technical, and economic performance requirements. Expenditures to complete the acquired in-process technologies are expected to total approximately \$17.5 million.

*inSilicon*. The IPRD expense related to the inSilicon acquisition was \$5.2 million. At the date of the inSilicon merger, the principal in-process technologies were identified based on the following inSilicon product lines: Ethernet, Joint Photographic Experts Group (JPEG), Java Technology, Peripheral Component Interconnect (PCI), PCI-X and Universal Serial Business (USB). For purposes of valuing the IPRD in accordance with the methodology discussed above, the following estimates were used: revenue growth ranging from 300% beginning in year three for certain products to revenue decline of 50% in year ten; cost of sales -- 8% of revenue in each year; and selling, general and administrative expenses -- ranging from 45% of revenue in year two to 30% of revenue in year seven. In addition, it was assumed there would be no expense reduction due to economic synergies as a result of the acquisition. The rates used to discount the net cash flows from the purchased in-process technology range from 26% to 36%. The technologies were approximately 20% to 67% complete at the acquisition date. The nature of the efforts to complete these projects related, in varying degrees, to the completion of all planning, designing, prototyping,

verification, and testing activities that are necessary to establish that the proposed technologies met their design specifications, including functional, technical, and economic performance requirements. Expenditures to complete the acquired in-process technologies are expected to total approximately \$4.9 million.

During fiscal 2000, we made an acquisition resulting in aggregate IPRD charges of \$1.7 million which was not individually material to the results of our operations in the respective year. The fair value of the related IPRD was determined in a manner substantially similar to that described above.

The risks associated with acquired research and development are considered high and no assurance can be made that these products will generate any benefit to us or meet market expectations.

*Amortization of Intangible Assets.* Goodwill represents the excess of the aggregate purchase price over the fair value of the tangible and identifiable intangible assets we have acquired. Goodwill for our pre-fiscal 2002 acquisitions and intangible assets are amortized over their estimated useful lives of three to ten years. We assess the recoverability of goodwill by estimating whether the unamortized cost will be recovered through estimated future undiscounted cash flows. Amortization of intangible assets charged to operating expenses for fiscal 2002 increased 68% to \$28.6 million as compared to \$17.0 million for fiscal 2001. The increase in amortization of intangible assets charged to operations for fiscal 2002 as compared to fiscal 2001 is due to the amortization of intangible assets acquired in the Avant!, inSilicon and Co-Design mergers during the current year. The Financial Accounting Standards Board recently issued new guidance with respect to the amortization and evaluation of goodwill. This new guidance is discussed below under “*Effect of New Accounting Standards*”.

In connection with the current year mergers, we also assumed unvested stock options held by Avant!, inSilicon and Co-Design employees. We have recorded deferred stock compensation totaling \$8.1 million, \$1.7 million and \$0.7 million based on the intrinsic value of these assumed unvested stock options for Avant!, inSilicon and Co-Design, respectively. The deferred stock compensation is amortized over the options’ remaining vesting period of one to three years. During fiscal 2002, we recorded amortization of deferred stock compensation in each of the following expense classifications in the statement of operations:

<i>(in thousands)</i>	
Cost of revenue	\$ 207
Research and development	499
Sales and marketing	234
General and administrative	582
Total	<u>\$ 1,522</u>

Amortization of intangible assets charged to operating expenses for fiscal 2001 increased 13% to \$17.0 million as compared to \$15.1 million in fiscal 2000. The increase in amortization of intangible assets charged to operations for fiscal 2001 as compared to fiscal 2000 is due to the write-off of certain technology totaling \$1.8 million acquired from, and goodwill totaling \$0.4 million related to, the acquisition of Eagle Design Automation, Inc. in 1997 and to the fact that the goodwill and intangible assets related to certain acquisitions completed during fiscal 2000 were amortized for the full year of fiscal 2001.

We periodically evaluate our intangible assets for indications of impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. If this evaluation indicates that the value of the intangible asset may be impaired, an assessment of the recoverability of the net carrying value of the asset over its remaining useful life is made. If this assessment indicates that the intangible asset is not recoverable, based on the estimated undiscounted future cash flows of the entity or technology acquired over the remaining amortization period, the net carrying value of the related intangible asset will be reduced to fair value and the remaining amortization period may be adjusted. In fiscal 2002, we recognized an aggregate impairment charge of \$3.8 million to reduce the amount of certain intangible assets associated with prior acquisitions to their estimated fair value. Approximately \$3.7 million and \$0.1 million are included in integration expense and amortization of intangible assets, respectively, on the statement of operations. The impairment charge is primarily attributable to certain technology acquired from, and goodwill related to, the acquisition of Stanza, Inc. in 1999. During the fourth quarter

of fiscal 2002, we determined that we would not allocate future resources to assist in the market growth of this technology as products acquired in the merger with Avant! provide customers with superior capabilities and we do not anticipate any future sales of the product.

In fiscal 2001, we recognized an aggregate impairment charge of \$2.2 million to reduce the amount of certain intangible assets associated with prior acquisitions to their estimated fair value. Approximately \$1.8 million and \$0.4 million are included in cost of revenues and amortization of intangible assets, respectively, on the statement of operations. The impairment charge is attributable to certain technology acquired from, and goodwill related to the acquisition of Eagle Design Automation, Inc. in 1997. During the fourth quarter of fiscal 2001, we determined that we would not allocate future resources to assist in the market growth of this technology and we do not anticipate any future sales of the product. There were no impairments of intangible assets in fiscal 2000.

*Other (Expense) Income, Net.* Other expense, net of other income is \$208.6 million in fiscal 2002. The balance consists primarily of the following: (i) \$240.8 million expense due to the settlement of the Cadence litigation as described under “Cadence Litigation”, (ii) \$11.3 million in impairment charges related to certain assets in our venture portfolio, (iii) realized gains on investments of \$22.7 million, (iv) a gain of \$3.1 million for the termination fee on the IKOS agreement, (v) rental income of \$10.0 million, (vi) interest income of \$8.3 million and (vii) and other miscellaneous expenses including amortization of premium forwards and foreign exchange gains and losses recognized during the fiscal year of \$0.6 million.

In fiscal 2001, other income, net of other expense was \$83.8 million. The balance consists primarily of the following: (i) a gain of \$10.6 million on the sale of our silicon libraries business to Artisan (ii) \$5.8 million in impairment charges related to certain assets in our venture portfolio, (iii) realized gains on investments of \$55.3million, (iv) rental income of \$8.6 million, (v) interest income of \$12.8 million and (vi) and other miscellaneous expenses including amortization of premium forwards and foreign exchange gains and losses recognized during the fiscal year of \$2.3 million.

In fiscal 2000, other income, net of other expense was \$40.8 million. The balance consists primarily of the following: (i) realized gains on investments of \$13.0 million, (ii) interest income of \$28.2 million and (iii) and other miscellaneous expenses including amortization of premium forwards and foreign exchange gains and losses recognized during the fiscal year of \$0.4 million.

*Interest Rate Risk.* Our exposure to market risk for changes in interest rates relates primarily to our short-term investment portfolio. We place our investments in a mix of tax-exempt and taxable instruments that meet high credit quality standards, as specified in our investment policy. The policy also limits the amount of credit exposure to any one issue, issuer and type of instrument. We do not anticipate any material losses due to this risk with respect to our investment portfolio.

The following table presents the carrying value and related weighted-average total return for our investment portfolio. The carrying value approximates fair value at October 31, 2002. In accordance with our investment policy, the weighted-average duration of our total invested funds does not exceed one year.

Principal (Notional) Amounts in U.S. Dollars:

	<b>Carrying Amount</b>	<b>Weighted- Average After Tax Return</b>
	<i>(in thousands)</i>	
Short-term investments — fixed rate	\$ 102,153	1.93%
Cash-equivalent investments — variable rate	5,253	1.69
Money market funds — variable rate	178,282	1.34
Total interest bearing instruments	\$ 285,688	1.56%

See Note 4, Financial Instruments, in the accompanying Notes to Consolidated Financial Statements for additional information on investment maturity dates, long-term debt and equity price risk related to our long-term investments.

*Foreign Currency Risk.* At the present time, we do not generally hedge anticipated foreign currency cash flows but hedge only (i) those currency exposures associated with certain assets and liabilities denominated in nonfunctional currencies and (ii) forecasted accounts receivable generally associated with sales contracts with extended payment terms and accounts payable denominated in non-functional currencies. Hedging activities undertaken are intended to offset the impact of currency fluctuations on these balances. The success of this activity depends upon the accuracy of our estimates of balances denominated in various currencies and in fluctuations in foreign currencies, primarily the Euro, Japanese yen, Taiwan dollar, British pound sterling, Canadian dollar, Singapore dollar, Korean won and Israeli shekel. At October 31, 2002, we had forward contracts for the sale and purchase of currencies with a notional value expressed in U.S. dollars of \$305.1 million. Looking forward, we do not anticipate any material adverse effect on our consolidated financial position, results of operations, or cash flows resulting from the use of these instruments. There can be no assurance that these hedging transactions will be effective in the future.

These foreign currency contracts contain credit risk in that the counterparty may be unable to meet the terms of the agreements. We have limited these agreements to major financial institutions to reduce such credit risk. Furthermore, we monitor the potential risk of loss with any one financial institution. We do not enter into forward contracts for speculative purposes. The realized gain (loss) on these contracts as they matured have not been material to our consolidated financial position, results of operations or cash flows.

The following table provides information about our foreign currency contracts at October 31, 2002. Due to the short-term nature of these contracts, the contract rates approximate the weighted-average currency exchange rates at October 31, 2002. These forward contracts mature in approximately thirty days and contracts are rolled-forward on a monthly basis to match firmly committed transactions.

Short-Term Forward Contracts to Sell and Buy Foreign  
Currencies in U.S. Dollars

	<b>USD Amount</b>	<b>Contract Rate</b>
	<i>(in thousands)</i>	
Forward Net Contract Values:		
Euro	\$250,272	1.0177
Japanese yen	35,974	122.9000
Taiwan dollar	4,508	34.7600
British pound sterling	1,856	0.6428
Korean won	2,204	1229.0000
Israeli shekel	651	4.8140
Canadian dollar	7,598	1.5636
Singapore dollar	2,084	1.7681
	\$305,147	

The unrealized gains of approximately \$10.0 million on the outstanding forward contracts at October 31, 2002 are presented net of tax in accumulated other comprehensive income. The realized gain/loss on these contracts as they matured were not material to our consolidated financial position, results of operations, or cash flows for the periods presented.

*Termination of Agreement to Acquire IKOS Systems, Inc.* On July 2, 2001, we entered into an Agreement and Plan of Merger and Reorganization (the IKOS Merger Agreement) with IKOS Systems, Inc. (IKOS). The IKOS Merger Agreement provided for the acquisition of all outstanding shares of IKOS common stock by Synopsys.

On December 7, 2001, Mentor Graphics Corporation (Mentor) commenced a cash tender offer to acquire all of the outstanding shares of IKOS common stock at \$11.00 per share, subject to certain conditions. On March 12,

2002, Synopsys and IKOS executed a termination agreement by which the parties terminated the IKOS Merger Agreement and pursuant to which IKOS paid Synopsys the \$5.5 million termination fee required by the IKOS Merger Agreement. This termination fee and \$2.4 million of expenses incurred in conjunction with the acquisition are included in other income, net on the consolidated statement of operations for the year ended October 31, 2002. Synopsys subsequently executed a revised termination agreement with Mentor and IKOS in order to add Mentor as a party thereto.

#### Acquisition of Avant! Corporation

On June 6, 2002 (the closing date), we completed the merger with Avant!.

*Reasons For the Acquisition.* Our Board of Directors unanimously approved the merger with Avant! at its December 1, 2001 meeting. In approving the merger agreement, the Board of Directors consulted with legal and financial advisors as well as with management and considered a number of factors. These factors include the fact that the merger is expected to enable Synopsys to offer its customers a complete end-to-end solution for system-on-chip design that includes Synopsys' logic synthesis and design verification tools with Avant!'s advanced place and route, physical verification and design integrity products, thus increasing customers' design efficiencies. By increasing customer design efficiencies, Synopsys expects to be able to better compete for customers designing the next generation of semiconductors. Further, by gaining access to Avant!'s physical design and verification products, as well as its broad customer base and relationships, Synopsys will gain new opportunities to market its existing products. The foregoing discussion of the information and factors considered by our Board of Directors is not intended to be exhaustive but includes the material factors considered by our Board of Directors.

*Purchase Price.* Holders of Avant! common stock received 0.371 of a share of Synopsys common stock (including the associated preferred stock rights) in exchange for each share of Avant! common stock owned as of the closing date, aggregating 14.5 million shares of Synopsys common stock. The fair value of the Synopsys shares issued was based on a per share value of \$54.74, which is equal to Synopsys' average last sale price per share as reported on the Nasdaq National Market for the trading-day period two days before and after December 3, 2001, the date of the merger agreement.

The total purchase consideration consists of the following:

<i>(in thousands)</i>	
Fair value of Synopsys common stock issued	\$ 795,388
Acquisition related costs	37,397
Facilities closure costs	62,638
Employee severance costs	51,014
Fair value of options to purchase Synopsys common stock issued, less \$8.1 million representing the portion of the intrinsic value of Avant!'s unvested options applicable to the remaining vesting period	63,033
	\$ 1,009,470

The acquisition-related costs of \$37.4 million consist primarily of banking, legal and accounting fees, printing costs, and other directly related charges including contract termination costs of \$6.3 million.

Facilities closure costs at the closing date include \$54.2 million related to Avant!'s corporate headquarters. After the merger, the functions performed in the buildings were consolidated into Synopsys' corporate facilities. The lessors have brought a claim against Avant! for the future amounts payable under the lease agreements. The amount accrued at the closing date is equal to the future amounts payable under the related lease agreements, without taking into consideration in the accrual any defenses the Company may have to the claim. Resolution of this contingency at an amount different from that accrued will result in an increase or decrease in the purchase consideration and the amount will be allocated to goodwill. Subsequent to October 31, 2002, Synopsys settled all of the claims of the landlord of two of these buildings for \$7.4 million. The remaining facilities closure costs at the closing date totaling

\$8.4 million represents the present value of the future obligations under certain of Avant!'s lease agreements which the Company has or intends to terminate under an approved facilities exit plan plus additional costs expected to be incurred directly related to vacating such facilities.

Employee severance costs include (i) \$39.6 million in cash paid to Avant!'s Chairman of the Board, consisting of severance plus a cash payment equal to the intrinsic value of his in-the-money stock options at the closing date, (ii) \$5.1 million in cash severance payments paid to redundant employees (primarily sales and corporate infrastructure personnel) terminated on or subsequent to the consummation of the merger under an approved plan of termination and (iii) \$6.3 million in termination payments to certain executives in accordance with their respective pre-merger employment agreements. The total number of Avant! employees terminated as a result of the merger was approximately 250.

As of October 31, 2002, \$89.7 million of costs described in the three preceding paragraphs have been paid and \$61.4 million of these costs have not yet been paid. The following table presents the components of acquisition-related costs recorded, along with amounts paid during fiscal 2002.

<i>(in thousands)</i>	<b>Initial Total Cost</b>	<b>Additions</b>	<b>Subtotal</b>	<b>Payments through October 31, 2002</b>	<b>Balance at October 31, 2002</b>
Acquisition related costs	\$ 37,342	\$ 55	\$37,397	\$33,557	\$ 3,840
Facilities closure costs	62,638	--	62,638	5,377	57,261
Employee severance costs	50,367	647	51,014	50,724	290
<b>Total</b>	<b>\$ 150,347</b>	<b>\$ 702</b>	<b>151,049</b>	<b>\$89,658</b>	<b>\$ 61,391</b>

During the fourth quarter of fiscal 2002, additions were made to increase the total acquisition related costs including an increase to employee severance costs totaling \$0.6 million for actual amounts paid to such employees.

The total purchase consideration has been allocated to the assets and liabilities acquired, including identifiable intangible assets, based on their respective fair values at the acquisition date and resulting in excess purchase consideration over the net tangible and identifiable intangible assets acquired of \$369.5 million. The following unaudited condensed balance sheet data presents the fair value of the assets and liabilities acquired (after certain adjustments made during the fourth quarter to the preliminary fair values of the assets and liabilities acquired).

<i>(in thousands)</i>	
Assets acquired	
Cash, cash equivalents and short-term investments	\$ 241,313
Accounts receivable	65,971
Prepaid expenses and other current assets	18,082
Intangible assets	373,300
Goodwill	369,470
Other assets	3,875
Total assets acquired	<u>\$ 1,072,011</u>
Liabilities acquired	
Accounts payable and accrued liabilities	\$ 173,998
Deferred revenue	30,080
Income taxes payable	89,274
Other liabilities	4,651
Total liabilities acquired	<u>\$ 298,003</u>

The initial allocation of the purchase price included certain assets and liabilities that we recorded using preliminary estimates of fair value. During the fourth quarter of 2002, the value assigned to Avant!'s investment in a



venture capital fund was reduced from the preliminary value of \$12.8 million to \$5.0 million upon obtaining additional information on the venture fund's non-public investments and subsequent sale of the investment to a third party. The decrease in the fair value of the investment increased the consideration allocated to goodwill by \$7.8 million. During the fourth quarter of 2002, the Company also increased the value of the acquired customs and use-tax liabilities by \$2.5 million, resulting in a corresponding increase in goodwill.

*Asset Held for Sale.* As a result of the merger, Synopsys acquired Avant!'s physical libraries business, and was obligated to offer and sell such business to Artisan Components, Inc. under the terms of a January 2001 non-compete agreement, under which we agreed not to engage, directly or indirectly, in the physical libraries business before January 3, 2003. As of the closing date, the value allocated to the acquired libraries business had been recorded as net assets held for sale, based on the estimated future net cash flows from the libraries business in accordance with EITF 87-11, *Allocation of Purchase Price to Assets to Be Sold*. During the fourth quarter of fiscal 2002, management determined that the libraries business would not be sold and, accordingly, allocated the fair value of the libraries business as of the closing date to the underlying tangible assets and intangible assets. The fair value allocated to the tangible and intangible assets was \$8.3 million, with the remaining fair value allocated to goodwill. This allocation is reflected in the balance sheet as of October 31, 2002.

*Goodwill and Intangible Assets.* Goodwill, representing the excess of the purchase price over the fair value of tangible and identifiable intangible assets acquired in the merger, will not be amortized, consistent with the guidance in SFAS 142 as discussed under "Effect of New Accounting Standards" below. The goodwill associated with the Avant! acquisition is not deductible for tax purposes. In addition, a portion of the purchase price was allocated to the following identifiable intangible assets:

<b>Intangible Asset</b>	<i>(in thousands)</i>	<b>Estimated Useful Life</b>
Core/developed technology	\$ 189,800	3 years
Contract rights intangible	51,700	3 years
Customer installed base/relationship	102,900	6 years
Trademarks and tradenames	17,700	3 years
Covenants not to compete	9,100	The life of the related agreement (2 to 4 years)
Customer backlog	2,100	3 years
Total	<u>\$ 373,300</u>	

*Contract Rights Intangible.* Avant! had executed signed license agreements and delivered the initial configuration of licensed technologies under ratable license arrangements and had executed signed contracts to provide PCS over a one to three year period, for which Avant! did not consider the fees to be fixed or determinable at the outset of the arrangement. There were no receivables or deferred revenues recorded on Avant!'s historical financial statements at the closing date as the related payments were not yet due under extended payment terms and deliveries are scheduled to occur over the terms of the arrangements. These ratable licenses and PCS arrangements require future performance by both parties and, as such, represent executory contracts. The contract rights intangible asset associated with these arrangements is being amortized to cost of revenue over the related contract lives of three years.

The amortization of intangible assets, with the exception of the contract rights intangible and core/developed technology, is included in operating expenses in the statement of operations for the fiscal year ended October 31, 2002. Amortization of core/developed technology and contract rights intangible is included in cost of revenue.

*Cadence Litigation.* At the time of the acquisition of Avant!, Avant! was engaged in civil litigation with Cadence regarding alleged misappropriation of trade secrets, among other things, by Avant! and certain individuals.

In connection with the merger, Synopsys entered into a policy with a subsidiary of American International Group, Inc., a AAA-rated insurance company, whereby insurance was obtained for certain compensatory, exemplary and punitive damages, penalties and fines and attorneys' fees arising out of pending litigation between Avant! and Cadence. The policy did not provide coverage for litigation other than the Avant!/Cadence litigation.

We paid a total premium of \$335 million for the policy, of which \$240 million was contingently refundable. The balance of the premium paid to the insurer (\$95 million) is included in integration expense for the year ended October 31, 2002. Under the policy the insurer is obligated to pay covered loss up to a limit of liability equaling (a) \$500 million plus (b) interest accruing at the fixed rate of 2%, compounded semi-annually, on \$250 million (the interest component), as reduced by previous covered losses. Interest earned on \$250 million is included in other income, net in the post-merger statement of operations.

On November 13, 2002, Cadence and Synopsys reached a settlement of the litigation. Under the terms of the agreement, Cadence will be paid \$265 million in two installments—\$20 million on November 22, 2002 and \$245 million on December 16, 2002. In addition, Cadence and Synopsys have entered into reciprocal licenses arrangements covering the intellectual property at issue in the litigation. As a result of the payment, Synopsys has recognized expense of approximately \$240.8 million, which is equal to the contingently refundable portion of the insurance premium plus interest accrued on the restricted asset. This expense is included in other income and expense on the statement of operations.

#### Acquisition Of Co-Design

On September 6, 2002, we completed the acquisition of Co-Design.

*Reasons for the Acquisition.* In approving the merger agreement, management considered a number of factors, including (i) the acquisition will help promote the development and adoption of the Superlog language, which we believe can increase designer productivity; (ii) the combination of Co-Design's technology with our high-level verification and design implementation tools is expected to improve the performance of our software products; and (iii) the acquisition gives us access to Co-Design's highly-skilled employees who will help us improve our existing products and facilitate the development of new products. The foregoing discussion of the information and factors considered by Synopsys' management is not intended to be exhaustive but includes the material factors considered.

*Purchase Price.* Holders of Co-Design common stock received consideration consisting of cash and notes totaling \$32.7 million in exchange for all shares of Co-Design common stock owned as of the merger date. The total purchase consideration consists of the following:

<i>(in thousands)</i>	
Cash paid and notes issued of \$2.9 million for Co-Design common stock	\$ 32,651
Acquisition related costs	1,038
Fair value of options to purchase Synopsys common stock issued, less \$0.7 million representing the portion of the intrinsic value of Co-Design's unvested options applicable to the remaining vesting period	593
	<u>\$ 34,282</u>

The acquisition-related costs of approximately \$1.0 million consist primarily of legal and accounting fees. As of October 31, 2002, substantially all of these acquisition-related costs have been paid.

Total consideration for the acquisition and services provided has been allocated to the total assets acquired of \$8.8 million, total liabilities assumed of \$5.3 million and notes payable of \$4.8 million, including identifiable intangible assets, based on their respective fair values at the acquisition date. The identifiable intangible assets consist of core/developed technology totaling \$6.2 million which is being amortized over an estimated useful life of 10 years due to the fact that this technology is essentially a programming language. The \$4.8 million of notes are payable to former Co-Design shareholders in 2007 of which \$1.9 million has been included in integration expense for services performed in the statement of operations. If certain milestones are met, the notes may be prepaid in fiscal 2004 and upon prepayment, an additional interest component totaling approximately \$1.0 million is also payable. The total purchase consideration has been allocated to the assets and liabilities acquired, including

identifiable intangible assets, based on their respective fair values at the acquisition date and resulted in excess purchase consideration over the net tangible and identifiable intangible assets acquired of \$27.7 million.

#### Acquisition of inSilicon

On September 20, 2002, we completed the acquisition of inSilicon.

*Reasons for the Acquisition.* In approving the merger agreement, management considered a number of factors, including the complementary nature of inSilicon's portfolio of intellectual property blocks and Synopsys' own portfolio; the fact that inSilicon had established a per-use license model for its IP products, which would accelerate Synopsys' adoption of a per-use model for its new and development-stage IP, inSilicon's relationships with chip design teams, inSilicon's positive reputation as a vendor of high-quality IP and inSilicon's highly-skilled employee base. The foregoing discussion of the information and factors considered by our management is not intended to be exhaustive but includes the material factors considered.

*Purchase Price.* Holders of inSilicon common stock received \$4.05 in exchange for each share of inSilicon common stock owned as of the merger date, or approximately \$65.4 million. The total purchase consideration consists of the following:

<i>(in thousands)</i>	
Cash paid for inSilicon common stock	\$ 65,386
Acquisition related costs	6,221
Fair value of options to purchase Synopsys common stock issued, less \$1.7 million representing the portion of the intrinsic value of inSilicon's unvested options applicable to the remaining vesting period	2,975
	\$ 74,582

The acquisition-related costs of \$6.2 million consist primarily of legal and accounting fees of \$1.8 million, and other directly related charges including contract termination costs of \$3.3 million, and restructuring costs of approximately \$0.8 million. As of October 31, 2002, \$3.4 million of acquisition-related costs have been paid. Of the balance remaining at October 31, 2002, \$2.2 million represents outstanding contract termination costs.

The total purchase consideration has been allocated to the assets and liabilities acquired, including identifiable intangible assets, based on their respective fair values at the acquisition date, resulting in goodwill of \$22.2 million. The following unaudited condensed balance sheet data presents the fair value of the assets and liabilities acquired.

<i>(in thousands)</i>	
Assets acquired	
Cash, cash equivalents and short-term investments	\$ 24,908
Accounts receivable	2,428
Prepaid expenses and other current assets	7,463
Core/developed technology	15,100
Customer backlog	1,200
Goodwill	22,160
Other assets	1,290
Total assets acquired	\$ 74,549
Liabilities acquired	
Accounts payable and accrued liabilities	\$ 8,242
Deferred revenue	1,137
Income taxes payable	463
Other liabilities	1,736
Total liabilities acquired	\$ 11,578

*Goodwill and Intangible Assets.* Goodwill, representing the excess of the purchase consideration over the fair value of tangible and identifiable intangible assets acquired in the merger will not be amortized, consistent with the guidance in SFAS 142 as discussed under “Effect of New Accounting Standards” below. The goodwill associated with the inSilicon acquisition is not deductible for tax purposes.

inSilicon had executed signed contracts with five of its major customers to provide IP licenses, including significant modifications to the IP license in order to meet unique customer requirements. The value associated with these contracts was determined by quantifying the projected cash flow related to these contracts, discounted to present value, and is recorded as customer backlog in intangible assets in the consolidated balance sheets.

Intangible assets are being amortized over their estimated useful life of 3 years. The amortization of intangible assets is included in cost of revenue in the statement of operations for the fiscal year ended October 31, 2002.

*Unaudited Pro Forma Results of Operations.* The following table presents pro forma results of operations and gives effect to the Avant! and inSilicon mergers as if the mergers were consummated on November 1, 2000. The unaudited pro forma results of operations are not necessarily indicative of the results of operations had the Avant! and inSilicon mergers actually occurred at the beginning of fiscal 2001, nor is it necessarily indicative of future operating results:

	<b>Year Ended October 31,</b>	
	<b>2002</b>	<b>2001</b>
	<i>(in thousands, except per share amounts)</i>	
Revenues	\$ <b>1,186,916</b>	\$ 1,100,249
Net income	\$ <b>117,494</b>	\$ 78,909
Basic earnings per share	\$ <b>1.56</b>	\$ 1.05
Weighted average common shares outstanding	<b>75,311</b>	75,131
Diluted earnings per share	\$ <b>1.49</b>	\$ 0.98
Weighted average common shares and dilutive stock options outstanding	<b>78,656</b>	80,180

The unaudited pro forma results of operations for each of the periods presented exclude non-recurring merger costs of \$335.8 million for the Avant! insurance policy premium, \$82.5 million for IPRD resulting from the Avant! merger, \$5.2 million for IPRD resulting from the inSilicon merger and \$21.0 million and \$268.1 million for Avant!’s pre-merger litigation settlement and other related costs incurred in fiscal 2002 and 2001, respectively. These expenses are included in the historical consolidated statement of operations.

*Prior Year Business Combinations and Divestitures.* On January 4, 2001, we sold the assets of our silicon libraries business to Artisan Components, Inc. for a total sales price of \$15.5 million, including common stock with a fair value on the date of sale of \$11.4 million, and cash of \$4.1 million. The net book value of the assets sold was \$1.4 million. Expenses incurred in connection with the sale were \$3.5 million. We recorded a gain on the sale of the business of \$10.6 million, which is included in other income, net in 2001. Direct revenue for the silicon libraries business was \$0.2 million and \$4.3 million for the fiscal years 2001 and 2000, respectively.

There were no business combinations completed in fiscal 2001.

In fiscal 2000, we acquired (i) VirSim, a software product, from Innoveda, Inc., for a purchase price of approximately \$7.0 million in cash, (ii) The Silicon Group, Inc., a privately held provider of integrated circuit design and intellectual property integration services, for a purchase price of \$3.0 million, including cash payments of \$1.8 million and a reserve of approximately 34,000 shares of common stock for issuance under The Silicon Group’s stock option plan which was assumed in the transaction, and (iii) Leda, S.A. (Leda), a privately held provider of

RTL coding-style-checkers, for a purchase price of \$7.7 million, including cash payments of \$7.5 million. Approximately \$1.7 million of the Leda purchase price was allocated to in-process research and development and charged to operations because the acquired technology had not reached technological feasibility and had no alternative uses. The purchase price of each of these transactions was allocated to the acquired assets and liabilities based on their estimated fair values as of the date of the respective acquisition. Amounts allocated to developed technology, workforce and goodwill have been amortized on a straight-line basis over periods ranging from three to five years. Effective November 1, 2002, goodwill will no longer be amortized in accordance with SFAS 142 as discussed below under "Effect of New Accounting Standards".

### Subsequent Events

*Renewal of Stock Repurchase Program.* In December 2002, our Board of Directors renewed our stock repurchase program originally approved in July 2001. Under the renewed program, we may repurchase Synopsys common stock with a market value up to \$500 million (not including amounts purchased to date under the July 2001 program on the open market). Common shares repurchased are intended to be used for ongoing stock issuances, such as for existing employee stock option and stock purchase plans and acquisitions.

*Proposed Acquisition of Numerical Technologies, Inc.* On January 13, 2003, we entered into an Agreement and Plan of Merger with Numerical Technologies, Inc. (Numerical) under which we commenced a cash tender offer to acquire all of the outstanding shares of Numerical common stock at \$7.00 per share, followed by a second-step merger in which we would acquire any untendered Numerical shares at the same price per share. The total transaction value is expected to be approximately \$250 million. Following the consummation of the cash tender offer, Numerical will merge with and into a wholly owned subsidiary of Synopsys. The acquisition is subject to certain conditions, including the tender of a majority of the fully diluted shares of Numerical, compliance with regulatory requirements and customary closing conditions.

*Workforce Reduction.* During the first quarter of fiscal 2003, we implemented a workforce reduction. The purpose was to reduce expenses by decreasing the number of employees in all departments in domestic and foreign locations. As a result, we expect to record a charge of between \$4.8 million and \$5.3 million during the first quarter of fiscal 2003. The charge consists of severance and other special termination benefits.

### **Effect of New Accounting Standards**

In July 2001, the Financial Accounting Standards Board (FASB) issued Statements of Financial Accounting Standards No. 141, *Business Combinations* (SFAS 141), and Financial Accounting Standards No. 142, *Goodwill and Other Intangible Assets* (SFAS 142). SFAS 141 requires that the purchase method of accounting be used for all business combinations initiated after June 30, 2001 and specifies criteria intangible assets acquired in a purchase method business combination must meet to be recognized apart from goodwill. SFAS 142 requires that goodwill and intangible assets with indefinite useful lives no longer be amortized, but instead be tested for impairment at least annually in accordance with the provisions of SFAS 142.

We adopted SFAS 142 on November 1, 2002. As of October 31, 2002, unamortized goodwill is \$434.6 million, which will no longer be amortized subsequent to the adoption of SFAS 142. Related goodwill amortization expense for fiscal 2002, 2001 and 2000 is \$16.2 million, \$17.0 million and \$15.1 million, respectively.

We adopted the provisions of SFAS 141 on July 1, 2001. Under SFAS 141, goodwill and intangible assets with indefinite useful lives acquired in a purchase business combination completed after June 30, 2001, but before SFAS 142 is adopted, will not be amortized but will continue to be evaluated for impairment in accordance with SFAS 121. Goodwill and intangible assets acquired in business combinations completed before July 1, 2001 will continue to be amortized and tested for impairment in accordance with current accounting guidance until the date of adoption of SFAS 142.

Upon adoption of SFAS 142, we must evaluate our existing intangible assets and goodwill acquired in purchase business combinations prior to July 1, 2001, and make any necessary reclassifications in order to conform with the

new criteria in SFAS 141 for recognition apart from goodwill. Upon adoption of SFAS 142, we have assessed useful lives and residual values of all intangible assets acquired. We have also tested goodwill for impairment in accordance with the provisions of SFAS 142. In completing our impairment analysis, we have determined that we have one reporting unit as the company operates in one reportable segment. In conjunction with the implementation of SFAS No. 142, we have completed a goodwill impairment review as of the beginning of fiscal 2003 and found no impairment. This impairment review was based on the fair value of the Company as determined by its market capitalization.

In July 2001, the FASB issued Statement of Financial Accounting Standards No. 143, *Accounting for Asset Retirement Obligations* (SFAS 143). SFAS 143 requires that asset retirement obligations that are identifiable upon acquisition, construction or development and during the operating life of a long-lived asset be recorded as a liability using the present value of the estimated cash flows. A corresponding amount would be capitalized as part of the asset's carrying amount and amortized to expense over the asset's useful life. We are required to adopt the provisions of SFAS 143 effective November 1, 2002. The adoption of SFAS 143 will not have a significant impact on our financial position and results of operations.

In August 2001, the FASB issued Statement of Financial Accounting Standards No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets* (SFAS 144), which addresses financial accounting and reporting for the impairment or disposal of long-lived assets and supersedes SFAS No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of*, and the accounting and reporting provisions of APB Opinion No. 30, *Reporting the Results of Operations for a Disposal of a Segment of a Business*. We are required to adopt the provisions of SFAS 144 no later than November 1, 2002. The adoption of SFAS 144 will not have a significant impact on our financial position and results of operations.

In July 2002, the FASB issued Statement of Financial Accounting Standards No. 146 (SFAS 146), *Accounting for Exit or Disposal Activities*. SFAS 146 addresses the recognition, measurement, and reporting of costs that are associated with exit and disposal activities, including costs related to terminating a contract that is not a capital lease and termination benefits that employees who are involuntarily terminated receive under the terms of a one-time benefit arrangement that is not an ongoing benefit arrangement or an individual deferred-compensation contract. SFAS 146 supersedes Emerging Issues Task Force Issue No. 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)* and requires liabilities associated with exit and disposal activities to be expensed as incurred. SFAS 146 will be effective for exit or disposal activities of ours that are initiated after December 31, 2002. We believe that the adoption of SFAS 146 will not have a significant impact on our financial position and results of operations.

In December 2002, the FASB issued Statement of Financial Accounting Standards No. 148 (SFAS 148), *Accounting for Stock-Based Compensation - Transition and Disclosure*. SFAS 148 amends FASB Statement No. 123 (SFAS 123), *Accounting for Stock-Based Compensation*, to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, SFAS 148 amends the disclosure requirements of SFAS 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. The transition guidance and annual disclosure provisions of SFAS 148 are effective for fiscal years ending after December 15, 2002. The interim disclosure provisions are effective for financial reports containing financial statements for interim periods beginning after December 15, 2002. We are currently evaluating the impact of adoption of SFAS 148 on our financial position and results of operations.

In November 2002, the EITF reached a consensus on Issue No. 00-21 (EITF 00-21), *Revenue Arrangements with Multiple Deliverables*. EITF 00-21 addresses certain aspects of the accounting by a vendor for arrangements under which the vendor will perform multiple revenue generating activities. EITF 00-21 will be effective for fiscal years beginning after June 15, 2003. We do not expect the adoption of EITF 00-21 to have a material impact on our financial position and results of operations.

In November 2002, the FASB Interpretation No. 45 (Interpretation 45), *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*, which clarifies disclosure

and recognition/measurement requirements related to certain guarantees. The disclosure requirements are effective for financial statements issued after December 15, 2002 and the recognition/measurement requirements are effective on a prospective basis for guarantees issued or modified after December 31, 2002. We are currently evaluating the impact of adoption of Interpretation 45 on our financial position and results of operations.

### **Liquidity and Capital Resources**

Cash, cash equivalents and short-term investments were \$414.7 million at October 31, 2002, a decrease of \$61.7 million, or 13%, from \$476.4 million at October 31, 2001. Cash used in operating activities was \$181.0 million for fiscal 2002 compared to cash provided by operating activities of \$295.5 million in fiscal 2001. The decrease in cash flows from operating activities is due primarily to the insurance premium payments totaling \$335.8 million related to the Avant! acquisition and payments for income taxes and other liabilities made during the year.

Cash provided by investing activities was \$275.7 million in fiscal 2002 compared to \$61.8 million provided by investing activities during fiscal 2001. The increase of \$213.9 million in 2002 in cash provided by investing activities is due primarily to the cash acquired in the 2002 acquisitions, net of cash received, of \$168.3 million. Net proceeds from the sale of short- and long-term investments totaled \$157.8 million for fiscal 2002 as compared to net proceeds of investments of \$141.5 million for fiscal 2001. The cash received from the sales of investments during fiscal 2002 was primarily used to purchase treasury stock. Capital expenditures totaled \$48.8 million during fiscal 2002 compared to \$82.5 million in fiscal 2001. During fiscal 2001, we invested in fixed assets, primarily related to construction of our Oregon facilities and computing equipment to upgrade our internal engineering and enterprise application systems.

We used \$51.8 million in net cash for financing activities during 2002 compared to \$232.7 in fiscal 2001. The primary financing uses of cash during 2002 were the repurchase of 3.9 million shares of common stock at an average price of \$44.20 per share. Financing proceeds from the sale of shares pursuant to our employee stock plans during fiscal 2002 were \$119.9 million compared to \$105.4 million during fiscal 2001.

Accounts receivable increased \$60.9 million, or 41%, to \$207.2 million at October 31, 2002 from \$146.3 million at October 31, 2001 largely due to the Avant! merger. Days sales outstanding, which is calculated based on revenues for the most recent quarter and accounts receivable as of the balance sheet date decreased to 61 days as of October 31, 2002 from 73 days at October 31, 2001. The decrease in days sales outstanding is due in part to the timing of large cash collections realized during the fourth quarter of fiscal 2002.

We believe that our current cash, cash equivalents, short-term investments and cash generated from operations will satisfy our business requirements for at least the next twelve months.

### **Stock Option Plans**

Under our 1992 Stock Option Plan (the 1992 Plan), 19,475,508 shares of common stock have been authorized for issuance. Pursuant to the 1992 Plan, the Board of Directors may grant either incentive or non-qualified stock options to purchase shares of common stock to eligible individuals at not less than 100% of the fair market value of those shares on the grant date. Stock options generally vest over a period of four years and expire ten years from the date of grant. As of October 31, 2002, 6,114,514 stock options remain outstanding and 3,523,486 shares of common stock are reserved for future grants under the 1992 Plan.

Under our Non-Statutory Stock Option Plan (the 1998 Plan), 26,623,534 shares of common stock have been authorized for issuance. Pursuant to the 1998 Plan, the Board of Directors may grant non-qualified stock options to employees, excluding executive officers. Exercisability, option price and other terms are determined by the Board of Directors, but the option price shall not be less than 100% of the fair market value of the stock at the grant date. Stock options generally vest over a period of four years and expire ten years from the date of grant. At October 31, 2002, 18,832,666 stock options remain outstanding and 4,817,722 shares of common stock were reserved for future grants.

Under our 1994 Non-Employee Directors Stock Option Plan (the Directors Plan), a total of 750,000 shares have been authorized for issuance. The Directors Plan provides for automatic grants to each non-employee member of the Board of Directors upon initial appointment or election to the Board, reelection and for annual service on Board committees. Stock options are granted at not less than 100% of the fair market value of those shares on the grant date. Stock options granted upon appointment or election to the Board vest 25% annually but may be exercised immediately. Stock options granted upon reelection to the Board and for committee service vest 100% after the first year of continuous service. As of October 31, 2002, 515,580 stock options remain outstanding and 71,839 shares of common stock were reserved for future grants.

We have assumed certain option plans in connection with business combinations. Generally, these options were granted under terms similar to the terms of our stock option plans at prices adjusted to reflect the relative exchange ratios. All assumed plans were terminated as to future grants upon completion of each of the business combinations.

We monitor dilution related to our option program by comparing net option grants in a given year to the number of shares outstanding. The dilution percentage is calculated as the new option grants for the year, net of options forfeited by employees leaving the Company, divided by the total outstanding shares at the end of the year. The option dilution percentages were 3.4% and 6.3% for fiscal 2002 and 2001, respectively. We also have a share repurchase program where we regularly repurchase shares from the open market to offset dilution related to our option program.

A summary of the distribution and dilutive effect of options granted is as follows:

	<b>Year Ended October 31,</b>	
	<b>2002</b>	<b>2001</b>
Net grants during the period as percentage of outstanding shares	<b>3.4%</b>	6.3%
Grants to Named Executive Officers during the period as percentage of total options granted	<b>9.3%</b>	5.1%
Grants to Named Executive Officers during the period as percentage of outstanding shares	<b>0.5%</b>	0.5%
Total outstanding options held by Named Executive Officers as percentage of total options outstanding	<b>13.7%</b>	13.6%

A summary of our stock option activity and related weighted-average exercise prices for fiscal 2002 is as follows:

	<b>Options Outstanding</b>		
	<b>Shares Available for Options</b>	<b>Number of Shares</b>	<b>Weighted-Average Exercise Price</b>
	<i>(in thousands, except per share amounts)</i>		
Balance at October 31, 2001	8,209	25,920	\$ 40.10
Grants	(4,081)	4,081	\$ 47.88
Options assumed in acquisitions	—	2,511	\$ 37.16
Exercises	—	(2,851)	\$ 34.43
Cancellations	1,585	(1,681)	\$ 42.93
Additional shares reserved	2,700	—	—
Balance at October 31, 2002	<b>8,413</b>	<b>27,980</b>	<b>\$ 41.40</b>

As of October 31, 2002, a total of 19.5 million, 26.6 million and 750,000 shares were reserved for issuance under our 1992, 1998 and Directors Plans, respectively, of which 8.4 million shares were available for future grants. For



additional information regarding our stock option activity during fiscal 2001, please see Note 6 of Notes to Consolidated Financial Statements.

A summary of outstanding in-the-money and out-of-the-money options and related weighted-average exercise prices as of October 31, 2002 is as follows:

	Exercisable(2)		Unexercisable		Total	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
	<i>(in thousands, except per share amounts)</i>					
In-the-Money	9,061	\$ 33.37	5,825	\$ 33.56	14,886	\$ 33.45
Out-of-the-Money (1)	6,034	\$ 50.97	7,060	\$ 49.97	13,094	\$ 50.43
Total Options Outstanding	<u>15,095</u>	\$ 40.41	<u>12,885</u>	\$ 42.56	<u>27,980</u>	\$ 41.40

(1) Out-of-the-money options are those options with an exercise price equal to or above the closing price of \$39.64 on November 1, 2002, the last trading day of the fiscal year.

(2) Exercisable shares represent those options that have vested and exclude 135,000 options granted to Directors that are exercisable prior to the vesting date.

The following table sets forth further information regarding individual grants of options during fiscal 2002 for each of the Named Executive Officers.

Name	Individual Grants		Range of Exercise Prices (\$/Share)	Expiration Date	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term (\$)	
	Number of Securities Under-lying Options Granted (1)	Percent of Total Options Granted to Employees (2)			5%	10%
Aart J. de Geus	106,500	2.69%	\$44.56 — \$56.17	12/17/11 — 8/27/12	\$3,533,394	\$8,954,315
Chi-Foon Chan	91,700	2.32%	\$44.56 — \$56.17	12/17/11 — 8/27/12	\$3,028,417	\$7,674,603
Vicki L. Andrews	72,900	1.84%	\$44.56 — \$56.17	12/17/11 — 8/27/12	\$2,417,345	\$6,126,027
Robert B. Henske	73,300	1.85%	\$44.56 — \$56.17	12/17/11 — 8/27/12	\$2,429,772	\$6,157,520
Steven K. Shevick	25,300	0.64%	\$44.56 — \$56.17	12/17/11 — 8/27/12	\$ 825,997	\$2,093,239

(1) Sum of all option grants made during the fiscal year to such person. Options become exercisable ratably in a series of monthly installments over a four-year period from the grant date, assuming continued service to Synopsys, subject to acceleration under certain circumstances involving a change in control of Synopsys. Each option has a maximum term of 10 years, subject to earlier termination upon the optionee's cessation of service.

(2) Based on total of 3,960,661 shares subject to options granted to employees under Synopsys' option plans during fiscal 2002.

The following table provides the specified information concerning exercises of options to purchase our common stock and the value of unexercised options held by our Named Executive Officers at October 31, 2002:

Name	Shares Acquired On Exercise	Value Realized (1)	Number of Securities Underlying Unexercised Options at October 31, 2002 Exercisable/Unexercisable		Value of In -the-Money Options at October 31, 2002 (2) Exercisable/Unexercisable	
Aart J. de Geus	—	—	1,281,09	447,606	\$4,659,659	\$1,236,025
Chi-Foon Chan	—	—	810,462	377,438	\$1,919,835	\$ 945,044
Vicki L. Andrews	50,000	\$ 962,700	93,908	172,658	\$ 138,782	\$ 389,438
Robert B. Henske	—	—	236,633	237,167	\$ 607,275	\$ 467,825
Steven K. Shevick	5,000	\$ 132,725	109,082	73,218	\$ 349,036	\$ 163,144

(1) Market value at exercise less exercise price.

(2) Market value of underlying securities on November 1, 2002 (\$39.64) minus the exercise price.

The following table provides information regarding equity compensation plans approved and not approved by security holders as of October 31, 2002 (in thousands, except price per share amounts):

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants, and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants, and Rights (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a)) (c)
Employee Equity Compensation Plans Approved by Stockholders (1992 Stock Option Plan)	6,114,514	\$ 39.76	3,523,486
Employee Equity Compensation Plans Not Approved by Stockholders (1998 Non-Statutory Stock Option Plan)	18,832,666	\$ 42.64	4,817,722
Total	<u>24,947,180 (1)(2)</u>	\$ 41.94	<u>8,341,208 (2)</u>

(1) Does not include information for options assumed in connection with mergers and acquisitions. As of October 31, 2002, a total of 2,516,779 shares of our common stock were issuable upon exercise of such outstanding options.

(2) Does not include information for options under the Directors Plan. As of October 31, 2002, a total of 515,580 shares of our common stock were issuable upon exercise of such outstanding options and 71,839 were available for future issuance.

### Factors That May Affect Future Results

*Weakness in the semiconductor and electronics businesses may negatively impact Synopsys' business.* Synopsys' business depends on the semiconductor and electronics industries. During 2001 and 2002, these industries experienced steep declines in orders and revenue. In February 2002, for example, semiconductor sales (on a three month rolling average basis) were down approximately 45% from their all-time peak, reached in October 2000. By October 2002, sales remained 33% below the peak. Despite this marginal improvement, customers report a significant lack of visibility in their businesses, and this has affected their buying behavior. Customers are scrutinizing their purchases of EDA software very carefully. In addition, they are increasingly demanding, and we have granted, extended payment terms on their purchases, which has affected our cash flow. Based on our interactions with customers, Synopsys does not expect a material recovery in the semiconductor and electronics industries in 2003; if recovery continues we believe that it will be very gradual, at best. Consequently, Synopsys is not expecting material growth in the EDA industry in 2003.

Demand for electronic design automation products is largely dependent upon the commencement of new design projects by semiconductor manufacturers and their customers, the increasing complexity of designs and the number of design engineers. During 2001 and 2002 many semiconductor and electronic companies cancelled or deferred design projects and reduced their design engineering staffs; the formation of new companies engaged in semiconductor design, traditionally an important source of new business for the Company, slowed significantly; and a small number of existing customers went out of business. Each of these developments negatively impacted our orders and revenue. Demand for our products and services may also be affected by partnerships and/or mergers in the semiconductor and systems industries. Given current market conditions, the rate of mergers and acquisitions may increase during 2003. Such combinations may reduce the aggregate level of purchases of our products and services by the companies involved.

Continuation or worsening of the current conditions in the semiconductor and electronics industries, and continued consolidation among our customers, all could have a material adverse effect on our business, financial condition and results of operations.

*Synopsys' revenue and earnings may fluctuate.* Many factors affect our revenue and earnings, which makes it difficult to predict revenue and earnings for any given fiscal period. Among these factors are customer product and service demand, product license terms, and the timing of revenue recognition on products and services sold. The following are some of the specific factors that could affect our revenue and earnings in a particular quarter or over several quarterly or annual periods:

- Our products are complex, and before buying them customers spend a great deal of time reviewing and testing them. Our customers' evaluation and purchase cycles do not necessarily match our quarterly periods. In the past, we have received a disproportionate volume of orders in the last week of a quarter. This trend has become more pronounced in recent quarters. In addition, a large proportion of our business is attributable to our largest customers. As a result, if any order, and especially a large order, is delayed beyond the end of a fiscal period, our orders for that period could be below our plan and our revenue for that period or future periods could be below our plan and any targets we may have published.
- Our business is seasonal. Orders and revenue are typically lowest in our first fiscal quarter and highest in our fourth fiscal quarter, with a material decline between the fourth quarter of one fiscal year and the first quarter of the next fiscal year. This difference is driven largely by the volume of perpetual licenses shipped during the quarter, which, following the seasonal pattern of overall orders, typically declines from the fourth quarter to the first quarter.
- Our revenue and earnings targets for any fiscal period are based, in part, upon an assumption that we will achieve a certain volume of overall orders, and a mix of perpetual licenses (on which revenue is recognized in the quarter shipped) and TSLs (on which revenue is recognized over the term of license) within a specified range, which is adjusted from time to time. If we receive the targeted volume of overall orders but a lower-than-expected proportion of perpetual orders, then our revenue for the quarter will be below our target for the quarter (though the shortfall will be recognized in future quarters). Conversely, if we receive a lower-than-expected volume of overall orders but the expected volume of perpetual orders, then our revenue for the period may be on target, though revenue in future periods will be lower than expected.
- Accounting rules determine when revenue is recognized on our orders, and therefore impact how much revenue we will report in any given fiscal period. In general, revenue is recognized on TSLs ratably over the term of the license and on perpetual licenses upon delivery of the license. For any given order, however, the specific terms agreed to with a customer may have the effect under the accounting rules of requiring revenue treatment different from the treatment we intended and, in developing our financial plans, expected. As a result, revenue for the fiscal period may be higher or lower than it otherwise would have been, and different than our plan or any announced targets for such period.

*Competition may have a material adverse effect on Synopsys' results of operations.* The EDA industry is highly competitive. We compete against other EDA vendors, and with customers' internally developed design tools and internal design capabilities for a share of the overall EDA budgets of our potential customers. In general, competition is based on product quality and features, post-sale support, interoperability with other vendors' products, price, payment terms and, as discussed below, the ability to offer a complete design flow. Our competitors include companies that offer a broad range of products and services, such as Cadence Design Systems, Inc. and Mentor Graphics Corporation, as well as companies that offer products focused on a discrete phase of the integrated circuit design process. In the current economic environment price and payment terms have increased in importance as a basis for competition. During fiscal 2002 we have increasingly agreed to extended payment terms on our TSLs, which has had a negative effect on cash flow from operations. In addition, in certain situations our competitors are offering aggressive discounts on their products. As a result, average prices may fall.

*If we are unable to develop an integrated design flow product and other new products we may be unable to compete effectively.* Increasingly, EDA companies compete on the basis of design flows involving integrated logic and physical design products rather than on the basis of individual point tools performing a discrete phase of the design process. The need to offer an integrated design flow will become increasingly important as ICs grow more complex. After the acquisition of Avant!, we offer all of the point tools required to design an IC, some of which integrate logic and physical design capabilities. Our products compete principally with design flow products from Cadence and Magma Design Automation, which in some respects may be more integrated than our products. Our future success depends on our ability to integrate Synopsys' logic design and physical synthesis products with the physical design products acquired from Avant!, which will require significant engineering and development work. Success in this project is especially important as the Company believes that its orders and revenue from Design Compiler, which has accounted for 29% and 18% of Synopsys orders in 2001 and 2002, respectively peaked in fiscal year 2001, as predicted, and are likely to continue to decline over time. There can be no guarantee that we will be able to offer a competitive complete design flow to customers. If we are unsuccessful in developing integrated design flow products on a timely basis or if we are unsuccessful in developing or convincing customers to adopt such products, our competitive position could be significantly weakened.

In order to sustain revenue growth over the long term, we will have to enhance our existing products, introduce new products that are accepted by a broad range of customers and to generate growth in our consulting services business. In addition to the development of integrated logic and physical design products, Synopsys is attempting to integrate its verification products into a comprehensive functional verification platform, and is expanding its offerings of intellectual property design components. Product success is difficult to predict. The introduction of new products and growth of a market for such products cannot be assured. In the past we, like all companies, have introduced new products that have failed to meet our revenue expectations. There can be no assurance that we will be successful in expanding revenue from existing or new products at the desired rate, and the failure to do so would have a material adverse effect on our business, financial condition and results of operations.

*Businesses that Synopsys has acquired or that Synopsys may acquire in the future may not perform as projected.* We have acquired or merged with a number of companies in recent years, and as part of our efforts to increase revenue and expand our product and services offerings we may acquire additional companies. During 2002, we acquired Avant!, inSilicon Corporation and Co-Design Automation, Inc. In addition to direct costs, acquisitions pose a number of risks, including potential dilution of earnings per share, problems in integrating the acquired products and employees into our business, the failure to realize expected synergies or cost savings, the failure of acquired products to achieve projected sales, the drain on management time for acquisition-related activities, adverse effects on customer buying patterns and assumption of unknown liabilities. While we attempt to review proposed acquisitions carefully and negotiate terms that are favorable to us, there is no assurance that any acquisition will have a positive effect on our performance.

*Delays or cancellation of consulting projects or customer payment defaults could have a material adverse effect on the Company's financial condition and results of operations.* As of December 1, 2002, the Company had approximately \$1.3 billion in backlog, as defined in "Item 1 – Business – Sales, Distribution and Backlog." The Company expects that this backlog will turn into revenue. Orders for professional services, which constitute less than \$100 million of the total backlog, may be deferred or cancelled by the customer in the event that a project is

delayed or cancelled, though in some cases the company is paid a cancellation fee. In the case of orders for the Company's software, backlog includes only amounts subject to committed, non-cancelable orders. Such orders are not subject to cancellation or delay by the customer; but may fail to yield the expected revenue in the event that the customer defaults and fails to pay amounts owed. In such cases the Company will generally institute legal proceedings to recover amounts owed. To date, the Company has not experienced a material level of defaults, though in the current economic environment it is possible that the level of defaults will increase. See "Management's Discussion and Analysis of Results of Operation and Financial Condition – Critical Accounting Policies – Allowance for Doubtful Accounts". Any material payment default by the Company's customers could have a material adverse effect on the Company's financial condition and results of operations.

*Continued stagnation of foreign economies would adversely affect our performance.* During fiscal 2002, 35% of our revenue was derived from outside North America, as compared to 37% during fiscal 2001. Foreign sales are vulnerable to regional or worldwide economic or political conditions. The global electronics industry has experienced steep declines in 2001 and 2002, and the Company does not expect material recovery in 2003. In particular, a number of our largest European customers are in the telecommunications equipment business, which has been disproportionately affected during this period. The Japanese economy has been stagnant for several years, and there is no expectation of improvement in the near future. If the Japanese economy remains weak, revenue and orders from Japan, and perhaps the rest of Asia, could be adversely affected.

Foreign sales are also vulnerable to changes in foreign currency exchange rates, either by making the Company's products more expensive to foreign customers or by reducing the reported revenue realized from overseas sales. The Company is particularly exposed to the Euro and the Japanese yen. Though the Company attempts to hedge its risks related to forecasted accounts receivable generally associated with sales contracts with extended payment terms and accounts payable denominated in non-functional currencies, the yen-dollar and Euro-dollar exchange rates remain subject to unpredictable fluctuations. Weakness of either currency could adversely affect revenue and orders from those regions. Conversely, if those currencies strengthen, our expenses denominated in those currencies, which are not hedged, could increase. Asian countries other than Japan also have experienced economic and currency problems in recent years, and in some cases they have not fully recovered. Although the Asia Pacific region is growing it is relatively small as a percentage of our business and it could be difficult to sustain growth in the region if the rest of the world's economies continue to stagnate. If economic conditions worsen orders and revenues from the Asia Pacific region would be adversely affected.

*A failure to recruit and retain key employees would have a material adverse effect on our ability to compete.* Our success is dependent on our ability to attract and retain key technical, sales and managerial employees, including those who join Synopsys in connection with acquisitions. Despite recent economic conditions, skilled technical, sales and management employees are in high demand. There are a limited number of qualified EDA and IC design engineers, and the competition for such individuals is intense. Experience at Synopsys is highly valued in the EDA industry and the general electronics industry, and our employees, including employees that have joined Synopsys in connection with acquisitions, are recruited aggressively. In the past, we have experienced a high rate of employee turnover, which may recur in the future. There can be no assurance that we can continue to recruit and retain the technical and managerial personnel we need to run our business successfully. Failure to do so could have a material adverse effect on our business, financial condition and results of operations.

In addition, new regulations proposed by The Nasdaq National Market requiring shareholder approval for all stock option plans as well as new regulations proposed by the New York Stock Exchange prohibiting NYSE member organizations from giving a proxy to vote on equity-compensation plans unless the beneficial owner of the shares has given voting instructions could make it more difficult for us to grant options to employees in the future. To the extent that new regulations make it more difficult or expensive to grant options to employees, we may incur increased cash compensation costs or find it difficult to attract, retain and motivate employees, either of which could materially and adversely affect our business.

*A failure to protect our proprietary technology would have a material adverse effect on Synopsys' financial condition and results of operations.* Our success is dependent, in part, upon our proprietary technology and other intellectual property rights. We rely on agreements with customers, employees and others, and intellectual property

laws, to protect our proprietary technology. There can be no assurance that these agreements will not be breached, that we would have adequate remedies for any breach or that our trade secrets will not otherwise become known or be independently developed by competitors. Moreover, effective intellectual property protection may be unavailable or limited in certain foreign countries. Failure to obtain or maintain appropriate patent, copyright or trade secret protection, for any reason, could have a material adverse effect on our business, financial condition and results of operations. In addition, there can be no assurance that infringement claims will not be asserted against us and any such claims could require us to enter into royalty arrangements or result in costly and time-consuming litigation or could subject us to damages or injunctions restricting our sale of products or could require us to redesign products.

*Our operating expenses do not fluctuate proportionately with fluctuations in revenues, which could materially adversely affect our results of operations in the event of a shortfall in revenue.* Our operating expenses are based in part on our expectations of future revenue, and expense levels are generally committed in advance of revenue. Since only a small portion of our expenses varies with revenue, a shortfall in revenue translates directly into a reduction in net income. If we are unsuccessful in generating anticipated revenue or maintaining expenses within the expected range, however, our business, financial condition and results of operations could be materially adversely affected.

*Synopsys has adopted anti-takeover provisions, which may have the effect of delaying or preventing changes of control or management.* We have adopted a number of provisions that could have anti-takeover effects. Our Board of Directors has adopted a Preferred Shares Rights Plan, commonly referred to as a poison pill. In addition, our Board of Directors has the authority, without further action by its stockholders, to issue additional shares of Common Stock and to fix the rights and preferences of, and to issue authorized but undesignated shares of Preferred Stock. These and other provisions of Synopsys' Restated Certificate of Incorporation and Bylaws and the Delaware General Corporation Law may have the effect of deterring hostile takeovers or delaying or preventing changes in control or management of Synopsys, including transactions in which the stockholders of Synopsys might otherwise receive a premium for their shares over then current market prices.

*Synopsys is subject to changes in financial accounting standards, which may affect our reported revenue, or the way we conduct business.* We prepare our financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP). GAAP are subject to interpretation by the Financial Accounting Standards Board, the American Institute of Certified Public Accountants (AICPA), the SEC and various bodies appointed by these organizations to interpret existing rules and create new accounting policies. Accounting policies affecting software revenue recognition, in particular, have been the subject of frequent interpretations, which have had a profound affect on the way we license our products. As a result of the recent enactment of the Sarbanes-Oxley Act and the related scrutiny of accounting policies by the SEC and the various national and international accounting industry bodies, we expect the frequency of accounting policy changes to accelerate. Future changes in financial accounting standards, including pronouncements relating to revenue recognition, may have a significant effect on our reported results and may even affect our reporting of transactions completed before the change is effective.

The FASB and other accounting bodies are currently considering a change to US GAAP that, if implemented, would require us to account for options as a compensation expense in the period in which they are granted. Synopsys currently accounts for stock options under Statement of Financial Accounting Standards No. 123, *Accounting for Stock-Based Compensation* (SFAS 123). As permitted by SFAS 123, the Company has elected to use the intrinsic value method prescribed by Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* (APB 25), to measure compensation expense for stock-based awards to employees, under which the granting of a stock option is not considered compensation, although the impact of "expensing" stock options is disclosed in Note 6 of the Notes to the Consolidated Financial Statements. We cannot predict whether such a requirement will be adopted, but if it is there would be a significant negative effect on our reported results of operations.

**Item 7a. *Quantitative and Qualitative Disclosure About Market Risk***

Information relating to quantitative and qualitative disclosure about market risk is set forth in Synopsys' 2002 Annual Report on Form 10-K under the captions "Interest Rate Risk" and "Foreign Currency Risk" in Management's Discussion and Analysis of Financial Condition and Results of Operations, and "Foreign Exchange Hedging" in Note 4 of Notes to Consolidated Financial Statements.

## **ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

### **REPORT OF KPMG LLP, INDEPENDENT AUDITORS**

To The Board of Directors and  
Shareholders of Synopsys, Inc.:

We have audited the accompanying consolidated balance sheets of Synopsys, Inc. and subsidiaries as of October 31, 2002 and 2001, and the related consolidated statements of operations, stockholders' equity and comprehensive income and cash flows for each of the years in the three-year period ended October 31, 2002. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of Synopsys, Inc. and subsidiaries as of October 31, 2002 and 2001, and the results of their operations and their cash flows for each of the years in the three-year period ended October 31, 2002 in conformity with accounting principles generally accepted in the United States of America.

\s\KPMG LLP

Mountain View, California  
November 20, 2002, except as to Note 13,  
which is as of January 13, 2003



**CONSOLIDATED BALANCE SHEETS**  
(in thousands, except par value data)

ASSETS

	October 31,	
	2002	2001
Current assets:		
Cash and cash equivalents	\$ 312,580	\$ 271,696
Short-term investments	102,153	204,740
Cash, cash equivalents and short-term investments	414,733	476,436
Accounts receivable, net of allowances of \$11,565 and \$11,027, respectively	207,206	146,294
Deferred taxes	282,867	149,239
Prepaid expenses and other	24,509	19,413
Total current assets	929,315	791,382
Property and equipment, net	185,040	192,304
Long-term investments	39,386	61,699
Goodwill, net	434,554	35,077
Intangible assets, net	355,334	3,197
Long-term deferred taxes and other assets	35,085	45,248
Total assets	\$1,978,714	\$1,128,907

LIABILITIES AND STOCKHOLDERS' EQUITY

Current liabilities:		
Accounts payable and accrued liabilities	\$ 246,789	\$ 135,272
Current portion of long-term debt	1,423	535
Accrued income taxes	169,912	110,561
Deferred revenue	359,245	290,052
Total current liabilities	777,369	536,420
Deferred compensation and other long-term liabilities	36,387	17,124
Long-term deferred revenue	51,477	89,707
Stockholders' equity:		
Preferred stock, \$.01 par value; 2,000 shares authorized; no shares outstanding	—	—
Common stock, \$.01 par value; 400,000 shares authorized; 73,562 and 59,428 shares outstanding, respectively	735	595
Additional paid-in capital	1,039,386	575,403
Retained earnings	198,863	436,662
Treasury stock, at cost	(116,499)	(531,117)
Deferred stock compensation	(8,858)	—
Accumulated other comprehensive income	(146)	4,113
Total stockholders' equity	1,113,481	485,656
Total liabilities and stockholders' equity	\$1,978,714	\$1,128,907

See accompanying notes to consolidated financial statements.

**SYNOPSYS, INC.**

**CONSOLIDATED STATEMENTS OF OPERATIONS**  
(in thousands, except per share data)

	Year Ended October 31,		
	2002	2001	2000
Revenue:			
Product	\$ 245,193	\$ 163,924	\$ 434,077
Service	287,747	341,833	340,796
Ratable license	373,594	174,593	8,905
Total revenue	<b>906,534</b>	680,350	783,778
Cost of revenue:			
Product	15,319	20,479	35,085
Service	78,167	79,747	80,442
Ratable license	45,737	29,896	8,947
Amortization of intangible assets and deferred stock compensation	33,936	—	—
Total cost of revenue	<b>173,159</b>	130,122	124,474
Gross margin	<b>733,375</b>	550,228	659,304
Operating expenses:			
Research and development	225,545	189,831	189,280
Sales and marketing	264,809	273,954	288,762
General and administrative	78,461	69,682	59,248
Integration	128,528	—	—
In-process research and development	87,700	—	1,750
Amortization of intangible assets and deferred stock compensation	28,649	17,012	15,129
Total operating expenses	<b>813,692</b>	550,479	554,169
Operating (loss) income	<b>(80,317)</b>	(251)	105,135
Other income, net	<b>(208,623)</b>	83,784	40,803
(Loss) income before provision for income taxes	<b>(288,940)</b>	83,533	145,938
Provision (benefit) for income taxes	<b>(88,947)</b>	26,731	48,160
Net (loss) income	<b>\$ (199,993)</b>	\$ 56,802	\$ 97,778
Basic earnings per share:			
Net (loss) income per share	\$ (2.99)	\$ 0.94	\$ 1.43
Weighted average common shares	<b>66,808</b>	60,601	68,510
Diluted earnings per share:			
Net (loss) income per share	\$ (2.99)	\$ 0.88	\$ 1.38
Weighted average common shares and dilutive stock options outstanding	<b>66,808</b>	64,659	70,998

See accompanying notes to consolidated financial statements.

## SYNOPSYS, INC.

### CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME (in thousands)

	Common Stock		Additional	Retained	Treasury	Deferred	Comprehensive	Accumulated	Total
	Shares	Amount	Paid-in Capital	Earnings	Stock	Compensation	Income (Loss)	Other Comprehensive Income (Loss)	
<b>Balance at October 31, 1999</b>	70,750	\$708	\$542,052	\$349,192	\$(28,589)	—		\$9,234	\$872,597
Comprehensive Income:									
Net income	—	—	—	97,778	—	—	97,778	—	97,778
Other comprehensive income (loss), net of tax:									
Unrealized gain on investments	—	—	—	—	—	—	50,689		
Reclassification adjustment on unrealized gains on investments	—	—	—	—	—	—	(8,934)		
Foreign currency translation adjustment	—	—	—	—	—	—	(3,431)		
Other comprehensive income							<u>38,324</u>	38,324	38,324
Comprehensive income							<u>\$ 136,102</u>		
Acquisition of treasury stock	(9,932)	(99)	99	—	(397,466)	—		—	(397,466)
Stock options assumed in connection with acquisition	—	—	1,187	—	—	—		—	1,187
Stock issued under stock option and stock purchase plans	2,059	20	4,514	(41,551)	96,562	—		—	59,545
Tax benefits associated with exercise of stock options	—	—	10,864	—	—	—		—	10,864
<b>Balance at October 31, 2000</b>	<u>62,877</u>	<u>629</u>	<u>558,716</u>	<u>405,419</u>	<u>(329,493)</u>	<u>—</u>		<u>47,558</u>	<u>682,829</u>
Comprehensive Income:									
Net income	—	—	—	56,802	—	—	56,802	—	56,802
Other comprehensive income (loss), net of tax:									
Unrealized loss on investments	—	—	—	—	—	—	(4,063)		
Reclassification adjustment on unrealized gains on investments	—	—	—	—	—	—	(33,713)		
Foreign currency translation adjustment	—	—	—	—	—	—	(5,669)		
Other comprehensive loss							<u>(43,445)</u>	(43,445)	(43,445)
Comprehensive income							<u>\$ 13,357</u>		
Acquisition of treasury stock	(6,617)	(66)	66	—	(331,882)	—		—	(331,882)
Stock issued under stock option and stock purchase plans	3,168	32	628	(25,559)	130,258	—		—	105,359
Tax benefits associated with exercise of stock options	—	—	15,993	—	—	—		—	15,993
<b>Balance at October 31, 2001</b>	<u>59,428</u>	<u>\$ 595</u>	<u>\$ 575,403</u>	<u>\$ 436,662</u>	<u>\$(531,117)</u>	<u>\$ —</u>		<u>\$ 4,113</u>	<u>\$ 485,656</u>

## SYNOPSYS, INC.

### CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME - continued (in thousands)

	Common Stock		Additional	Retained	Treasury	Deferred	Comprehensive	Accumulated	
	Shares	Amount	Paid-in	Earnings	Stock	Compensation	Income (Loss)	Other	Total
			Capital					Comprehensive	
								Income (Loss)	
<b>Balance Forward:</b>									
<b>Balance at October 31, 2001</b>	59,428	\$ 595	\$ 575,403	\$ 436,662	\$ (531,117)	\$ —		\$ 4,113	\$ 485,656
Comprehensive Income (Loss):									
Net loss	—	—	—	(199,993)	—	—	(199,993)	—	(199,993)
Other comprehensive income (loss), net of tax:									
Unrealized loss on investments	—	—	—	—	—	—	(143)		
Unrealized gain on currency contracts	—	—	—	—	—	—	6,482		
Reclassification adjustment on unrealized gains on investments	—	—	—	—	—	—	(5,842)		
Foreign currency translation adjustment	—	—	—	—	—	—	(4,756)		
Other comprehensive loss							(4,259)	(4,259)	(4,259)
Comprehensive loss							<u>\$(204,252)</u>		
Acquisition of Avant! Corporation	14,530	145	435,066	—	431,312	(8,102)		—	858,421
Amortization of deferred stock compensation related to acquisitions	—	—	(83)	—	—	1,605		—	1,522
Acquisition of treasury stock	(3,884)	(39)	39	—	(171,678)	—		—	(171,678)
Stock options assumed in connection with acquisition of inSilicon and Co-Design	—	—	5,929	—	—	(2,361)		—	3,568
Stock issued under stock option and stock purchase plans	3,488	34	3,572	(37,806)	154,984	—		—	120,784
Tax benefits associated with exercise of stock options	—	—	19,460	—	—	—		—	19,460
<b>Balance at October 31, 2002</b>	<u>73,562</u>	<u>\$ 735</u>	<u>\$1,039,386</u>	<u>\$ 198,863</u>	<u>\$ (116,499)</u>	<u>\$ (8,858)</u>		<u>\$ (146)</u>	<u>\$1,113,481</u>

See accompanying notes to the consolidated financial statements.

## SYNOPSYS, INC.

### CONSOLIDATED STATEMENTS OF CASH FLOWS (in thousands)

	Year Ended October 31,		
	2002	2001	2000
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net (loss) income	\$ (199,993)	\$ 56,802	\$ 97,778
Adjustments to reconcile net (loss) income to net cash provided by operating activities:			
Amortization and depreciation	116,100	65,162	63,770
Provision for doubtful accounts and sales returns	7,042	5,759	3,528
Write-down of long term investments	11,326	5,848	—
Write-down of land	14,712	—	—
Gain on sale of long-term investments	(21,299)	(57,080)	(11,455)
Write-down of goodwill and intangible assets	3,785	2,200	—
Deferred taxes	(128,167)	(58,831)	(64,137)
Deferred rent	2,804	—	—
In-process research and development	87,700	—	1,750
Non-cash gain on sale of silicon libraries	—	(10,580)	—
Non-cash compensation expense	1,761	—	—
Tax benefit associated with stock options	19,460	15,993	10,864
Net changes in operating assets and liabilities:			
Accounts receivable	5,275	(5,190)	(19,186)
Prepaid expenses and other current assets	2,930	(231)	4,316
Other assets	(14,814)	(1,754)	(8,787)
Accounts payable and accrued liabilities	(77,546)	(8,072)	39,180
Accrued income taxes	(20,974)	54,563	5,980
Deferred revenue	5,993	229,160	23,190
Deferred compensation	2,856	1,771	5,092
Net cash (used in) provided by operating activities	<b>(181,049)</b>	<b>295,520</b>	<b>151,883</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>			
Proceeds from sales and maturities of short-term investments	876,298	2,003,589	2,782,613
Purchases of short-term investments	(769,102)	(1,927,784)	(2,667,112)
Proceeds from sales of long-term investments and bonds	56,033	77,777	24,336
Purchases of long-term investments	(5,472)	(12,076)	(13,998)
Proceeds from sale of silicon libraries business	—	4,122	—
Purchases of property and equipment	(48,755)	(82,490)	(68,500)
Cash acquired in acquisitions (net of cash paid)	168,311	—	(14,474)
Intangible assets, net	—	(313)	3,697
Capitalization of software development costs	(1,592)	(1,000)	(1,000)
Net cash provided by investing activities	<b>275,721</b>	<b>61,825</b>	<b>45,562</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>			
Proceeds from issuance of long-term debt	—	—	727
Principal payments on debt obligations	—	(6,162)	(13,507)
Proceeds from sale of common stock	119,868	105,359	59,545
Purchases of treasury stock	(171,677)	(331,882)	(397,466)
Net cash used in financing activities	<b>(51,809)</b>	<b>(232,685)</b>	<b>(350,701)</b>
Effect of exchange rate changes on cash	(1,979)	(5,669)	(3,433)
Net increase (decrease) in cash and cash equivalents	<b>40,884</b>	<b>118,991</b>	<b>(156,689)</b>
Cash and cash equivalents, beginning of year	<b>271,696</b>	<b>152,705</b>	<b>309,394</b>
Cash and cash equivalents, end of year	<b>\$ 312,580</b>	<b>\$ 271,696</b>	<b>\$ 152,705</b>
<b>SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:</b>			
Cash paid during the year for:			
Income taxes	\$ 70,750	\$ 25,262	\$ 91,927
Non-cash transactions:			
Issuance of stock and options in exchange for net assets of Avant!	\$ 858,421	\$ —	\$ —
Issuance of notes payable in Co-Design acquisition	\$ 4,770	\$ —	\$ —

See accompanying notes to consolidated financial statements.

**SYNOPSYS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**NOTE 1. DESCRIPTION OF BUSINESS**

Synopsys, Inc. (Synopsys or the Company) is a leading supplier of EDA software to the global electronics industry. The Company develops, markets, and supports a wide range of integrated circuit (IC) design products that are used by designers of advanced ICs, including system-on-a-chip ICs, and the electronic systems (such as computers, cell phones, and internet routers) that use such ICs, to automate significant portions of their design process. ICs are distinguished by the speed at which they run, their area, the amount of power they consume and their cost of production. Synopsys' products offer its customers the opportunity to design ICs that are optimized for speed, area, power consumption and production cost, while reducing overall design time. The Company also provides consulting services to help its customers improve their IC designs and, where requested, to assist them with their IC designs, as well as training and support services.

**CURRENT YEAR ACQUISITIONS.** On June 6, 2002, the Company completed its merger with Avant! Corporation (Avant!). Avant! was a leader in the development of software used in the physical design and physical verification phases of chip design. Under the terms of the merger agreement between Synopsys and Avant!, Avant! merged with and into a wholly-owned subsidiary of Synopsys. The results of operations of Avant! are included in the accompanying consolidated financial statements for the period from June 6, 2002 through October 31, 2002.

On September 6, 2002, we completed our acquisition of Co-Design, a private company which was developing simulation software used in the high level verification stage of the chip design process, and a new design language that permits designers to describe the behavior of their chips more efficiently than current standard languages. The results of operations of Co-Design are included in the accompanying consolidated financial statements for the period from September 6, 2002 through October 31, 2002.

On September 20, 2002, we completed our acquisition of inSilicon, a company that developed, marketed and licensed an extensive portfolio of complex "intellectual property blocks", or pre-designed, pre-verified subportions of a chip that can be used as building blocks for complex systems-on-a-chip, and therefore, accelerate the development of such chips. The results of operations of inSilicon are included in the accompanying consolidated financial statements for the period from September 20, 2002 through October 31, 2002.

**NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**FISCAL YEAR END.** The Company has a fiscal year that ends on the Saturday nearest October 31. Fiscal 2002 and 2000 were 52-week years and fiscal 2001 was a 53-week year. For presentation purposes, the consolidated financial statements and notes refer to the calendar month end.

**PRINCIPLES OF CONSOLIDATION.** The consolidated financial statements include the accounts of the Company and all of its subsidiaries. All significant intercompany accounts and transactions have been eliminated.

**USE OF ESTIMATES.** The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts recorded in the financial statements and accompanying notes. Actual amounts could differ from these estimates.

**CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS.** The Company classifies investments with original maturities of three months or less when acquired as cash equivalents. All of the Company's cash equivalents and short-term investments are classified as available-for-sale and are reported at fair value, with unrealized gains and losses included in stockholders' equity as a component of accumulated other comprehensive income, net of tax. The fair value of short-term investments is determined based on quoted market prices. The cost of securities sold is based on the specific identification method and realized gains and losses are included in other income, net. The Company has cash equivalents and investments with various high quality institutions and, by policy, limits the amount of credit exposure to any one institution.

**CONCENTRATION OF CREDIT RISK.** The Company sells its products worldwide primarily to customers in the semiconductor industry. The Company performs on-going credit evaluations of its customers' financial condition and generally does not require collateral. The Company maintains reserves for potential credit losses, and such losses have been within management's expectations and have not been material in any year.

**FAIR VALUES OF FINANCIAL INSTRUMENTS.** The fair value of the Company's cash, accounts receivable, long-term investments, forward contracts relating to certain investments in equity securities, accounts payable, long-term debt and foreign currency contracts, approximates the carrying amount, which is the amount for which the instrument could be exchanged in a current transaction between willing parties.

**FOREIGN CURRENCY TRANSLATION.** The functional currency of each of the Company's foreign subsidiaries is the foreign subsidiary's local currency. Assets and liabilities of the Company's foreign operations are translated into U.S. dollars at exchange rates in effect at the balance sheet date. Income and expense items are translated at average exchange rates for the period. Accumulated net translation adjustments are reported in stockholders' equity, net of tax, as a component of accumulated other comprehensive income (loss). The associated tax benefit for cumulative translation adjustments was \$3.0 million, \$3.6 million and \$2.2 million in fiscal 2002, 2001 and 2000, respectively. Foreign exchange transaction gains and losses were not material for all periods presented and are included in the results of operations.

**FOREIGN CURRENCY CONTRACTS.** The Company operates internationally and therefore is exposed to potentially adverse movements in currency exchange rates. The Company has entered into foreign currency forward contracts to reduce its exposure to foreign currency rate changes on non-functional currency denominated balance sheet positions. The objective of these contracts is to neutralize the impact of foreign currency rate movements on the Company's operating results.

The Company also uses forward foreign currency contracts to hedge certain cash flow exposures resulting from the impact of currency exchange rate fluctuations on forecasted receivables denominated in non-functional currencies. These foreign currency contracts, carried at fair value, have a duration of approximately 30 days. Such cash flow exposures result from portions of the Company's forecasted accounts receivable generally associated with sales contracts with extended payment terms and accounts payable denominated in non-functional currencies. As of October 31, 2002, the unrealized gain of approximately \$10.0 million on these forward contracts is recorded in stockholders' equity, net of tax, as a component of accumulated other comprehensive income. The Company enters into these foreign exchange contracts to hedge only (i) those currency exposures associated with certain assets and liabilities denominated in nonfunctional currencies and (ii) forecasted accounts receivable and accounts payable denominated in non-functional currencies in the normal course of business, and accordingly, they are not speculative in nature.

Foreign currency forward contracts require the Company to exchange currencies at rates agreed upon at the inception of the contracts. These contracts reduce the exposure to fluctuations in exchange rates because the gains and losses associated with non-functional currency balances and transactions are generally offset with the gains and losses of the hedge contracts. Because the impact of movements in currency exchange rates on forward contracts offsets the related impact on the underlying items being hedged, these financial instruments help alleviate the risk that might otherwise result from changes in currency exchange rates.

The realized gain/loss on these contracts as they matured were not material to the consolidated financial position, results of operations or cash flows for the periods presented.

**REVENUE RECOGNITION AND COST OF REVENUE.** Revenue consists of fees for perpetual and time-based licenses for the Company's software products, post-contract customer support (PCS), customer training and consulting. The Company classifies its revenues as product, service or ratable license. Product revenue consists primarily of sales of perpetual licenses.

Service revenue consists of fees for consulting services, training, and PCS associated with non-ratable time-based licenses or perpetual licenses. PCS sold with perpetual licenses is generally renewable, after any bundled PCS period expires, in one-year increments for a fixed percentage of the perpetual list price or, for perpetual license arrangements in excess of \$2 million, as a percentage of the net license fee.

Ratable license revenue is all fees related to time-based licenses bundled with PCS and sold as a single package (commonly referred to by the Company as a Technology Subscription License or TSL), and time-based licenses in which the Company did not bundle PCS but has granted extended payment terms or under which the customer has a right to receive unspecified future products.

Cost of product revenue includes cost of production personnel, product packaging, documentation, amortization of capitalized software development costs, and costs of the Company's systems products. Cost of service revenue includes personnel and the related costs associated with providing training, consulting and PCS. Cost of ratable license revenue includes the cost of products and services related to time-based licenses bundled with PCS and sold as a single package and to time-based licenses that include extended payment terms or unspecified future products. Cost of revenue also includes the amortization of the contract rights intangible, core technology and deferred stock compensation.

The Company recognizes revenue in accordance with SOP 97-2, SOFTWARE REVENUE RECOGNITION, as amended by SOP 98-9 and SOP 98-4 and generally recognizes revenue when all of the following criteria are met as set forth in paragraph 8 of SOP 97-2:

- o Persuasive evidence of an arrangement exists,
- o Delivery has occurred,
- o The vendor's fee is fixed or determinable, and
- o Collectibility is probable.

The Company defines each of the four criteria above as follows:

**PERSUASIVE EVIDENCE OF AN ARRANGEMENT EXISTS.** It is the Company's customary practice to have a written contract, which is signed by both the customer and Synopsys, or a purchase order from those customers that have previously negotiated a standard end-user license arrangement or volume purchase agreement, prior to recognizing revenue on an arrangement.

**DELIVERY HAS OCCURRED.** The Company's software may be either physically or electronically delivered to its customers. For those products that are delivered physically, the Company's standard transfer terms are FOB shipping point. For an electronic delivery of software, delivery is considered to have occurred when the customer has been provided with the access codes that allow the customer to take immediate possession of the software on its hardware.

If an arrangement includes undelivered products or services that are essential to the functionality of the delivered product, delivery is not considered to have occurred.

**THE VENDOR'S FEE IS FIXED OR DETERMINABLE.** The fee the Company's customers pay for its products is negotiated at the outset of an arrangement, and is generally based on the specific volume of product to be delivered. The Company's license fees are not a function of variable-pricing mechanisms such as the number of units distributed or copied by the customer, or the expected number of users in an arrangement. Therefore, except in cases where the Company grants extended payment terms to a specific customer, the Company's fees are considered to be fixed or determinable at the inception of the arrangements.

The Company's typical payment terms are such that a minimum of 75% of the arrangement revenue is due within one year or less. Arrangements with payment terms extending beyond the typical payment terms are not considered to be fixed or determinable. Revenue from such arrangements is recognized at the lesser of the aggregate of amounts due and payable or the amount of the arrangement fee that would have been recognized if the fees had been fixed or determinable.

**COLLECTIBILITY IS PROBABLE.** Collectibility is assessed on a customer-by-customer basis. The Company typically sells to customers for which there is a history of successful collection. New customers are subjected to a credit review process that evaluates the customers' financial positions and ultimately their ability to pay. New customers are typically assigned a credit limit based on a formulated review of their financial position. Such credit limits are only increased after a successful collection history with the customer has been established. If it is determined from the outset of an arrangement that collectibility is not probable based upon the Company's credit review process, revenue is recognized on a cash-collected basis.



**MULTIPLE ELEMENT ARRANGEMENTS.** The Company allocates revenue on software arrangements involving multiple elements to each element based on the relative fair values of the elements. The Company's determination of fair value of each element in multiple element arrangements is based on vendor-specific objective evidence (VSOE). The Company limits its assessment of VSOE for each element to the price charged when the same element is sold separately.

The Company has analyzed all of the elements included in its multiple-element arrangements and determined that it has sufficient VSOE to allocate revenue to the PCS components of its perpetual license products and consulting. Accordingly, assuming all other revenue recognition criteria are met, revenue from perpetual licenses is recognized upon delivery using the residual method in accordance with SOP 98-9 and revenue from PCS is recognized ratably over the PCS term. The Company recognizes revenue from TSLs over the term of the ratable license period, as the license and PCS portions of a TSL are bundled and not sold separately. Revenue from contracts with extended payment terms is recognized as the lesser of amounts due and payable or the amount of the arrangement fee that would have been recognized if the fee were fixed or determinable.

Certain of the Company's time-based licenses include the rights to unspecified additional products. Revenue from contracts with the rights to unspecified additional software products is recognized ratably over the contract term. The Company recognizes revenue from time-based licenses that include both unspecified additional software products and extended payment terms that are not considered to be fixed or determinable in an amount that is the lesser of amounts due and payable or the ratable portion of the entire fee.

**CONSULTING SERVICES.** The Company provides design methodology assistance, specialized services relating to telecommunication systems design and generalized turnkey design services. The Company's consulting services generally are not essential to the functionality of the software. The Company's software products are fully functional upon delivery and implementation does not require any significant modification or alteration. The Company's services to its customers often include assistance with product adoption and integration and specialized design methodology assistance. Customers typically purchase these professional services to facilitate the adoption of the Company's technology and dedicate personnel to participate in the services being performed, but they may also decide to use their own resources or appoint other professional service organizations to provide these services. Software products are billed separately and independently from consulting services, which are generally billed on a time-and-materials or milestone-achieved basis. The Company generally recognizes revenue from consulting services as the services are performed.

Exceptions to the general rule above involve arrangements where the Company has committed to significantly alter the features and functionality of its software or build complex interfaces necessary for the Company's software to function in the customer's environment. These types of services are considered to be essential to the functionality of the software. Accordingly, contract accounting is applied to both the software and service elements included in these arrangements.

**PROPERTY AND EQUIPMENT.** Property and equipment is recorded at cost. Depreciation and amortization of assets is provided using the straight-line method over estimated useful lives of the property or equipment ranging from three to five years. Leasehold improvements are amortized using the straight-line method over the remaining term of the lease or the economic useful life of the asset whichever is shorter. The cost of repairs and maintenance is charged to operations as incurred. A detail of property and equipment is as follows:

	<b>October 31,</b>	
	<b>2002</b>	<b>2001</b>
	<i>(in thousands)</i>	
Computer and other equipment	\$ 279,239	\$ 271,264
Buildings	21,821	22,092
Furniture and fixtures	26,446	23,160
Land	42,754	50,153
Leasehold improvements	61,796	35,775
	<b>432,056</b>	402,444
Less accumulated depreciation and amortization	<b>(247,016)</b>	(210,140)
	<b>\$ 185,040</b>	\$ 192,304

**SOFTWARE DEVELOPMENT COSTS.** Capitalization of software development costs begins upon the establishment of technological feasibility, which is generally the completion of a working prototype. Software development costs capitalized were \$1.6 million in fiscal 2002, \$1.0 million in fiscal 2001, and \$1.0 million in fiscal 2000. Amortization of software development costs is computed based on the straight-line method over the software's estimated economic life of approximately two years. The Company recorded amortization of \$1.1 million, \$1.0 million, and \$1.0 million in fiscal 2002, 2001 and 2000, respectively.

**GOODWILL AND INTANGIBLE ASSETS.** Goodwill represents the excess of the aggregate purchase price over the fair value of the tangible and identifiable intangible assets acquired by the Company. Intangible assets consist of purchased technology, contract rights intangibles, customer installed base/relationship, trademarks and tradenames, covenants not to compete, customer backlog and capitalized software. Intangible assets are amortized on a straight-line basis over their estimated useful lives which range from three to ten years. Amortization of intangible assets was \$61.1 million, \$17.0 million and \$15.1 million in fiscal 2002, 2001 and 2000, respectively.

The Company periodically evaluates its intangible assets for indications of impairment. If this evaluation indicates that the value of the intangible asset may be impaired, an assessment of the recoverability of the net carrying value of the asset over its remaining useful life is made. If this assessment indicates that the intangible asset is not recoverable, based on the estimated undiscounted future cash flows of the entity or technology acquired over the remaining amortization period, the net carrying value of the related intangible asset will be reduced to fair value and/or the remaining amortization period may be adjusted. In fiscal 2002, the Company recognized an aggregate impairment charge of \$3.8 million to reduce the amount of certain intangible assets associated with prior acquisitions to their estimated fair value. Approximately \$3.7 million and \$0.1 million are included in integration expense and amortization of intangible assets, respectively, on the statement of operations. The impairment charge is primarily attributable to certain technology acquired from, and goodwill related to the acquisition of Stanza, Inc. in 1999. During the fourth quarter of fiscal 2002, the Company determined that it would not allocate future resources to assist in the market growth of this technology as products offered by Avant! provide customers with similar capabilities as well as additional functionality and does not anticipate any future sales of the product.

In fiscal 2001, the Company recognized an aggregate impairment charge of \$2.2 million to reduce the amount of certain intangible assets associated with prior acquisitions to their estimated fair value. Approximately \$1.8 million and \$0.4 million are included in cost of revenues and amortization of intangible assets, respectively, on the statement of operations. The impairment charge is attributable to certain technology acquired from, and goodwill related to the acquisition of Eagle Design Automation, Inc. in 1997. During the fourth quarter of fiscal 2001, the Company determined that it would not allocate future resources to assist in the market growth of this technology and does not anticipate any future sales of the product. There were no impairments of intangible assets in fiscal 2000.

ACCOUNTS PAYABLE AND ACCRUED LIABILITIES. Accounts payable and accrued liabilities consist of:

	<b>October 31,</b>	
	<b>2002</b>	<b>2001</b>
	<i>(in thousands)</i>	
Payroll and related benefits	<b>\$ 106,155</b>	\$ 90,356
Other accrued liabilities	<b>121,995</b>	25,487
Accounts payable	<b>18,639</b>	19,429
Total	<b>\$ 246,789</b>	\$ 135,272

DEFERRED COMPENSATION PLAN. The Company maintains a deferred compensation plan (the Plan) which permits certain employees to defer up to 50% of their annual cash base compensation or 100% of their annual cash variable compensation. Distributions from the Plan are generally payable upon cessation of employment over five to 15 years or as a lump sum payment, at the option of the employee. Undistributed amounts under the Plan are subject to the claims of the Company's creditors. As of October 31, 2002 and 2001, the invested amounts under the Plan total \$22.8 million and \$15.6 million respectively, and are recorded as a long-term asset on the Company's balance sheet. As of October 31, 2002 and 2001, the Company has recorded \$22.9 million and \$16.7 million, respectively, as a long-term liability to recognize undistributed amounts due to employees.

INCOME TAXES. The Company accounts for income taxes using the asset and liability method. Under the asset and liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

EARNINGS PER SHARE. Basic earnings per share is computed using the weighted-average number of shares outstanding during the period. Diluted earnings per share is computed using the weighted-average number of common shares and dilutive stock options outstanding during the period. The weighted-average dilutive stock options outstanding is computed using the treasury stock method. Due to the net loss incurred for fiscal 2002, the effect of employee stock options is anti-dilutive.

The following is a reconciliation of the weighted-average common shares used to calculate basic net income per share to the weighted-average common shares used to calculate diluted net income per share.

	<b>Year Ended October 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<i>(in thousands)</i>		
Weighted-average common shares for basic net income per share	<b>66,808</b>	60,601	68,510
Weighted-average stock options outstanding	—	4,058	2,488
Weighted-average shares for diluted net income per share	<b>66,808</b>	64,659	70,998

The effect of dilutive employee stock options excludes approximately 28.0 million, 3.8 million and 13.0 million stock options for fiscal 2002, 2001 and 2000, respectively, which were anti-dilutive for earnings per share calculations.

STOCK-BASED COMPENSATION. As permitted by Statement of Financial Accounting Standards No. 123, ACCOUNTING FOR STOCK-BASED COMPENSATION (SFAS 123), the Company has elected to use the intrinsic value method prescribed by Accounting Principles Board Opinion No. 25, ACCOUNTING FOR STOCK ISSUED TO EMPLOYEES (APB 25), to measure compensation expense for stock-based awards to employees.

RECLASSIFICATIONS. Certain prior year amounts have been reclassified to conform to current year presentation.

### NOTE 3. BUSINESS COMBINATIONS AND DIVESTITURES

PURCHASE COMBINATIONS. During fiscal 2002 and 2000, the Company made a number of purchase acquisitions. Pro forma results of operations have been presented only for the inSilicon and Avant! mergers since the effects of the remaining 2002 and 2000 acquisitions are not material to the Company's consolidated financial position, results of operations or cash flows for the periods presented. The consolidated financial statements include the operating results of each business from the date of acquisition. There were no purchase transactions during fiscal 2001.

For each acquisition, the excess of the purchase price over the estimated value of the net tangible assets acquired was allocated to various intangible assets, consisting primarily of developed technology, customer- and contract-related assets and goodwill. The values assigned to developed technologies related to each acquisition were based upon future discounted cash flows related to the existing products' projected income streams.

The amounts allocated to purchased in-process research and development were determined through established valuation techniques in the high-technology industry and were expensed upon acquisition because technological feasibility had not been established and no future alternative uses existed.

#### ACQUISITION OF AVANT! CORPORATION.

On June 6, 2002 (the closing date), the Company completed the merger with Avant!.

REASONS FOR THE ACQUISITION. The Board of Directors unanimously approved the merger with Avant! at its December 1, 2001 meeting. In approving the merger agreement, the Board of Directors consulted with legal and financial advisors as well as with management and considered a number of factors. These factors include the fact that the merger is expected to enable Synopsys to offer its customers a complete end-to-end solution for system-on-chip design that includes Synopsys' logic synthesis and design verification tools with Avant!'s advanced place and route, physical verification and design integrity products, thus increasing customers' design efficiencies. By increasing customer design efficiencies, Synopsys expects to be able to better compete for customers designing the next generation of semiconductors. Further, by gaining access to Avant!'s physical design and verification products, as well as its broad customer base and relationships, Synopsys will gain new opportunities to market its existing products. The foregoing discussion of the information and factors considered by the Board of Directors is not intended to be exhaustive but includes the material factors considered by the Board of Directors.

PURCHASE PRICE. Holders of Avant! common stock received 0.371 of a share of Synopsys common stock (including the associated preferred stock rights) in exchange for each share of Avant! common stock owned as of the closing date, aggregating 14.5 million shares of Synopsys common stock. The fair value of the Synopsys shares issued was based on a per share value of \$54.74, which is equal to Synopsys' average last sale price per share as reported on the Nasdaq National Market for the trading-day period two days before and after December 3, 2001, the date of the merger agreement.

The total purchase consideration consists of the following:

<i>(in thousands)</i>	
Fair value of Synopsys common stock issued	\$ 795,388
Acquisition related costs	37,397
Facilities closure costs	62,638
Employee severance costs	51,014
Fair value of options to purchase Synopsys common stock issued, less \$8.1 million representing the portion of the intrinsic value of Avant!'s unvested options applicable to the remaining vesting period	<u>63,033</u>
	<u>\$ 1,009,470</u>

The acquisition-related costs of \$37.4 million consist primarily of banking, legal and accounting fees, printing costs, and other directly related charges including contract termination costs of \$6.3 million.

Facilities closure costs at the closing date include \$54.2 million related to Avant!'s corporate headquarters. After the merger, the functions performed in the buildings were consolidated into Synopsys' corporate facilities. The lessors have brought a claim against Avant! for the future amounts payable under the lease agreements. The amount accrued at the closing date is equal to the future amounts payable under the related lease agreements, without taking into consideration in the accrual any defenses the Company may have to the claim. Resolution of this contingency at an amount different from that accrued will result in an increase or decrease in the purchase consideration and the amount will be allocated to goodwill. Subsequent to October 31, 2002, Synopsys settled all of the claims of the landlord of two of these buildings for \$7.4 million. The remaining facilities closure costs at the closing date totaling \$8.4 million represents the present value of the future obligations under certain of Avant!'s lease agreements which the Company has or intend to terminate under an approved facilities exit plan plus additional costs expected to be incurred directly related to vacating such facilities.

Employee severance costs include (i) \$39.6 million in cash paid to Avant!'s Chairman of the Board, consisting of severance plus a cash payment equal to the intrinsic value of his in-the-money stock options at the closing date, (ii) \$5.1 million in cash severance payments paid to redundant employees (primarily sales and corporate infrastructure personnel) terminated on or subsequent to the consummation of the merger under an approved plan of termination and (iii) \$6.3 million in termination payments to certain executives in accordance with their respective pre-merger employment agreements. The total number of Avant! employees terminated as a result of the merger was approximately 250.

As of October 31, 2002, \$89.7 million of costs described in the three preceding paragraphs have been paid and \$61.4 million of these costs have not yet been paid. The following table presents the components of acquisition-related costs recorded, along with amounts paid during fiscal 2002.

<i>(in thousands)</i>	<b>Initial Total Cost</b>	<b>Additions</b>	<b>Subtotal</b>	<b>Payments through October 31, 2002</b>	<b>Balance at October 31, 2002</b>
Acquisition related costs	\$ 37,342	\$ 55	\$37,397	\$33,557	\$ 3,840
Facilities closure costs	62,638	--	62,638	5,377	57,261
Employee severance costs	50,367	647	51,014	50,724	290
<b>Total</b>	<b>\$ 150,347</b>	<b>\$ 702</b>	<b>151,049</b>	<b>\$89,658</b>	<b>\$ 61,391</b>

During the fourth quarter of fiscal 2002, additions were made to increase the total acquisition related costs including an increase to employee severance costs totaling \$0.6 million for actual amounts paid to such employees.

The total purchase consideration has been allocated to the assets and liabilities acquired, including identifiable intangible assets, based on their respective fair values at the acquisition date and resulting in excess purchase consideration over the net tangible and identifiable intangible assets acquired of \$369.5 million. The following unaudited condensed balance sheet data presents the fair value of the assets and liabilities acquired (after certain adjustments made during the fourth quarter to the preliminary fair values of the assets and liabilities acquired).

(in thousands)

Assets acquired	
Cash, cash equivalents and short-term investments	\$ 241,313
Accounts receivable	65,971
Prepaid expenses and other current assets	18,082
Intangible assets	373,300
Goodwill	369,470
Other assets	3,875
Total assets acquired	<u>\$ 1,072,011</u>
Liabilities acquired	
Accounts payable and accrued liabilities	\$ 173,998
Deferred revenue	30,080
Income taxes payable	89,274
Other liabilities	4,651
Total liabilities acquired	<u>\$ 298,003</u>

The initial allocation of the purchase price included certain assets and liabilities recorded using preliminary estimates of fair value. During the fourth quarter of 2002, the value assigned to Avant!'s investment in a venture capital fund was reduced from the preliminary value of \$12.8 million to \$5.0 million upon obtaining additional information on the venture funds non-public investments and subsequent sale of the investment to a third party. The decrease in the fair value of the investment increased the consideration allocated to goodwill by \$7.8 million. During the fourth quarter of 2002, the Company also increased the value of the acquired customs and use-tax liabilities by \$2.5 million, resulting in a corresponding increase in goodwill.

**ASSET HELD FOR SALE.** As a result of the merger, Synopsys acquired Avant!'s physical libraries business, and Synopsys was obligated to offer and sell such business to Artisan Components, Inc. under the terms of a January 2001 non-compete agreement, under which Synopsys agreed not to engage, directly or indirectly, in the physical libraries business before January 3, 2003. As of the closing date, the value allocated to the acquired libraries business had been recorded as net assets held for sale, based on the estimated future net cash flows from the libraries business in accordance with EITF 87-11, **ALLOCATION OF PURCHASE PRICE TO ASSETS TO BE SOLD**. During the fourth quarter of fiscal 2002, management determined that the libraries business would not be sold and, accordingly, allocated the fair value of the libraries business as of the closing date to the underlying tangible assets and intangible assets. The fair value allocated to the tangible and intangible assets was \$8.3 million, with the remaining fair value allocated to goodwill. This allocation is reflected in the balance sheet as of October 31, 2002.

**GOODWILL AND INTANGIBLE ASSETS.** Goodwill, representing the excess of the purchase price over the fair value of tangible and identifiable intangible assets acquired in the merger, will not be amortized, consistent with the guidance in SFAS 142 as discussed under Note 11 below. The goodwill associated with the Avant! acquisition is not deductible for tax purposes. In addition, a portion of the purchase price was allocated to the following identifiable intangible assets:

<b>Intangible Asset</b>	<i>(in thousands)</i>	<b>Estimated Useful Life</b>
Core/developed technology	\$189,800	3 years
Contract rights intangible	51,700	3 years
Customer installed base/relationship	102,900	6 years
Trademarks and tradenames	17,700	3 years
Covenants not to compete	9,100	The life of the related agreement (2 to 4 years)
Customer backlog	2,100	3 years
<b>Total</b>	<u><u>\$373,300</u></u>	

**CONTRACT RIGHTS INTANGIBLE.** Avant! had executed signed license agreements and delivered the initial configuration of licensed technologies under ratable license arrangements and had executed signed contracts to provide PCS over a one to three year period, for which Avant! did not consider the fees to be fixed and determinable at the outset of the arrangement. There were no receivables or deferred revenues recorded on Avant!'s historical financial statements at the closing date as the related payments were not yet due under extended payment terms and deliveries are scheduled to occur over the terms of the arrangements. These ratable licenses and PCS arrangements require future performance by both parties and, as such, represent executory contracts. The contract rights intangible asset associated with these arrangements is being amortized to cost of revenue over the related contract lives of three years.

The amortization of intangible assets, with the exception of the contract rights intangible and core/developed technology, is included in operating expenses in the statement of operations for the fiscal year ended October 31, 2002. Amortization of core/developed technology and contract rights intangible is included in cost of revenue.

**CADENCE LITIGATION.** As the time of the acquisition of Avant!, Avant! was engaged in civil litigation with Cadence regarding alleged misappropriation of trade secrets, among other things, by Avant! and certain individuals.

In connection with the merger, Synopsys entered into a policy with a subsidiary of American International Group, Inc., a AAA-rated insurance company, whereby insurance was obtained for certain compensatory, exemplary and punitive damages, penalties and fines and attorneys' fees arising out of pending litigation between Avant! and Cadence. The policy does not provide coverage for litigation other than the Avant!/Cadence litigation.

The Company paid a total premium of \$335 million for the policy, of which \$240 million was contingently refundable. The balance of the premium paid to the insurer (\$95 million) is included in integration expense for the year ended October 31, 2002. Under the policy the insurer is obligated to pay covered loss up to a limit of liability equaling (a) \$500 million plus (b) interest accruing at the fixed rate of 2%, compounded semi-annually, on \$250 million (the interest component), as reduced by previous covered losses. Interest earned on \$250 million is included in other income, net in the post-merger statement of operations.

On November 13, 2002, Cadence and Synopsys reached a settlement of the litigation. Under the terms of the agreement, Cadence will be paid \$265 million in two installments--\$20 million on November 22, 2002 and \$245 million on December 16, 2002. In addition, Cadence and Synopsys have entered into reciprocal licenses arrangements covering the intellectual property at issue in the litigation. As a result of the payment, Synopsys has recognized expense of approximately \$240.8 million, which is equal to the contingently refundable portion of the insurance premium plus interest accrued on the restricted asset. This expense is included in other income and expense on the statement of operations.

#### **ACQUISITION OF CO-DESIGN.**

On September 6, 2002, the Company completed the acquisition of Co-Design.

**REASONS FOR THE ACQUISITION.** In approving the merger agreement, management considered a number of factors, including (i) the acquisition will help promote the development and adoption of the Superlog language, which Synopsys believes can increase designer productivity; (ii) the combination of Co-Design's technology with Synopsys' high-level verification and design implementation tools is expected improve the performance Synopsys' products; and (iii) the acquisition gives Synopsys access to Co-Design's highly-skilled employees who

will help Synopsys improve its existing products and facilitate the development of new products. The foregoing discussion of the information and factors considered by Synopsys' management is not intended to be exhaustive but includes the material factors considered.

**PURCHASE PRICE.** Holders of Co-Design common stock received consideration consisting of cash and notes totaling \$32.7 million in exchange for all shares of Co-Design common stock owned as of the merger date. The total purchase consideration consists of the following:

<i>(in thousands)</i>	
Cash paid and notes issued of \$2.9 million for Co-Design common stock	\$ 32,651
Acquisition related costs	1,038
Fair value of options to purchase Synopsys common stock issued, less \$0.7 million representing the portion of the intrinsic value of Co-Design's unvested options applicable to the remaining vesting period	593
	<u>\$ 34,282</u>

The acquisition-related costs of approximately \$1.0 million consist primarily of legal and accounting fees. As of October 31, 2002, substantially all of these acquisition-related costs have been paid.

Total consideration for the acquisition and services provided has been allocated to the total assets acquired of \$8.8 million, total liabilities assumed of \$5.3 million and notes payable of \$4.8 million, including identifiable intangible assets, based on their respective fair values at the acquisition date. The identifiable intangible assets consist of core/developed technology totaling \$6.2 million which is being amortized over an estimated useful life of 10 years due to the fact that this technology is essentially a programming language. The \$4.8 million of notes are payable to former Co-Design shareholders in 2007 of which \$1.9 million has been included in integration expense for services performed in the statement of operations. If certain milestones are met, the notes may be prepaid in fiscal 2004 and upon prepayment, an additional interest component totaling approximately \$1.0 million is also payable. The total purchase consideration has been allocated to the assets and liabilities acquired, including identifiable intangible assets, based on their respective fair values at the acquisition date and resulted in excess purchase consideration over the net tangible and identifiable intangible assets acquired of \$27.7 million.

#### ACQUISITION OF INSILICON CORPORATION (INSILICON).

On September 20, 2002, the Company completed the acquisition of inSilicon.

**REASONS FOR THE ACQUISITION.** In approving the merger agreement, management considered a number of factors, including the complementary nature of inSilicon's portfolio of intellectual property blocks and Synopsys' own portfolio; the fact that inSilicon had established a per-use license model for its IP products, which would accelerate Synopsys' adoption of a per-use model for its new and development-stage IP, inSilicon's relationships with chip design teams, inSilicon's positive reputation as a vendor of high-quality IP and inSilicon's highly-skilled employee base. The foregoing discussion of the information and factors considered by Synopsys' management is not intended to be exhaustive but includes the material factors considered.



PURCHASE PRICE. Holders of inSilicon common stock received \$4.05 in exchange for each share of inSilicon common stock owned as of the merger date, or approximately \$65.4 million. The total purchase consideration consists of the following:

<i>(in thousands)</i>	
Cash paid for inSilicon common stock	\$ 65,386
Acquisition related costs	6,221
Fair value of options to purchase Synopsys common stock issued, less \$1.7 million representing the portion of the intrinsic value of inSilicon's unvested options applicable to the remaining vesting period	2,975
	<u>\$ 74,582</u>

The acquisition-related costs of \$6.2 million consist primarily of legal and accounting fees of \$1.8 million, and other directly related charges including contract termination costs of \$3.3 million, and restructuring costs of approximately \$0.8 million. As of October 31, 2002, \$3.4 million of acquisition-related costs have been paid. Of the balance remaining at October 31, 2002, \$2.2 million represents outstanding contract termination costs.

The total purchase consideration has been allocated to the assets and liabilities acquired, including identifiable intangible assets, based on their respective fair values at the acquisition date, resulting in goodwill of \$22.2 million. The following unaudited condensed balance sheet data presents the fair value of the assets and liabilities acquired.

<i>(in thousands)</i>	
Assets acquired	
Cash, cash equivalents and short-term investments	\$ 24,908
Accounts receivable	2,428
Prepaid expenses and other current assets	7,463
Core/developed technology	15,100
Customer backlog	1,200
Goodwill	22,160
Other assets	1,290
Total assets acquired	<u>\$ 74,549</u>
Liabilities acquired	
Accounts payable and accrued liabilities	\$ 8,242
Deferred revenue	1,137
Income taxes payable	463
Other liabilities	1,736
Total liabilities acquired	<u>\$ 11,578</u>

GOODWILL AND INTANGIBLE ASSETS. Goodwill, representing the excess of the purchase consideration over the fair value of tangible and identifiable intangible assets acquired in the merger will not be amortized, consistent with the guidance in SFAS 142 as discussed under Note 11 below. The goodwill associated with the inSilicon acquisition is not deductible for tax purposes.

inSilicon had executed signed contracts with five of its major customers to provide IP licenses, including significant modifications to the IP license in order to meet unique customer requirements. The value associated with these contracts was determined by quantifying the projected cash flow related to these contracts, discounted to present value, and is recorded as customer backlog in intangible assets in the consolidated balance sheets.

Intangible assets are being amortized over their estimated useful life of three years. The amortization of intangible assets is included in cost of revenue in the statement of operations for the fiscal year ended October 31, 2002.

UNAUDITED PRO FORMA RESULTS OF OPERATIONS. The following table presents pro forma results of operations and gives effect to the Avant! and inSilicon mergers as if the mergers were consummated on November 1, 2000. The unaudited pro forma results of operations are not necessarily indicative of the results of operations had the Avant! and inSilicon mergers actually occurred at the beginning of fiscal 2001, nor is it necessarily indicative of future operating results:

	<b>Year Ended</b>	
	<b>October 31, 2002</b>	<b>October 31, 2001</b>
	<i>(in thousands, except per share amounts)</i>	
Revenues	\$ <b>1,186,916</b>	\$ 1,100,249
Net income	\$ <b>117,494</b>	\$ 78,909
Basic earnings per share	\$ <b>1.56</b>	\$ 1.05
Weighted average common shares outstanding	<b>75,311</b>	75,131
Diluted earnings per share	\$ <b>1.49</b>	\$ 0.98
Weighted average common shares and dilutive stock options outstanding	<b>78,656</b>	80,180

The unaudited pro forma results of operations for each of the periods presented exclude non-recurring merger costs of \$335.8 million for the Avant! insurance policy premium, \$82.5 million for IPRD resulting from the Avant! merger, \$5.2 million for IPRD resulting from the inSilicon merger and \$21.0 million and \$268.1 million for Avant!'s pre-merger litigation settlement and other related costs incurred in fiscal 2002 and 2001, respectively. These expenses are included in the historical consolidated statement of operations.

INTEGRATION COSTS. Non-recurring integration costs incurred relate to merger activities which are not included in the purchase consideration under Emerging Issues Task Force Number 95-3 (EITF 95-3), RECOGNITION OF LIABILITIES IN CONNECTION WITH A PURCHASE BUSINESS COMBINATION. These costs are expensed as incurred. During fiscal 2002, integration costs totaled \$128.5 million. These costs consisted primarily of (i) \$95.0 million related to the premium for the insurance policy acquired in conjunction with the Avant! merger, (ii) \$14.7 million related to write-downs of Synopsys facilities and property under the approved facility exit plan for the Avant! merger, (iii) \$10.0 million and \$0.7 million related to severance costs for Synopsys employees who were terminated and costs associated with transition employees as a result of the Avant! and inSilicon mergers, respectively, (iv) \$1.3 million related to the write-off of software licenses owned by Synopsys which were originally purchased from Avant!, (v) \$3.7 million goodwill impairment charge related to a prior Synopsys acquisition as a result of the acquisition of Avant! and (vi) \$1.2 million and \$1.9 million of other expenses including travel and certain professional fees for the Avant! and Co-Design mergers, respectively.

PRIOR YEAR BUSINESS COMBINATIONS AND DIVESTITURES. On January 4, 2001, the Company sold the assets of its silicon libraries business to Artisan Components, Inc. for a total sales price of \$15.5 million, including common stock with a fair value on the date of sale of \$11.4 million, and cash of \$4.1 million. The net book value of the assets sold was \$1.4 million. Expenses incurred in connection with the sale were \$3.5 million. The Company recorded a gain on the sale of the business of \$10.6 million, which is included in other income, net in 2001. Direct revenue for the silicon libraries business was \$0.2 million and \$4.3 million for the fiscal years 2001 and 2000, respectively.

There were no business combinations completed in fiscal 2001.

In fiscal 2000, the Company acquired (i) VirSim, a software product, from Innoveda, Inc., for a purchase price of approximately \$7.0 million in cash, (ii) The Silicon Group, Inc., a privately held provider of integrated circuit design and intellectual property integration services, for a purchase price of \$3.0 million, including cash payments of \$1.8 million and a reserve of approximately 34,000 shares of common stock for issuance under The Silicon Group's stock option plan which was assumed in the transaction, and (iii) Leda, S.A. (Leda), a privately held provider of RTL coding-style-checkers, for a purchase price of \$7.7 million, including cash payments of \$7.5 million. Approximately \$1.7 million of the Leda purchase price was allocated to in-process research and development and charged to operations because the acquired technology had not reached technological feasibility

and had no alternative uses. The purchase price of each of these transactions was allocated to the acquired assets and liabilities based on their estimated fair values as of the date of the respective acquisition. Amounts allocated to developed technology and goodwill are being amortized on a straight-line basis over periods ranging from three to five years. Beginning November 1, 2002, amounts allocated to goodwill will no longer be amortized in accordance with FAS 142 as discussed below under Note 11.

#### NOTE 4. FINANCIAL INSTRUMENTS

CASH, CASH EQUIVALENTS AND INVESTMENTS. All cash equivalents, short-term investments, and non-current investments have been classified as available-for-sale securities and are detailed as follows:

	Cost	Net Unrealized Gains	Net Unrealized Losses	Estimated Fair Value
<b>October 31, 2002</b>				
<i>(in thousands)</i>				
Classified as current assets:				
Cash	\$ 129,044	\$ —	\$ —	\$ 129,044
Money market funds	183,536	—	—	183,536
Tax-exempt municipal obligations	101,904	249	—	102,153
Municipal auction rate preferred stock	—	—	—	—
	<b>414,484</b>	<b>249</b>	<b>—</b>	<b>414,733</b>
Classified as non-current assets:				
Equity securities	25,113	14,273	—	39,386
Total	<b>\$ 439,597</b>	<b>\$ 14,522</b>	<b>\$ —</b>	<b>\$ 454,119</b>
<b>October 31, 2001</b>				
Classified as current assets:				
Cash	\$ 47,383	\$ —	\$ —	\$ 47,383
Money market funds	224,313	—	—	224,313
Tax-exempt municipal obligations	188,714	1,751	—	190,465
Municipal auction rate preferred stock	14,275	—	—	14,275
	474,685	1,751	—	476,436
Classified as non-current assets:				
Equity securities	38,577	23,122	—	61,699
Total	<b>\$ 513,262</b>	<b>\$ 24,873</b>	<b>\$ —</b>	<b>\$ 538,135</b>

Short-term investments include tax-exempt municipal obligations, which may have underlying maturities of more than one year. However, such investments may have put options or reset dates within three years that meet high credit quality standards as specified in the Company's investment policy. At October 31, 2002, the underlying maturities of the Company's investments are \$8.0 million within one year, \$39.9 million within one to five years, \$15.1 million within five to ten years and \$39.1 million after ten years. These investments are generally classified as available for sale, and are recorded on the balance sheet at fair market value with unrealized gains or losses reported as a separate component of accumulated other comprehensive income, net of tax. Realized gains and losses on sales of short-term investments have not been material.

STRATEGIC INVESTMENTS. The Company's strategic investment portfolio consists of minority equity investments in publicly traded companies and investments in privately held companies, many of which can still be considered in the start-up or development stages. The securities of publicly traded companies are generally classified as available-for-sale securities accounted for under Statement of Financial Accounting Standards No. 115, ACCOUNTING FOR CERTAIN INVESTMENTS IN DEBT AND EQUITY SECURITIES (SFAS 115), and are reported at fair value, with unrealized gains or losses, net of tax, recorded as a component of other comprehensive income in stockholders' equity. The cost of securities sold is based on the specific identification method. The securities of privately held companies are reported at the lower of cost or fair value.

During the years ended October 31, 2002 and 2001 the Company determined that certain strategic investments, with an aggregate value of \$16.3 million and \$9.4 million, respectively, were impaired, and that the impairment was other than temporary. Accordingly, the Company recorded a charge of approximately \$11.3 million and \$5.8 million during fiscal 2002 and 2001, respectively, to write down the carrying value of the investments. The impairment charge is included in other income, net. The Company reviews its investments in non-public companies on a quarterly basis and estimates the amount of any impairment incurred during the current period based on specific analysis of each investment, considering the activities of and events occurring at each of the underlying portfolio companies during the quarter. The Company's portfolio companies operate in industries that are rapidly evolving and extremely competitive. For equity investments in non-public companies for which there is not a market in which their value is readily determinable, the Company assesses each investment for indicators of impairment at each quarter end based primarily on achievement of business plan objectives and current market conditions, among other factors. The primary business plan objectives the Company considers include achievement of planned financial results, completion of capital raising activities, the launching of technology, the hiring of key employees and overall progress on the portfolio company's business plan. If it is determined that an impairment has occurred with respect to an investment in a portfolio company, in the absence of quantitative valuation metrics, management estimates the impairment and/or the net realizable value of the portfolio investment based on public- and private-company market comparable information and valuations completed for companies similar to Synopsys' portfolio companies. There were no impairment charges recorded during fiscal 2000.

**DERIVATIVE FINANCIAL INSTRUMENTS.** Available-for-sale equity investments accounted for under SFAS 115 are subject to market price risk. From time to time, the Company enters into and designates forward contracts to hedge variable cash flows from anticipated sales of these investments. In accounting for a derivative designated as a cash flow hedge, the effective portion of the change in fair value of the derivative is initially recorded in other comprehensive income and reclassified into earnings when the hedged anticipated transaction affects earnings. The ineffective portion of the change in the fair value of the derivative is recognized in earnings immediately.

The Company's objective for entering into derivative contracts is to lock in the price of selected equity holdings while maintaining the rights and benefits of ownership until the anticipated sale occurs. The forecasted sale selected for hedging is determined by market conditions, up-front costs, and other relevant factors. The Company has generally selected forward sale contracts to hedge its market price risk.

Changes in the spot rate of the forward sale contracts designated and qualifying as cash flow hedges of the forecasted sale of available-for-sale investments accounted for under SFAS 115 are reported in other comprehensive income. The notional amount of the forward designated as the hedging instrument is equal to the available-for-sale securities being hedged. In addition, hedge effectiveness is assessed based on the changes in spot prices. As such, the hedging relationship is perfectly effective, both at inception of the hedge and on an ongoing basis. The difference between the contract price and the forward price, which is generally not material, is reflected in other income.

The Company has entered into forward sale contracts in fiscal 2001 and 2000 with a major financial institution for the sale through April 10, 2003 of certain of the Company's strategic investments. During fiscal 2001, the Company physically settled certain forward contracts. The net gain on the forward contracts was offset by the net loss on the related available-for-sale investment since inception of the hedge, with any gain or loss reclassified from other comprehensive income to other income. As of October 31, 2002, the Company has forward sale contracts outstanding for 46,790 shares of Broadcom Corporation stock at a forward price of \$222.72. As of October 31, 2002, the excess of the fair market value of the forward sale price over cost has been recorded in stockholders' equity as a component of accumulated other comprehensive income.

In fiscal 2002, the Company recorded a net realized gain on the sale of the available-for-sale investments of \$22.7 million (net of premium amortization). As of October 31, 2002, the Company has recorded \$7.6 million in long-term investments due to locked-in unrealized gains on the available-for-sale investments. As of October 31, 2002, the maximum length of time over which the Company is hedging its exposure to the variability in future cash flows associated with the forward sale contracts is 6 months.

**FOREIGN CURRENCY HEDGING.** The Company conducts business on a global basis. Consequently, the Company enters into foreign currency forward contracts to reduce the impact of certain currency exposures. As

of October 31, 2002, 2001, and 2000, the Company had \$305.1 million, \$72.2 million and \$47.5 million, respectively of short-term foreign currency forward contracts outstanding. These contracts are denominated primarily in the Euro and Japanese yen. The outstanding forward contracts have maturities that expire in approximately one month from the balance sheet date. For fair value hedges, foreign currency gains and losses on forward contracts and their underlying balance sheet exposures resulting from market adjustments are included in earnings. Gains and losses related to these instruments for the fiscal years ended October 31, 2002, 2001 and 2000 were not material. The Company also uses forward foreign currency contracts to hedge cash flow exposures resulting from the impact of currency exchange rate fluctuations on forecasted receivables. As of October 31, 2002, the unrealized gain of approximately \$10.0 million on these forward contracts is recorded in stockholders' equity, net of tax, as a component of accumulated other comprehensive income.

**OTHER COMPREHENSIVE INCOME.** Other comprehensive income includes a reclassification adjustment related to unrealized gains on investments, accumulated net translation adjustments and unrealized gains on certain foreign currency forward contracts that qualify as cash flow hedges. In fiscal 2002, 2001 and 2000, the reclassification adjustment is \$5.8 million, \$33.7 million and \$8.9 million, respectively. The reclassification amount adjusts other comprehensive income for gains on the sale of available-for-sale securities realized during the current year and included in other comprehensive income as unrealized holding gains in the period in which such unrealized gains arose. The reclassification adjustment is net of income tax expense of \$3.8 million, \$21.6 million and \$6.0 million, respectively, in fiscal 2002, 2001 and 2000.

**DEBT.** As of October 31, 2002, the Company's debt consisted of \$0.1 million for equipment leases and \$5.1 million for notes payable related to acquisitions payable through 2007. In fiscal 2002, the Company was also assessed approximately \$1.4 million to secure bonds related to certain property taxes. As of October 31, 2001, the Company's debt consisted of \$0.1 million for equipment leases and \$0.3 million of notes payable from acquisitions. The fair value of the Company's long-term debt approximates the carrying amount.

#### **NOTE 5. COMMITMENTS AND CONTINGENCIES**

The Company leases its domestic and foreign facilities and certain office equipment under operating leases. Rent expense was \$33.7 million, \$30.0 million and \$29.1 million in fiscal 2002, 2001 and 2000, respectively. During December 2000, the Company entered into a sublease agreement for a portion of its office space through May 2003. Monthly lease payments of \$912,000 began on December 1, 2000. In November 2002, the sub-lessee repaid monthly lease payments totaling \$8.1 million.

Future minimum lease payments on all facility operating leases (net of sublease income) as of October 31, 2002 are as follows:

<b>Fiscal Year</b>	<b>Minimum Lease Payments (1)</b>	<b>Lease Income</b>	<b>Net</b>
	<i>(in thousands)</i>		
2003	\$ 31,222	\$ (7,768)	\$ 23,454
2004	30,163	-	30,163
2005	24,673	-	24,673
2006	24,286	-	24,286
2007	20,147	-	20,147
Thereafter	103,221	-	103,221
Total minimum payments required	<u>\$ 233,712</u>	<u>\$ (7,768)</u>	<u>\$ 225,944</u>

(1) Minimum lease payments exclude leases related to Avant! facilities which the Company intends to terminate under its approved facilities exit plan as these payments are included in the Facilities Closure Costs portion of the Avant! merger accrual, described in Note 3.

## NOTE 6. STOCKHOLDERS' EQUITY

**STOCK REPURCHASE PROGRAMS.** In July 2001, the Company's Board of Directors authorized stock repurchase programs under which Synopsys common stock with a market value up to \$500 million may be acquired in the open market. This stock repurchase program replaced all prior repurchase programs authorized by the Board. Common shares repurchased are intended to be used for ongoing stock issuances under the Company's employee stock plans and for other corporate purposes. The July 2001 stock repurchase program expired on October 31, 2002. During fiscal 2002, 2001 and 2000, the Company purchased 3.9 million shares at an average price of \$44.20 per share, 6.6 million shares at an average price of \$50.00 per share, and 9.9 million shares at an average price of \$40.02, respectively.

**PREFERRED SHARES RIGHTS PLAN.** The Company has adopted a number of provisions that could have anti-takeover effects, including a Preferred Shares Rights Plan. In addition, the Board of Directors has the authority, without further action by its shareholders, to fix the rights and preferences and issue shares of authorized but undesignated shares of Preferred Stock. This provision and other provisions of the Company's Restated Certificate of Incorporation and Bylaws and the Delaware General Corporation Law may have the effect of deterring hostile takeovers or delaying or preventing changes in control or management of the Company, including transactions in which the stockholders of the Company might otherwise receive a premium for their shares over then current market prices. The preferred share rights expire on October 24, 2007.

**EMPLOYEE STOCK PURCHASE PLAN.** Under the Company's 1992 Employee Stock Purchase Plan 7,050,000 shares have been authorized for issuance as of October 31, 2002. Under the ESPP, employees are granted the right to purchase shares of common stock at a price per share that is 85% of the lesser of the fair market value of the shares at (i) the beginning of a rolling two-year offering period, or (ii) the end of each semi-annual purchase period. During fiscal 2002, 2001, and 2000 shares totaling 627,941, 567,254, and 512,988, respectively, were issued under the plan at average per share prices of \$33.85, \$33.20, and \$32.63, respectively. As of October 31, 2002, 2,885,283 shares of common stock were reserved for future issuance under the plan.

**STOCK OPTION PLANS.** Under the Company's 1992 Stock Option Plan (1992 Plan), 19,475,508 shares of common stock have been authorized for issuance. Pursuant to the 1992 Plan, the Board of Directors may grant either incentive or non-qualified stock options to purchase shares of the Company's common stock to eligible individuals at not less than 100% of the fair market value of those shares on the grant date. Stock options generally vest over a period of four years and expire ten years from the date of grant. As of October 31, 2002, 3,523,486 shares of common stock are reserved for future grants under the 1992 Plan.

Under the Company's Non-Statutory Stock Option Plan (1998 Plan), 26,623,534 shares of common stock have been authorized for issuance. Pursuant to the 1998 Plan, the Board of Directors may grant non-qualified stock options to employees, excluding executive officers. Exercisability, option price and other terms are determined by the Board of Directors, but the option price shall not be less than 100% of the fair market value of the stock at the grant date. Stock options generally vest over a period of four years and expire ten years from the date of grant. At October 31, 2002, 4,817,722 shares of common stock were reserved for future grants.

Under the Company's 1994 Non-Employee Directors Stock Option Plan (Directors Plan), a total of 750,000 shares have been authorized for issuance. The Directors Plan provides for automatic grants to each non-employee member of the Board of Directors upon initial appointment or election to the Board, reelection and for annual service on Board committees. Stock options are granted at not less than 100% of the fair market value of those shares on the grant date. Stock options granted upon appointment or election to the Board vest 25% annually but may be exercised immediately. Stock options granted upon reelection to the Board and for committee service vest 100% after the first year of continuous service. As of October 31, 2002, 71,839 shares of common stock were reserved for future grants.

The Company has assumed certain option plans in connection with business combinations. Generally, these options were granted under terms similar to the terms of the Company's stock option plans at prices adjusted to reflect the relative exchange ratios. All assumed plans were terminated as to future grants upon completion of each of the business combinations.

Additional information concerning stock option activity under all plans is as follows:

	<b>Options Outstanding</b>	<b>Weighted- Average Exercise Price</b>
	<i>(in thousands)</i>	
Outstanding at October 31, 1999	13,031	\$38.75
Granted and assumed	16,220	\$36.05
Exercised	(1,554)	\$27.37
Canceled	(2,952)	\$41.35
Outstanding at October 31, 2000	24,745	\$37.39
Granted	5,967	\$48.23
Exercised	(2,605)	\$33.14
Canceled	(2,187)	\$39.80
Outstanding at October 31, 2001	25,920	\$40.10
Granted	<b>4,081</b>	<b>\$47.88</b>
Options assumed in acquisitions	<b>2,511</b>	<b>\$37.16</b>
Exercised	<b>(2,851)</b>	<b>\$34.43</b>
Canceled	<b>(1,681)</b>	<b>\$42.93</b>
Outstanding at October 31, 2002	<b>27,980</b>	<b>\$41.40</b>
Options exercisable at:		
October 31, 2000	6,619	\$36.15
October 31, 2001	10,405	\$38.23
October 31, 2002	<b>15,230</b>	<b>\$40.49</b>

The following table summarizes information about stock options outstanding at October 31, 2002:

Range of Exercise Prices	<b>Options Outstanding</b>			<b>Exercisable Options</b>	
	Number Outstanding	Weighted- Average Remaining Contractual Life (In Years)	Weighted- Average Exercise Price	Number Exercisable	Weighted- Average Exercise Price
		<i>(in thousands)</i>			<i>(in thousands)</i>
\$0.003 — \$32.25	7,317	7.12	\$ 29.45	4,197	\$ 28.96
\$32.38 — \$39.50	7,569	7.05	\$ 37.31	4,863	\$ 37.18
\$39.81 — \$49.60	6,512	8.08	\$ 45.17	2,998	\$ 45.07
\$49.83 — \$60.00	5,695	8.25	\$ 54.68	2,591	\$ 55.23
\$60.06 — \$111.86	887	7.35	\$ 61.79	581	\$ 62.13
\$0.003 — \$111.86	<b>27,980</b>	7.56	\$ 41.40	<b>15,230</b>	\$ 40.49

**STOCK-BASED COMPENSATION.** In accordance with APB 25, the Company applies the intrinsic value method in accounting for employee stock options. Accordingly, the Company generally recognizes no compensation expense with respect to stock-based awards to employees. The Company has determined pro forma information regarding net income and earnings per share as if the Company had accounted for employee stock options under the fair value method as required by SFAS No. 123. The Company has revised its SFAS No. 123 pro forma stock option disclosure presented below to incorporate the tax benefits associated with equity instruments. The fair value of these stock-based awards to employees was estimated using the Black-Scholes option pricing model, assuming no expected dividends and using the following weighted-average assumptions:

	<b>Year Ended October 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<b>Stock Option Plans</b>		
Expected life (in years)	<b>4.9</b>	4.4	3.9
Risk-free interest rate	<b>4.0%</b>	4.8%	6.3%
Volatility	<b>59.0%</b>	62.0%	58.3%
	<b>ESPP</b>		
Expected life (in years)	<b>1.25</b>	1.25	1.25
Risk-free interest rate	<b>2.1%</b>	4.1%	6.1%
Volatility	<b>59.0%</b>	62.0%	58.3%

For pro forma purposes, the estimated fair value of the Company's stock-based awards to employees is amortized over the options' vesting period of four years and the ESPP's six-month to two-year purchase period. The weighted-average estimated fair value of stock options issued during fiscal 2002, 2001 and 2000 was \$25.74, \$25.62 and \$15.96 per share, respectively. The weighted-average estimated fair value of share purchase rights under the ESPP during fiscal 2002, 2001 and 2000 was \$14.97, \$12.32 and \$15.33 per share, respectively.

The Company's pro forma net income and earnings per share data under SFAS No. 123 is as follows:

	<b>Year Ended October 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<i>(in thousands, except per share amounts)</i>		
Net income (loss)			
As reported under APB 25	<b>\$ (199,993)</b>	\$ 56,802	\$ 97,778
Pro forma under SFAS No. 123	<b>\$ (284,445)</b>	\$ (32,110)	\$ 20,420
Earnings (loss) per share — basic			
As reported under APB 25	<b>\$ (2.99)</b>	\$ 0.94	\$ 1.43
Pro forma under SFAS No. 123	<b>\$ (4.26)</b>	\$ (0.53)	\$ 0.30
Earnings (loss) per share — diluted			
As reported under APB 25	<b>\$ (2.99)</b>	\$ 0.88	\$ 1.38
Pro forma under SFAS No. 123	<b>\$ (4.26)</b>	\$ (0.53)	\$ 0.29

## NOTE 7. INCOME TAXES

The Company is entitled to a deduction for federal and state tax purposes with respect to employees' stock option activity. The net reduction in taxes otherwise payable arising from that deduction has been credited to additional paid-in capital.

The components of the Company's total income before provision for income taxes are as follows:

	<b>Year Ended October 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<i>(in thousands)</i>		
United States	<b>\$ (309,072)</b>	\$ 93,187	\$150,641
Foreign	<b>20,132</b>	(9,654)	(4,703)
	<b>\$ (288,940)</b>	\$ 83,533	\$145,938



The components of the provision (benefit) for income taxes are as follows:

	<b>Year Ended October 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<i>(in thousands)</i>		
Current:			
Federal	<b>\$ 9,605</b>	\$ 80,783	\$ 62,644
State	<b>(1,319)</b>	7,758	8,949
Foreign	<b>11,474</b>	6,782	3,388
	<b>19,760</b>	95,323	74,981
Deferred:			
Federal	<b>(104,041)</b>	(66,049)	(30,025)
State	<b>(21,728)</b>	(13,076)	(4,266)
Foreign	<b>(2,398)</b>	(5,460)	(3,394)
	<b>(128,167)</b>	(84,585)	(37,685)
Charge equivalent to the federal and state tax benefit related to employee stock options	<b>19,460</b>	15,993	10,864
Provision (benefit) for income taxes	<b>\$(88,947)</b>	\$ 26,731	\$ 48,160

The provision (benefit) for income taxes differs from the amount obtained by applying the statutory federal income tax rate to income (loss) before income taxes as follows:

	<b>Year Ended October 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<i>(in thousands)</i>		
Statutory federal tax	<b>\$(101,129)</b>	\$ 29,236	\$ 51,078
State tax, net of federal effect	<b>(8,105)</b>	2,611	5,555
Tax credits	<b>(10,745)</b>	(9,041)	(7,248)
Tax benefit from foreign sales corporation/extraterritorial income exclusion	<b>(2,827)</b>	(2,780)	(3,146)
Tax exempt income	<b>(1,865)</b>	(3,289)	(5,508)
Foreign tax in excess of (less than) U.S. statutory tax	<b>1,553</b>	2,679	(1,194)
Non-deductible merger and acquisition expenses	<b>4,367</b>	5,601	5,454
In-process research and development expenses	<b>30,695</b>	—	829
Other	<b>(891)</b>	1,714	2,340
	<b>\$( 88,947)</b>	\$ 26,731	\$ 48,160

Net deferred tax assets of \$276.3 million and \$170.4 million were recorded at October 31, 2002 and October 31, 2001, respectively. The net deferred tax asset of \$276.3 million for the year ended October 31, 2002 includes the tax effects of the parent corporation, Synopsys, and the newly acquired corporations, Avant!, inSilicon, and Co-Design. The tax effects of temporary differences and carryforwards which give rise to significant portions of the deferred tax assets and liabilities are as follows:

	<u>October 31,</u>	
	<u>2002</u>	<u>2001</u>
	<i>(in thousands)</i>	
Net deferred tax assets:		
Deferred tax assets:		
Current:		
Net operating loss and tax credit carryovers	\$ 7,370	\$ 5,157
Deferred revenue	111,463	122,857
Reserves and other expenses not currently deductible	62,414	17,831
Unrealized foreign exchange losses	—	1,839
Insurance premiums	94,213	—
Other	10,491	1,555
	<u>285,951</u>	<u>149,239</u>
Non-current:		
Net operating loss and tax credit carryovers	52,529	6,496
Deferred compensation	9,247	5,907
Deferred revenue	—	11,883
Depreciation and amortization	32,335	6,698
Other	2,148	1,258
	<u>96,259</u>	<u>32,242</u>
Total deferred tax assets	<u>382,210</u>	<u>181,481</u>
Deferred tax liabilities:		
Current:		
Unrealized foreign exchange losses	(3,084)	—
	<u>(3,084)</u>	<u>—</u>
Non-current:		
Unrealized gain on securities investments	(5,256)	(9,196)
Net capitalized software development costs	(1,185)	(397)
Intangible assets	(96,358)	—
Other	—	(1,482)
	<u>(102,799)</u>	<u>(11,075)</u>
Total deferred tax liabilities	<u>(105,883)</u>	<u>(11,075)</u>
Net deferred tax assets	<u>\$ 276,327</u>	<u>\$ 170,406</u>

At October 31, 2002, the Company believes that it is more likely than not that the results of future operations will generate sufficient taxable income to realize the deferred tax assets.

The Company's United States income tax returns for fiscal years ended September 30, 1996 and September 30, 1995 are under examination and the Internal Revenue Service has proposed certain adjustments. Management believes that adequate amounts have been provided for any adjustments that may ultimately result from these examinations.

The Company has federal tax loss carryforwards of approximately \$117.5 million at October 31, 2002. The loss carryforwards will expire in 2010 through 2020. Because of the change in ownership provisions of the Internal Revenue Code, a portion of the Company's loss carryforwards may be subject to annual limitations. The annual limitation may result in the expiration of the net operating loss before utilization. The Company also has net operating loss carryforwards from Ireland operations of approximately \$25.2 million. These loss carryforwards will expire in 2005 through 2006. Management believes that all net operating losses will be utilized and a valuation allowance is not necessary.

## NOTE 8. SEGMENT DISCLOSURE

Statement of Financial Accounting Standards No. 131, DISCLOSURES ABOUT SEGMENTS OF AN ENTERPRISE AND RELATED INFORMATION (SFAS 131), requires disclosures of certain information regarding operating segments, products and services, geographic areas of operation and major customers. The method for determining what information to report under SFAS 131 is based upon the "management approach," or the way that management organizes the operating segments within a company, for which separate financial information is available that is evaluated regularly by the Chief Operating Decision Maker (CODM) in deciding how to allocate resources and in assessing performance. Synopsys' CODM is the Chief Executive Officer and Chief Operating Officer.

The Company provides comprehensive design technology products and consulting services in the electronic design automation software industry. The CODM evaluates the performance of the Company based on profit or loss from operations before income taxes not including merger-related costs, in-process research and development and amortization of intangible assets. For the purpose of making operating decisions, the CODM primarily considers financial information presented on a consolidated basis accompanied by disaggregated information about revenues by geographic region. There are no differences between the accounting policies used to measure profit and loss for the Company segment and those used on a consolidated basis. Revenue is defined as revenues from external customers.

The disaggregated financial information reviewed by the CODM is as follows:

	<b>Year Ended October 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<i>(in thousands)</i>		
Revenue:			
Product	<b>245,193</b>	163,924	434,077
Service	<b>287,747</b>	341,833	340,796
Ratable license	<b>373,594</b>	174,593	8,905
Total revenue	<b>\$ 906,534</b>	\$ 680,350	\$ 783,778
Gross margin before amortization of intangible assets and deferred stock compensation	<b>\$ 767,311</b>	\$ 550,228	\$ 659,304
Operating income before integration costs, in-process research and development, amortization of intangible assets and deferred stock compensation, and \$95 million of the insurance premium related to the Cadence litigation (1)	<b>\$ 198,496</b>	\$ 16,761	\$ 122,014

(1) The total premium paid to the insurer was \$335.8 million of which \$95.0 million is included in operating income but is excluded from this table and \$240.8 million is included in other income and expense in the Company's consolidated statement of operations.

There were no integration, amortization of deferred stock compensation or insurance settlement costs during fiscal 2001 and 2000. There were no in-process research and development costs during fiscal 2001.

A reconciliation of the Company's segment gross margin to the Company's gross margin is as follows:

	<b>Year Ended October 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<i>(in thousands)</i>		
Gross margin before amortization of intangible assets and deferred stock compensation	<b>\$ 767,311</b>	\$ 550,228	\$ 659,304
Amortization of intangible assets and deferred stock compensation	<b>(33,936)</b>	—	—
Gross margin	<b>\$ 733,375</b>	\$ 550,228	\$ 659,304

Reconciliation of the Company's segment profit and loss to the Company's operating income (loss) is as follows:

	<b>Year Ended October 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<i>(in thousands)</i>		
Operating income before integration costs, in-process research and development, amortization of intangible assets and deferred stock compensation, and \$95 million of the insurance premium related to the Cadence litigation (1)	<b>\$ 198,496</b>	\$ 16,761	\$ 122,014
Integration costs	<b>(128,528)</b>	—	—
In-process research and development	<b>(87,700)</b>	—	(1,750)
Amortization of intangible assets and deferred stock compensation	<b>(62,585)</b>	(17,012)	(15,129)
Operating (loss) income	<b>\$ (80,317)</b>	\$ (251)	\$ 105,135

(1) The total premium paid to the insurer was \$335.8 million of which \$95.0 million is included in operating income but is excluded from this table and \$240.8 million is included in other income and expense in the Company's consolidated statement of operations.

Revenue and long-lived assets related to operations in the United States and other geographic areas are as follows:

	<b>Year Ended October 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<i>(in thousands)</i>		
Revenue:			
United States	<b>\$ 591,526</b>	\$ 426,527	\$ 456,759
Europe	<b>145,758</b>	125,380	141,306
Japan	<b>95,413</b>	69,850	130,698
Other	<b>73,837</b>	58,593	55,015
Consolidated	<b>\$ 906,534</b>	\$ 680,350	\$ 783,778
	<b>October 31,</b>	<b>October 31,</b>	
	<b>2002</b>	<b>2001</b>	
Long-lived assets:			
United States	<b>\$ 162,360</b>	\$ 176,330	
Other	<b>22,680</b>	15,974	
Consolidated	<b>\$ 185,040</b>	\$ 192,304	

Geographic revenue data for multi-region, multi-product transactions reflects internal allocations and is therefore subject to certain assumptions and the Company's methodology. Revenue is not reallocated among geographic regions to reflect any re-mixing of licenses between different regions following the initial product

shipment. No one customer accounted for more than ten percent of the Company's consolidated revenue in the periods presented.

The Company segregates revenue into five categories for purposes of internal management reporting: Design Implementation, Verification and Test, Design Analysis, Intellectual Property (IP) and Professional Services. The following table summarizes the revenue attributable to each of the various categories. Revenue attributable to products acquired from Avant!, inSilicon and Co-Design that was recognized by the acquired companies prior to the respective acquisition date is not reflected in the following tables. Revenue attributable to such acquired products after the acquisition date of the respective company is included in fiscal 2002. As a result of the Avant! merger, the Company has redefined its product groups. Prior period amounts have been reclassified to conform to the new presentation.

	<b>Year Ended October 31,</b>		
	<b>2002</b>	<b>2001</b>	<b>2000</b>
	<i>(in thousands)</i>		
Revenue:			
Design Implementation	<b>\$ 397,109</b>	\$ 270,357	\$ 305,192
Verification and Test	<b>269,098</b>	222,776	266,489
Design Analysis	<b>119,469</b>	40,658	44,220
IP	<b>62,177</b>	64,859	86,393
Professional Services	<b>58,681</b>	81,700	81,484
Consolidated	<b><u>\$906,534</u></b>	<b><u>\$ 680,350</u></b>	<b><u>\$ 783,778</u></b>

#### **NOTE 9. TERMINATION OF AGREEMENT TO ACQUIRE IKOS SYSTEMS, INC.**

On July 2, 2001, the Company entered into an Agreement and Plan of Merger and Reorganization (the IKOS Merger Agreement) with IKOS Systems, Inc. (IKOS). The IKOS Merger Agreement provided for the acquisition of all outstanding shares of IKOS common stock by Synopsys.

On December 7, 2001, Mentor Graphics Corporation (Mentor) commenced a cash tender offer to acquire all of the outstanding shares of IKOS common stock at \$11.00 per share, subject to certain conditions. On March 12, 2002, Synopsys and IKOS executed a termination agreement by which the parties terminated the IKOS Merger Agreement and pursuant to which IKOS paid Synopsys the \$5.5 million termination fee required by the IKOS Merger Agreement. This termination fee and \$2.4 million of expenses incurred in conjunction with the acquisition are included in other income, net on the consolidated statement of operations for the year ended October 31, 2002. Synopsys subsequently executed a revised termination agreement with Mentor and IKOS in order to add Mentor as a party thereto.

#### **NOTE 10. DEFERRED STOCK COMPENSATION**

In connection with the current year mergers, the Company also assumed unvested stock options held by Avant!, inSilicon and Co-Design employees. The Company has recorded deferred stock compensation totaling \$8.1 million, \$1.7 million and \$0.7 million based on the intrinsic value of these assumed unvested stock options for Avant!, inSilicon and Co-Design, respectively. The deferred stock compensation is amortized over the options' remaining vesting period of one to three years. During fiscal 2002, the Company recorded amortization of deferred stock compensation in each of the following expense classifications in the statement of operations:

<i>(in thousands)</i>	
Cost of revenues	\$ 207
Research and development	499
Sales and marketing	234
General and administrative	582
Total	<u>\$ 1,522</u>

## **NOTE 11. EFFECT OF NEW ACCOUNTING STANDARDS**

In July 2001, the Financial Accounting Standards Board (FASB) issued Statements of Financial Accounting Standards No. 141, BUSINESS COMBINATIONS (SFAS 141), and GOODWILL AND OTHER INTANGIBLE ASSETS (SFAS 142). SFAS 141 requires that the purchase method of accounting be used for all business combinations initiated after June 30, 2001 and specifies criteria intangible assets acquired in a purchase method business combination must meet to be recognized apart from goodwill. SFAS 142 requires that goodwill and intangible assets with indefinite useful lives no longer be amortized, but instead be tested for impairment at least annually in accordance with the provisions of SFAS 142.

The Company adopted SFAS 142 on November 1, 2002. As of October 31, 2002, unamortized goodwill is \$434.6 million, which will no longer be amortized subsequent to the adoption of SFAS 142. Related goodwill amortization expense for fiscal 2002, 2001 and 2000 is \$16.2 million, \$17.0 million and \$15.1 million, respectively.

The Company adopted the provisions of SFAS 141 on July 1, 2001. Under SFAS 141, goodwill and intangible assets with indefinite useful lives acquired in a purchase business combination completed after June 30, 2001, but before SFAS 142 is adopted, will not be amortized but will continue to be evaluated for impairment in accordance with SFAS 121. Goodwill and intangible assets acquired in business combinations completed before July 1, 2001 will continue to be amortized and tested for impairment in accordance with current accounting guidance until the date of adoption of SFAS 142.

Upon adoption of SFAS 142, the Company must evaluate its existing intangible assets and goodwill acquired in purchase business combinations prior to July 1, 2001, and make any necessary reclassifications in order to conform with the new criteria in SFAS 141 for recognition apart from goodwill. Upon adoption of SFAS 142, the Company has assessed useful lives and residual values of all intangible assets acquired. The Company has also tested goodwill for impairment in accordance with the provisions of SFAS 142. In completing its impairment analysis, the Company has determined that it has one reporting unit as the company operates in one reportable segment. In conjunction with the implementation of SFAS No. 142, the Company has completed a goodwill impairment review as of the beginning of fiscal 2003 and found no impairment. This impairment review was based on the fair value of the Company as determined by its market capitalization.

In July 2001, the FASB issued Statement of Financial Accounting Standards No. 143, ACCOUNTING FOR ASSET RETIREMENT OBLIGATIONS (SFAS 143). SFAS 143 requires that asset retirement obligations that are identifiable upon acquisition, construction or development and during the operating life of a long-lived asset be recorded as a liability using the present value of the estimated cash flows. A corresponding amount would be capitalized as part of the asset's carrying amount and amortized to expense over the asset's useful life. The Company is required to adopt the provisions of SFAS 143 effective November 1, 2002. The adoption of SFAS 143 will not have a significant impact on its financial position and results of operations.

In August 2001, the FASB issued Statement of Financial Accounting Standards No. 144, ACCOUNTING FOR THE IMPAIRMENT OR DISPOSAL OF LONG-LIVED ASSETS (SFAS 144), which addresses financial accounting and reporting for the impairment or disposal of long-lived assets and supersedes SFAS No. 121, ACCOUNTING FOR THE IMPAIRMENT OF LONG-LIVED ASSETS AND FOR LONG-LIVED ASSETS TO BE DISPOSED OF, and the accounting and reporting provisions of APB Opinion No. 30, REPORTING THE RESULTS OF OPERATIONS FOR A DISPOSAL OF A SEGMENT OF A BUSINESS. The Company is required to adopt the provisions of SFAS 144 no later than November 1, 2002. The adoption of SFAS 144 will not have a significant impact on the Company's financial position and results of operations.

In July 2002, the FASB issued Statement of Financial Accounting Standards No. 146 (SFAS 146), ACCOUNTING FOR EXIT OR DISPOSAL ACTIVITIES. SFAS 146 addresses the recognition, measurement, and reporting of costs that are associated with exit and disposal activities, including costs related to terminating a contract that is not a capital lease and termination benefits that employees who are involuntarily terminated receive under the terms of a one-time benefit arrangement that is not an ongoing benefit arrangement or an individual deferred-compensation contract. SFAS 146 supersedes Emerging Issues Task Force Issue No. 94-3, LIABILITY RECOGNITION FOR CERTAIN EMPLOYEE TERMINATION BENEFITS AND OTHER COSTS TO EXIT AN ACTIVITY (INCLUDING CERTAIN COSTS INCURRED IN A RESTRUCTURING) and requires liabilities associated with exit and disposal activities to be expensed as incurred. SFAS 146 will be

effective for exit or disposal activities of the Company that are initiated after December 31, 2002. The Company believes that the adoption of SFAS 146 will not have a significant impact on the Company's financial position and results of operations.

In December 2002, the FASB issued Statement of Financial Accounting Standards No. 148 (SFAS 148), ACCOUNTING FOR STOCK-BASED COMPENSATION - TRANSITION AND DISCLOSURE. SFAS 148 amends FASB Statement No. 123 (SFAS 123), ACCOUNTING FOR STOCK-BASED Compensation, to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, SFAS 148 amends the disclosure requirements of SFAS 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. The transition guidance and annual disclosure provisions of SFAS 148 are effective for fiscal years ending after December 15, 2002. The interim disclosure provisions are effective for financial reports containing financial statements for interim periods beginning after December 15, 2002. The Company is currently evaluating the impact of adoption of SFAS 148 on its financial position and results of operations.

In November 2002, the EITF reached a consensus on Issue No. 00-21 (EITF 00-21), REVENUE ARRANGEMENTS WITH MULTIPLE DELIVERABLES. EITF 00-21 addresses certain aspects of the accounting by a vendor for arrangements under which the vendor will perform multiple revenue generating activities. EITF 00-21 will be effective for fiscal years beginning after June 15, 2003. The Company does not expect the adoption of EITF 00-21 to have a material impact on its financial position and results of operations.

In November 2002, the FASB Interpretation No. 45 (Interpretation 45), GUARANTOR'S ACCOUNTING AND DISCLOSURE REQUIREMENTS FOR GUARANTEES, INCLUDING INDIRECT GUARANTEES OF INDEBTEDNESS OF OTHERS, which clarifies disclosure and recognition/measurement requirements related to certain guarantees. The disclosure requirements are effective for financial statements issued after December 15, 2002 and the recognition/measurement requirements are effective on a prospective basis for guarantees issued or modified after December 31, 2002. The Company is currently evaluating the impact of adoption of Interpretation 45 on its financial position and results of operations.

#### **NOTE 12. RELATED PARTY TRANSACTIONS**

Approximately 8% of fiscal 2002 revenues were derived from a company whose Chief Financial and Enterprise Officer serves on the Synopsys Board of Directors. Management believes the transactions between the two parties were carried out under the Company's normal terms and conditions.

The Company has a joint venture with Davan Tech Co., Ltd, of Korea (Davan Tech) whereby Davan Tech acts as a non-exclusive distributor for the Company subject to certain conditions as defined in the distribution agreement. As of October 31, 2002, the Company owned approximately 10% of Davan Tech and the investment is accounted for under the cost basis. During the period from June 6, 2002 through October 31, 2002, the Company recognized revenues totaling \$1.3 million from Davan Tech.

The Chairman of the Company's Audit Committee is also the Chairman of the Board of Directors for a company in which Synopsys has invested \$500,000. During the first quarter of fiscal 2003, Synopsys invested an additional \$300,000 in this company.

#### **NOTE 13. SUBSEQUENT EVENTS**

**RENEWAL OF STOCK REPURCHASE PROGRAM.** In December 2002, the Company's Board of Directors renewed its stock repurchase program originally approved in July 2001. Under the renewed program, the Company may repurchase Synopsys common stock with a market value up to \$500 million (not including amounts purchased to date under the July 2001 program on the open market). Common shares repurchased are intended to be used for ongoing stock issuances, such as for existing employee stock option and stock purchase plans and acquisitions.

**PROPOSED ACQUISITION OF NUMERICAL TECHNOLOGIES, INC.** On January 13, 2003, the Company entered into an Agreement and Plan of Merger with Numerical Technologies, Inc. (Numerical) under which the Company commenced a cash tender offer to acquire all of the outstanding shares of Numerical common stock

at \$7.00 per share, followed by a second-step merger in which the Company would acquire any untendered Numerical shares at the same price per share. The total transaction value is expected to be approximately \$250 million. Following the consummation of the cash tender offer, Numerical will merge with and into a wholly owned subsidiary of the Company. The acquisition is subject to certain conditions, including the tender of a majority of the fully diluted shares of Numerical, compliance with regulatory requirements and customary closing conditions.

**WORKFORCE REDUCTION.** During the first quarter of fiscal 2003, the Company implemented a workforce reduction. The purpose was to reduce expenses by decreasing the number of employees in all departments in domestic and foreign locations. As a result, the Company expects to record a charge of between \$4.8 million and \$5.3 million during the first quarter of fiscal 2003. The charge consists of severance and other special termination benefits.

**NOTE 14. SELECTED QUARTERLY DATA (UNAUDITED)**

	<b>Quarter Ended</b>			
	<b>January 31,</b>	<b>April 30,</b>	<b>July 31,</b>	<b>October 31,</b>
	<i>(in thousands, except per share data)</i>			
2002:				
Revenue	<b>\$175,545</b>	<b>\$185,638</b>	<b>\$236,095</b>	<b>\$309,256</b>
Gross margin	<b>140,355</b>	<b>151,246</b>	<b>188,409</b>	<b>253,365</b>
Income (loss) before income taxes	<b>20,179</b>	<b>30,716</b>	<b>(161,380)</b>	<b>(178,455)</b>
Net income (loss)	<b>14,052</b>	<b>21,380</b>	<b>(137,589)</b>	<b>(97,836)</b>
Earnings (loss) per share				
Basic	<b>\$ 0.23</b>	<b>\$ 0.35</b>	<b>\$ (1.93)</b>	<b>\$ (1.31)</b>
Diluted	<b>\$ 0.22</b>	<b>\$ 0.33</b>	<b>\$ (1.93)</b>	<b>\$ (1.31)</b>
Market stock price range (1):				
High	<b>\$ 59.70</b>	<b>\$ 55.21</b>	<b>\$ 55.30</b>	<b>\$ 47.25</b>
Low	<b>\$ 49.46</b>	<b>\$ 41.71</b>	<b>\$ 40.24</b>	<b>\$ 32.63</b>
2001:				
Revenue	\$157,154	\$163,524	\$176,110	\$183,562
Gross margin	125,099	132,568	143,390	149,171
Income before income taxes	13,919	18,368	21,250	29,996
Net income	9,465	12,490	14,450	20,397
Earnings per share				
Basic	\$ 0.15	\$ 0.21	\$ 0.24	\$ 0.34
Diluted	\$ 0.15	\$ 0.19	\$ 0.22	\$ 0.33
Market stock price range (1):				
High	\$ 55.37	\$ 61.87	\$ 62.75	\$ 54.35
Low	\$ 34.12	\$ 43.12	\$ 44.05	\$ 37.04

(1) Company's common stock is traded on The Nasdaq Stock Market under the symbol "SNPS." The stock prices shown represent quotations among dealers without adjustments for retail markups, markdowns or commissions and may not represent actual transactions. As of October 31, 2002, there were approximately 568 shareholders of record. To date, the Company has paid no cash dividends on its capital stock, and has no current intention to do so.



**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

Not applicable.

**PART III****Item 10. Directors and Executive Officers of the Registrant**

Set forth below is information regarding the directors, including information furnished by them as to principal occupations, certain other directorships held by them, any arrangements pursuant to which they were selected as directors and their ages as of January 31, 2003.

Name	Age	Year First Elected Director
Aart J. de Geus	48	1986
Andy D. Bryant	52	1999
Chi-Foon Chan	53	1998
Bruce R. Chizen	47	2001
Deborah A. Coleman	50	1995
A. Richard Newton	51	1987; 1995
Sasson Somekh	56	1999
Roy Vallee	50	2003
Steven C. Walske	50	1991

**Background of Directors**

Dr. Aart J. de Geus co-founded Synopsys and currently serves as Chief Executive Officer and Chairman of the Board of Directors. Since the inception of Synopsys in December 1986, he has held a variety of positions, including Senior Vice President of Engineering and Senior Vice President of Marketing. From 1986 to 1992, Dr. de Geus served as Chairman of the Board. He served as President from 1992 to 1998. Dr. de Geus has served as Chief Executive Officer since January 1994 and has held the additional title of Chairman of the Board since February 1998. He has served as a Director since 1986. From 1982 to 1986 Dr. de Geus was employed by General Electric Corporation, where he was the Manager of the Advanced Computer-Aided Engineering Group. Dr. de Geus holds an M.S.E.E. from the Swiss Federal Institute of Technology in Lausanne, Switzerland and a Ph.D. in electrical engineering from Southern Methodist University.

Andy D. Bryant has been a Director of Synopsys since January 1999 and currently serves as Executive Vice President and Chief Financial and Enterprise Services Officer of Intel Corporation, with responsibility for financial operations, human resources, information technology and e-business functions and activities worldwide. Mr. Bryant joined Intel in 1981 as Controller for the Commercial Memory Systems Operation and in 1983 became Systems Group Controller. In 1987 he was promoted to Director of Finance for the corporation and was appointed Vice President and Director of Finance of the Intel Products Group in 1990. Mr. Bryant became CFO in February of 1994 and was promoted to Senior Vice President in January 1999. Mr. Bryant expanded his role to Chief Financial and Enterprise Services Officer in December 1999. He was promoted to Executive Vice President in January 2001. Prior to joining Intel, he held positions in finance at Ford Motor Company and Chrysler Corporation. Mr. Bryant holds a B.A. in economics from the University of Missouri and an M.B.A. in finance from the University of Kansas.

Dr. Chi-Foon Chan joined Synopsys as Vice President of Application Engineering & Services in May 1990. Since April 1997 he has served as Chief Operating Officer and since February 1998 he has held the additional title of President. Dr. Chan also became a Director of Synopsys in February 1998. From September 1996 to February 1998 he served as Executive Vice President, Office of the President. From February 1994 until April 1997 he served as Senior Vice President, Design Tools Group and from October 1996 until April 1997 as Acting Senior Vice President, Design Re-Use Group. Additionally, he has held the titles of Vice President, Engineering and General Manager, DesignWare Operations and Senior Vice President, Worldwide Field Organization. From March 1987 to May 1990, Dr. Chan was employed by NEC Electronics, where his last position was General Manager, Microprocessor Division. From 1977 to 1987, Dr. Chan held a number of senior engineering positions at Intel Corporation. Dr. Chan holds an M.S. and Ph.D. in computer engineering from Case Western Reserve University.

Bruce R. Chizen has been a Director of Synopsys since April 2001. Mr. Chizen has served as President of Adobe Systems Incorporated, a provider of graphic design, publishing, and imaging software for Web and print production, since April 2000 and as Chief Executive Officer since December 2000. He joined Adobe Systems in August 1994 as Vice President and General Manager, Consumer Products Division and in December 1997 became Senior Vice President and General Manager, Graphics Products Division. In August 1998 Mr. Chizen was promoted to Executive Vice President, Products and Marketing. From November 1992 to February 1994 he was Vice President and General Manager, Claris Clear Choice for Claris Corp., a wholly-owned subsidiary of Apple Computer. He is a Director of Adobe Systems Incorporated.

Deborah A. Coleman has been a Director of Synopsys since November 1995. Ms. Coleman is co-founder and currently General Partner of SmartForest Ventures in Portland, Oregon. Ms. Coleman was Chairman of the Board of Merix Corporation, a manufacturer of printed circuit boards, from May 1994, when it was spun off from Tektronix, Inc., until September 2001. She also served as Chief Executive Officer of Merix from May 1994 to September 1999 and as President from March 1997 to September 1999. Ms. Coleman joined Merix from Tektronix, a diversified electronics corporation, where she served as Vice President of Materials Operations, responsible for worldwide procurement, distribution, component engineering and component manufacturing operations. Prior to joining Tektronix in November 1992, Ms. Coleman was with Apple Computer, Inc. for eleven years, where she held several executive positions, including Chief Financial Officer, Chief Information Officer and Vice President of Operations. She is a Director of Applied Materials, Inc., a manufacturer of semiconductor fabrication equipment, Chairman of the Board of Teseda Corporation, a semiconductor test equipment company, and a director of Finatus, Inc., a web-based compliance service provider.

Dr. A. Richard Newton has been a Director of Synopsys since January 1995. Previously, Dr. Newton was a Director of Synopsys from January 1987 to June 1991. Dr. Newton has been a Professor of Electrical Engineering and Computer Sciences at the University of California at Berkeley since 1979 and is currently Dean of the College of Engineering. From July 1999 to June 2000, Dr. Newton was Chair of the Electrical Engineering and Computer Sciences Department. Since 1988 Dr. Newton has acted as a Venture Partner with Mayfield Fund, a venture capital partnership, and has contributed to the evaluation and development of over two dozen new companies. From November 1994 to July 1995 he was acting President and Chief Executive Officer of Silicon Light Machines, a private company which has developed display systems based on the application of micromachined silicon light-valves.

Dr. Sasson Somekh has been a Director of Synopsys since January 1999. He is Executive Vice President of Applied Materials, Inc., a manufacturer of semiconductor fabrication equipment. From December 1993 to November 2000, Dr. Somekh served as Senior Vice President. Dr. Somekh served as Group Vice President from 1990 to 1993. Prior to that, he was a divisional Vice President. Dr. Somekh joined Applied Materials in 1980 as a Project Manager.

Roy Vallee has been a Director of Synopsys since February 2003. Mr. Vallee is Chief Executive Officer and Chairman of the Board of Avnet, Inc., a global semiconductor products and electronics distributor, positions he has held since June 1998. Previously, he was Vice Chairman of the Board since November 1992, and also President and Chief Operating Officer since March 1992. Mr. Vallee currently serves on the board of directors of Teradyne, Inc., an automated testing company for the electronics, communications and software industries. He is also a member of the executive committee of the Global Technology Distribution Council.

Steven C. Walske has been a Director of Synopsys since December 1991. Mr. Walske has been Chief Business Strategist of Parametric Technology Corporation, a supplier of software products for mechanical computer aided engineering since June 2000. Previously, Mr. Walske served as Chairman, Chief Executive Officer and a Director from August 1994 until June 2000 and as President and Chief Executive Officer of that company from December 1986 to August 1994.

There are no family relationships among any executive officers, directors or persons chosen or nominated to become executive officers or directors of Synopsys.

## **Directors' Compensation**

Each member of the Board receives a retainer of \$25,000 per year for attendance at Board meetings. In addition, each member of the Audit Committee receives \$2,000 per Audit Committee meeting attended, other than the Chairperson, who receives \$4,000 per Audit Committee meeting attended.

In addition, non-employee members of the board of directors receive automatic option grants under the 1994 Non-Employee Directors Stock Option Plan, which in this document we refer to as the "Directors Plan." As of the date of this Annual Report, all seven non-employee members of the Synopsys board of directors were eligible to participate in the Directors Plan. Under the Directors Plan, new directors receive an option for 20,000 shares, vesting in equal installments over four years. In addition, each continuing director who is elected at an annual meeting of stockholders receives an option for 10,000 shares and an additional option for 5,000 shares for each Board committee membership. The annual option grants vest in full on the date immediately prior to the date of the annual meeting following their grant. In the case of directors appointed to the board between annual meetings, the annual and any committee grants are prorated based upon the amount of time since the last annual meeting.

During fiscal 2002, directors Andy D. Bryant, Bruce R. Chizen, Deborah A. Coleman, A. Richard Newton, Sasson Somekh and Steven C. Walske each received automatic grants of options to purchase 10,000 Synopsys common shares at an exercise price of \$49.83 per share for Synopsys board of directors service during the year. In addition, during fiscal 2002, each of such directors received options to purchase 10,000 Synopsys common shares for service on Synopsys board of directors committees at an exercise price of \$49.83. Mr. Vallee, who was added to the Board in February 2003, received an option for 20,000 shares at an exercise price of \$40.92 for his initial service, a pro rated annual grant of 3,333 shares at an exercise price of \$40.92 per share and a pro rated committee grant of 3,333 shares at an exercise price of \$40.46 per share.

During fiscal 2002, Dr. Newton provided consulting services to Synopsys, for which he was paid \$180,000. Under Synopsys' agreement with Dr. Newton, at Synopsys' request, Dr. Newton provides advice concerning long-term technology strategy and industry development issues, as well as assistance in identifying opportunities for partnerships with academia.

## **Section 16(a) Beneficial Ownership Reporting Compliance**

Section 16(a) of the Exchange Act requires Synopsys' directors, officers and greater than ten percent beneficial owners of its shares to file reports of ownership and changes in ownership with the SEC. Directors, officers and greater than ten percent stockholders are required by SEC regulations to furnish Synopsys with copies of all Section 16(a) forms they file.

Based solely upon its review of the copies of the Forms 3, 4 and 5 received by Synopsys and/or written representations from certain reporting persons, Synopsys believes that each of its directors, officers, and greater than ten percent beneficial owners of its shares during the fiscal year ended October 31, 2002 has complied with all filing requirements applicable to such persons during such fiscal year.

## **Executive Officers**

Information regarding executive officers who are not directors is included in Part I of the Annual Report.

## **Item 11. *Executive Compensation***

### **Executive Compensation And Other Matters**

The following table sets forth the compensation earned by (1) Synopsys' Chief Executive Officer and (2) each of the other four most highly compensated executive officers whose compensation for fiscal 2002 exceeded \$100,000, which in this document we collectively refer to as the "named executive officers," for services rendered in all capacities to Synopsys during the last three fiscal years.

## Summary Compensation Table

Name and Position	Year	Annual Compensation (\$)		Long-Term Compensation: Securities Awards Underlying Options (#)	All Other Compensation (\$ (1))
		Salary	Bonus		
Aart J. de Geus	2002	400,000	575,000	106,500	1,500
Chief Executive Officer and Chairman of the Board	2001	400,000	575,000	85,500	1,830
	2000	430,769	600,000	731,000	1,855
Chi-Foon Chan	2002	400,000	575,000	91,700	5,138
President and Chief Operating Officer	2001	400,000	575,000	71,000	2,588
	2000	430,769	600,000	623,000	2,493
Vicki L. Andrews	2002	300,000	448,385(2)	72,900	13,884
Senior Vice President World Wide Sales	2001	289,423	611,396(3)	60,500	9,544
	2000	287,500	568,256(4)	179,000	9,826
Robert B. Henske	2002(5)	375,000	350,000	73,300	1,500
Senior Vice President and Chief Financial Officer	2001	364,423	350,000	60,500	1,825
	2000(6)	175,000	232,000	340,000	160
Steven K. Shevick(7)	2002	250,000	220,000	25,300	1,500
Senior Vice President and Chief Financial Officer	2001	241,538	175,000	17,500	1,871
	2000	236,154	160,984	100,000	1,833

(1) Amounts in this column reflect premiums paid for group term life insurance, Synopsys 401(k) contributions and, in the case of Ms. Andrews only, car allowances. Dr. Chan's 2002 amounts include special travel allowance.

(2) Ms. Andrews' 2002 bonus consists of commissions of \$102,125 and variable bonus of \$346,260.

(3) Ms. Andrews' 2001 bonus consists of commissions of \$150,000, a variable bonus of \$296,260, a relocation bonus of \$160,000 and a special bonus of \$5,136.

(4) Ms. Andrews' 2000 bonus consists of commissions of \$318,096 and a variable bonus of \$250,160.

(5) Mr. Henske resigned from his position effective January 3, 2003.

(6) Mr. Henske commenced employment with Synopsys on May 10, 2000.

(7) Mr. Shevick was appointed Chief Financial Officer of Synopsys on January 2, 2003. Prior to that, he served as Vice President, Investor Relations and Legal and General Counsel.

### Stock Option Grants, Option Exercises and Year-End Values

Information regarding stock option grants, option exercises and year-end values for the named executive officers during fiscal 2002 is included in Item 7 of this Annual Report.

### Employment Contracts, Termination of Employment Arrangements and Change of Control Agreements

Under Synopsys' 1992 Stock Option Plan ("1992 Plan"), in the event of certain changes in the ownership or control of Synopsys involving a "Corporate Transaction," which includes an acquisition of Synopsys by merger or asset sales, all outstanding options under the 1992 Plan will automatically become exercisable, unless the option is assumed by the successor corporation, or parent thereof, or replaced by a comparable option to purchase shares of the capital stock of the successor corporation, or parent thereof.

In addition, in the event of a successful hostile tender offer for more than 50% of the outstanding Synopsys common shares or a change in the majority of the Synopsys board of directors as a result of one or more contested elections for membership on the Synopsys board of directors, the administrator of the 1992 Plan has the authority to accelerate vesting of outstanding options or shares purchased under the 1992 Plan.

The Directors Plan provides that in the event of a change of control or corporate transaction, as such terms are defined in the Directors Plan, all Directors Plan options held by such director shall become fully vested and exercisable as of the date of such change of control or corporate transaction.

Synopsys has entered into Employment Agreements, effective October 1, 1997, with its Chief Executive Officer and its President. Each Employment Agreement provides that if the executive is terminated involuntarily other than for cause within 24 months of a change of control, (a) the executive will be paid an amount equal to two times the sum of the executive's annual base pay plus target cash incentive, plus the cash value of the executive's health benefits for the next 18 months, and (b) all stock options held by the executive will immediately vest in full. If the executive is terminated involuntarily other than for cause in any other situation, the executive will receive a cash payment equal to the sum of the executive's annual base pay for one year plus the target cash incentive for such year, plus the cash value of the executive's health benefits for 12 months. The terms "involuntary termination," "cause" and "change of control" are defined in the Employment Agreements, each of which is filed with the SEC.

**Item 12. Security Ownership of Certain Beneficial Owners and Management**

The following table sets forth certain information with respect to the beneficial ownership of Synopsys common shares by (1) each person known by Synopsys to own beneficially more than five percent of the outstanding Synopsys common shares on that date, and, (2) as of February 6, 2003 (A) each Synopsys director, (B) each of the named executive officers and (C) all Synopsys directors and current executive officers as a group.

Name of Beneficial Owner(1)	Number	Percentage Ownership
J. & W. Seligman & Co. Incorporated 100 Park Avenue, 8th Floor New York, NY 10017	7,776,496 (2)	10.28%
Franklin Resources, Inc. One Frankling Parkway San Mateo, CA 94403-1906	5,291,927 (3)	7.0%
Blum Capital Partners, L.P 909 Montgomery Street, Suite 400 San Francisco, CA 94133-4625	4,906,200 (4)	6.61%
FMR Corp 82 Devonshire Street, Boston, Massachusetts 02109	4,785,520 (5)	6.33%
Harris Associates L.P. Two North LaSalle Street, Suite 500 Chicago, IL 60602-3790	3,805,900 (6)	5.03%
Vicki L. Andrews	128,653 (7)	*
Andy D. Bryant	93,749 (8)	*
Chi-Foon Chan	939,867 (9)	1.25%
Bruce R. Chizen	59,166(10)	*
Deborah A. Coleman	60,000(11)	*
Aart J. de Geus	1,708,165(12)	2.26%
Robert B. Henske	0	*
A. Richard Newton	95,916(13)	*
Steven K. Shevick	128,663(14)	*
Sasson Somekh	113,333(15)	*
Roy Vallee	0	*
Steven C. Walske	116,016(16)	*
All directors and current executive officers as a group (11 persons)	3,443,528(17)	4.45%

\* Less than 1%

(1) The persons named in the table above have sole voting and investment power with respect to all Synopsys common shares shown as beneficially owned by them, subject to community property laws where applicable and the information contained in the footnotes of this table.

- (2) Share ownership for J. & W. Seligman & Co. Incorporated was obtained from Amendment No. 11 to the Schedule 13G filed with the Securities and Exchange Commission on February 11, 2003.
- (3) Share ownership for Franklin Resources was obtained from Amendment No. 2 to the Schedule 13D filed with the Securities and Exchange Commission on February 12, 2003. Includes 2,127,450 shares as to which Franklin Advisers, Inc. has sole voting power, 1,921,522 shares as to which Templeton Global Advisers Limited has sole voting power, 448,785 shares as to which Fiduciary Trust Company International has sole voting power, 411,068 shares as to which Franklin Templeton Investment Management Limited has sole voting power, 232,110 shares as to which Templeton Investment Counsel, LLC has sole voting power, 147,817 shares as to which Franklin Templeton Investments Corp. has sole voting power and 3,175 shares as to which Templeton/Franklin Investment Services, Inc. has sole voting power.
- (4) Share ownership for Blum Capital Partners, L.P. was obtained from Schedule 13F-R filed with the Securities and Exchange Commission on February 14, 2003.
- (5) Share ownership for FMR Corp. was obtained from Amendment No. 2 to the Schedule 13D filed with the Securities and Exchange Commission on February 14, 2003.
- (6) Share ownership for Harris Associates L.P. was obtained from Schedule 13G filed with the Securities and Exchange Commission on February 14, 2003. Includes 1,620,900 shares over which Harris Associates L.P. has sole voting power and 2,185,000 shares over which Harris Associates L.P. has shared voting power.
- (7) Includes options to purchase 127,975 Synopsys common shares exercisable by Ms. Andrews within 60 days of February 6, 2003.
- (8) Consists of options to purchase 93,749 Synopsys common shares exercisable by Mr. Bryant within 60 days of February 6, 2003.
- (9) Includes options to purchase 907,633 Synopsys common shares exercisable by Dr. Chan within 60 days of February 6, 2003.
- (10) Consists of options to purchase 59,166 Synopsys common shares exercisable by Mr. Chizen within 60 days of February 6, 2003.
- (11) Consists of options to purchase 60,000 Synopsys common shares exercisable by Ms. Coleman within 60 days of February 6, 2003.
- (12) Includes options to purchase 1,396,131 Synopsys common shares exercisable by Dr. de Geus within 60 days of February 6, 2003.
- (13) Consists of options to purchase 95,916 Synopsys common shares exercisable by Dr. Newton within 60 days of February 6, 2003.
- (14) Includes options to purchase 126,352 Synopsys common shares exercisable by Mr. Shevick within 60 days of February 6, 2003.
- (15) Includes options to purchase 100,833 Synopsys common shares exercisable by Dr. Somekh within 60 days of February 6, 2003.
- (16) Includes options to purchase 115,916 Synopsys common shares exercisable by Mr. Walske within 60 days of February 6, 2003.
- (17) Includes options to purchase 3,083,671 Synopsys common shares exercisable by directors and current executive officers within 60 days of February 6, 2003.

**Item 13. *Certain Relationships and Related Transactions***

See Item 10, "Directors and Executive Officers of the Registrant-Directors' Compensation."

**Item 14. Controls and Procedures**

- (a) Evaluation of Disclosure Controls and Procedures. The Company's Chief Executive Officer and Chief Financial Officer have evaluated the effectiveness of the Company's disclosure controls and procedures (as such term is defined in Rules 13a-14(c) and 15d-14(c) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"). Based on such evaluation, such officers have concluded that, as of the Evaluation Date, the Company's disclosure controls and procedures are effective for gathering, analyzing and disclosing the information that the Company (including its consolidated subsidiaries) is required to include in the Company's reports filed or submitted under the Exchange Act.
- (b) Changes in Internal Controls. Since the Evaluation Date, there have not been any significant changes in the Company's internal controls or in other factors that could significantly affect such controls.

## PART IV

### ITEM 15. EXHIBITS, FINANCIAL STATEMENTS, SCHEDULES AND REPORTS ON FORM 8-K

(a) The following documents are filed as part of this Annual Report on Form 10-K:

(1) Financial Statements

The following documents are included as Part II, Item 8, of this Annual Report on Form 10-K:

	<u>Page</u>
Report of Independent Auditors.....	49
Consolidated Balance Sheets.....	50
Consolidated Statements of Operations.....	51
Consolidated Statements of Stockholders' Equity and Comprehensive Income .....	52
Consolidated Statements of Cash Flows .....	54
Notes to Consolidated Financial Statements.....	55

(2) Financial Statement Schedule

The information required by this item is incorporated by reference herein from Amendment No. 1 to this Annual Report on Form 10-K.

(3) Exhibits

See Item 15(c) below.

(b) Reports on Form 8-K

None.

(c) Exhibits

#### EXHIBIT

EXHIBIT NUMBER	EXHIBIT DESCRIPTION
2.1	Agreement and Plan of Merger, dated as of December 3, 2001, among Synopsys, Inc., Maple Forest Acquisition L.L.C., and Avant! Corporation. (1)
3.1	Fourth Amended and Restated Certificate of Incorporation (2)
3.2	Certificate of Designation of Series A Participating Preferred Stock(3)
3.3	Certificate of Amendment of Fourth Amended and Restated Certificate of Incorporation (10)
3.4	Restated Bylaws of Synopsys, Inc. (2)
4.1	Amended and Restated Preferred Shares Rights Agreement dated November 24, 1999 (3)
4.3	Specimen Common Stock Certificate (4)
10.1	Form of Indemnification Agreement (4)
10.2	Director's and Officer's Insurance and Company Reimbursement Policy (4)
10.3	Lease Agreement, dated August 17, 1990, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1977 (John Arrillaga Separate Property Trust), as amended, and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1977 (Richard T. Peery Separate Property Trust), as amended (4)
10.7	Lease Agreement, dated June 16, 1992, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20,



- 1977 (John Arrillaga Separate Property Trust), as amended, and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1977 (Richard T. Peery Separate Property Trust), as amended (5)
- 10.8 Lease Agreement, dated June 23, 1993, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1977 (John Arrillaga Separate Property Trust), as amended, and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1977 (Richard T. Peery Separate Property Trust), as amended (6)
- 10.9 Lease Agreement, August 24, 1995, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1977 (John Arrillaga Separate Property Trust), as amended, and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1977 (Richard T. Peery Separate Property Trust), as amended(7)
- 10.10 Amendment No. 6 to Lease, dated July 18, 2001, to Lease Agreement dated August 17, 1990, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1997 (John Arrillaga Survivor's Trust), and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1997 (Richard T. Peery Separate Property Trust), as amended (8)(9)
- 10.11 Amendment No. 4 to Lease, dated July 18, 2001, to Lease Agreement dated June 16, 1992, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1997 (John Arrillaga Survivor's Trust), and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1997 (Richard T. Peery Separate Property Trust), as amended (8)(9)
- 10.12 Amendment No. 3 to Lease, dated July 18, 2001, to Lease Agreement dated June 23, 1993, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1997 (John Arrillaga Survivor's Trust), and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1997 (Richard T. Peery Separate Property Trust), as amended (8)(9)
- 10.13 Amendment No. 1 to Lease, dated July 18, 2001, to Lease Agreement dated August 24, 1995, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1997 (John Arrillaga Survivor's Trust), and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1997 (Richard T. Peery Separate Property Trust), as amended. (8) (9)
- 10.14 Lease dated January 2, 1996 between the Company and Tarigo-Paul, a California Limited Partnership (10)
- 10.15 1992 Stock Option Plan, as amended and restated (11)(12)
- 10.16 Employee Stock Purchase Program, as amended and restated (11)(13)
- 10.17 International Employee Stock Purchase Plan, as amended and restated (11)(13)
- 10.18 Synopsys deferred compensation plan dated September 30, 1996 (11)(14)
- 10.19 1994 Non-Employee Directors Stock Option Plan, as amended and restated(11)(15)
- 10.20 Form of Executive Employment Agreement dated October 1, 1997 (11)(16)
- 10.21 Schedule of Executive Employment Agreements (9)(11)
- 10.22 1998 Nonstatutory Stock Option Plan (11)(17)
- 10.23 Settlement Agreement and General Release by and among Cadence Design Systems, Inc., Joseph Costello, Avant! Corporation LLC, Gerald Hsu, Eric Cheng, Mitsuru Igusa and Synopsys, Inc. effective as of November 13, 2002 (18)
- 10.24 Consulting Services Agreement between Synopsys, Inc. and  
A. Richard Newton Dated November 1, 2001 (11)(19)
- 21.1 Subsidiaries of the Company (9)
- 23.1 Report on Financial Statement Schedule (9)
- 23.2 Consent of KPMG LLP, Independent Auditors

24.1 Power of Attorney (9)

99.1 Certification of Chief Executive Officer and Chief Financial Officer furnished pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

-----

- (1) Incorporated by reference from exhibit to Current Report on Form 8-K filed with the Securities and Exchange Commission on December 5, 2001.
- (2) Incorporated by reference from exhibit to the Company's Quarterly Report on Form 10-Q for the quarterly period ended April 3, 1999.
- (3) Incorporated by reference from exhibit to Amendment No. 1 to the Company's Registration Statement on Form 8-A filed with the Securities and Exchange Commission on December 13, 1999.
- (4) Incorporated by reference from exhibit to the Company's Registration Statement on Form S-1 (File No. 33-45138) which became effective February 24, 1992.
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- (11) Compensatory plan or agreement in which an executive officer or director participates
- (12) Incorporated by reference from exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 2001.
- (13) Incorporated by reference from exhibit to the Company's Quarterly Report on Form 10-Q for the quarterly period ended April 30, 2001.
- (14) Incorporated by reference from exhibit to the Registration Statement on Form S-4 (File No. 333-21129) of Synopsys, Inc. filed with the Securities and Exchange Commission on February 5, 1997.
- (15) Incorporated by reference from exhibit to the Company's Registration Statement on Form S-8 (file No. 333-77597) filed with the Securities and Exchange Commission on May 3, 1999.
- (16) Incorporated by reference from exhibit to the Company's Quarterly Report on Form 10-Q for the quarterly period ended January 3, 1998.

- (17) Incorporated by reference from exhibit to the Company's Registration Statement on Form S-8 (File No. 333-90643) filed with the Securities and Exchange Commission on November 9, 1999.
- (18) Incorporated by reference exhibit to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on November 19, 2002.
- (19) Incorporated by reference from exhibit to the Company's Quarterly Report on Form 10-Q for the quarterly period ended April 30, 2002.

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 Mountain View, State of California, on this 7th day of July, 2003.

SYNOPSYS, INC.

By: /S/ AART J. DE GEUS

-----  
Aart J. de Geus  
Chief Executive Officer and  
Chairman of the Board of Directors  
(Principal Executive Officer)

By: /S/ STEVEN K. SHEVICK

-----  
Steven K. Shevick  
Senior Vice President, Finance  
and Chief Financial Officer  
(Principal Financial Officer)

By: /S/ RICHARD T. ROWLEY

-----  
Richard T. Rowley  
Vice President, Corporate Controller  
(Principal Accounting Officer)

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 and on the dates indicated:

SIGNATURE	TITLE	DATE
/S/ AART J. DE GEUS* ----- Aart J. de Geus	Chief Executive Officer (Principal Executive Officer) and Chairman of the Board of Directors	July 7, 2003
/S/ CHI-FOON CHAN* ----- Chi-Foon Chan	President, Chief Operating Officer and Director	July 7, 2003
/S/ ANDY D. BRYANT* ----- Andy D. Bryant	Director	July 7, 2003
/S/ BRUCE R. CHIZEN* ----- Bruce R. Chizen	Director	July 7, 2003
/S/ DEBORAH A. COLEMAN* ----- Deborah A. Coleman	Director	July 7, 2003
/S/ A. RICHARD NEWTON* ----- A. Richard Newton	Director	July 7, 2003
/S/ SASSON SOMEKH* ----- Sasson Somekh	Director	July 7, 2003
----- Roy Valle	Director	
/S/ STEVEN C. WALSKE* ----- Steven C. Walske	Director	July 7, 2003
/S/ STEVEN K. SHEVICK* ----- By: Steven K. Shevick, Attorney-in-Fact		

## CERTIFICATIONS

I, Aart J. de Geus, certify that:

1. I have reviewed this annual report on Form 10-K of Synopsys, Inc.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report; and
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:
  - a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
  - c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: July 7, 2003

/s/ AART J. DE GEUS

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Aart J. de Geus  
Chief Executive Officer  
(Principal Executive Officer)

I, Steven K. Shevick, certify that:

1. I have reviewed this annual report on Form 10-K of Synopsys, Inc.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report; and
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:
  - a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
  - c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officer and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: July 7, 2003

/S/ STEVEN K. SHEVICK

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Steven K. Shevick  
Chief Financial Officer  
(Principal Financial Officer)

## EXHIBIT INDEX

### EXHIBIT

EXHIBIT NUMBER	EXHIBIT DESCRIPTION
2.1	Agreement and Plan of Merger, dated as of December 3, 2001, among Synopsys, Inc., Maple Forest Acquisition L.L.C., and Avant! Corporation. (1)
3.1	Fourth Amended and Restated Certificate of Incorporation (2)
3.2	Certificate of Designation of Series A Participating Preferred Stock(3)
3.3	Certificate of Amendment of Fourth Amended and Restated Certificate of Incorporation (10)
3.4	Restated Bylaws of Synopsys, Inc. (2)
4.1	Amended and Restated Preferred Shares Rights Agreement dated November 24, 1999 (3)
4.3	Specimen Common Stock Certificate (4)
10.1	Form of Indemnification Agreement (4)
10.2	Director's and Officer's Insurance and Company Reimbursement Policy (4)
10.3	Lease Agreement, dated August 17, 1990, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1977 (John Arrillaga Separate Property Trust), as amended, and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1977 (Richard T. Peery Separate Property Trust), as amended (4)
10.7	Lease Agreement, dated June 16, 1992, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1977 (John Arrillaga Separate Property Trust), as amended, and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1977 (Richard T. Peery Separate Property Trust), as amended (5)
10.8	Lease Agreement, dated June 23, 1993, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1977 (John Arrillaga Separate Property Trust), as amended, and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1977 (Richard T. Peery Separate Property Trust), as amended (6)
10.9	Lease Agreement, August 24, 1995, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1977 (John Arrillaga Separate Property Trust), as amended, and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1977(Richard T. Peery Separate Property Trust), as amended (7)
10.10	Amendment No. 6 to Lease, dated July 18, 2001, to Lease Agreement dated August 17, 1990, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1997 (John Arrillaga Survivor's Trust), and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1997 (Richard T. Peery Separate Property Trust), as amended (8)(9)
10.11	Amendment No. 4 to Lease, dated July 18, 2001, to Lease Agreement dated June 16, 1992, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1997 (John Arrillaga Survivor's Trust), and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1997 (Richard T. Peery Separate Property Trust), as amended (8)(9)
10.12	Amendment No. 3 to Lease, dated July 18, 2001, to Lease Agreement dated June 23, 1993, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1997 (John Arrillaga Survivor's Trust), and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1997 (Richard T. Peery Separate Property Trust), as amended (8)(9)
10.13	Amendment No. 1 to Lease, dated July 18, 2001, to Lease Agreement dated



- August 24, 1995, between the Company and John Arrillaga, Trustee, or his successor trustee, UTA dated July 20, 1997 (John Arrillaga Survivor's Trust), and Richard T. Peery, Trustee, or his successor trustee, UTA dated July 20, 1997 (Richard T. Peery Separate Property Trust), as amended. (8) (9)
- 10.14 Lease dated January 2, 1996 between the Company and Tarigo-Paul, a California Limited Partnership (10)
- 10.15 1992 Stock Option Plan, as amended and restated (11)(12)
- 10.16 Employee Stock Purchase Program, as amended and restated (11)(13)
- 10.17 International Employee Stock Purchase Plan, as amended and restated (11)(13)
- 10.18 Synopsys deferred compensation plan dated September 30, 1996 (11)(14)
- 10.19 1994 Non-Employee Directors Stock Option Plan, as amended and restated(11)(15)
- 10.20 Form of Executive Employment Agreement dated October 1, 1997 (11)(16)
- 10.21 Schedule of Executive Employment Agreements (9)(11)
- 10.22 1998 Nonstatutory Stock Option Plan (11)(17)
- 10.23 Settlement Agreement and General Release by and among Cadence Design Systems, Inc., Joseph Costello, Avant! Corporation LLC, Gerald Hsu, Eric Cheng, Mitsuru Igusa and Synopsys, Inc. effective as of November 13, 2002 (18)
- 10.24 Consulting Services Agreement between Synopsys, Inc. and A. Richard Newton Dated November 1, 2001 (11)(19)
- 21.1 Subsidiaries of the Company (9)
- 23.1 Report on Financial Statement Schedule (9)
- 23.2 Consent of KPMG LLP, Independent Auditors
- 24.1 Power of Attorney (9)
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- (19) Incorporated by reference from exhibit to the Company's Quarterly Report on Form 10-Q for the quarterly period ended April 30, 2002.

EXHIBIT 23.2

Consent of Independent Auditors

The Board of Directors  
Synopsys, Inc.:

We consent to the incorporation by reference in registration statements (Nos. 333-75638 and 333-67184) on Form S-4 and (Nos. 333-45056, 333-38810, 333-32130, 333-90643, 333-84279, 333-77597, 333-56170, 333-63216, 333-71056, 333-50947, 333-77000, 333-97317, 333-97319, 333-99651, 333-100155, 333-103418, 333-103635, 333-103636, and 333-106149) on Form S-8 of Synopsys, Inc. of our reports dated November 20, 2002, except as to Note 13, which is as of January 13, 2003, relating to the consolidated balance sheets of Synopsys, Inc. and subsidiaries as of October 31, 2002 and 2001 and the related consolidated statements of operations, stockholders' equity and comprehensive income, and cash flows for each of the years in the three-year period ended October 31, 2002, and the related consolidated financial statement schedule, which reports appear in this annual report on Form 10-K/A of Synopsys, Inc.

/s/ KPMG LLP

Mountain View, California  
July 7, 2003

**Certification**  
**Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**  
**(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)**

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Synopsys, Inc., a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

The Annual Report on Form 10-K for the fiscal year ended October 31, 2002 (the "Form 10-K") of the Company to which this Certification is attached as Exhibit 99.1 fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: July 7, 2003

/s/ AART J. DE GEUS  
Aart J. de Geus  
Chief Executive Officer

Dated: July 7, 2003

/s/ STEVEN K. SHEVICK  
Steven K. Shevick  
Chief Financial Officer

The foregoing certification is being furnished solely pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code) and is not deemed filed with the Securities and Exchange Commission as part of the Form 10-K or as a separate disclosure document and is not to be incorporated by reference into any filing of Synopsys, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.

A signed original of this written statement required by Section 906 has been provided to Synopsys, Inc. and will be retained by Synopsys, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

**SYNOPSYS®**

Synopsys, Inc.  
700 East Middlefield Road  
Mountain View, CA 94043  
[www.synopsys.com](http://www.synopsys.com)