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AUDIT RISK ALERTS

DEC 20 2001

High-Technology Industry Developments—2001/02

American Institute of
Certified Public Accountants
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Harborside Financial Center
201 Plaza Three
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AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

AICPA

Notice to Readers

This Audit Risk Alert is intended to provide auditors with an overview of recent economic, technical, and professional developments that may affect the audits they perform. The AICPA staff has prepared this document. It has not been approved, or otherwise acted upon by any senior technical committee of the AICPA.

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High-Technology Industry Developments—2001/02

How This Alert Can Help You

This Audit Risk Alert can help you plan and perform your high-technology industry audits. The knowledge delivered by this Alert can assist you in achieving a more robust understanding of the high technology business environment in which your clients operate—an understanding that is more clearly linked to the assessment of the risk of material misstatement of the financial statements. Also, this Alert delivers information about emerging practice issues and about current accounting, auditing, and regulatory developments.

If you understand what is happening in the high-technology industry, especially the effects of the economy and issues related to inventory valuation and asset impairment, and if you can interpret and add value to that information, you will be able to offer valuable service and advice to your clients. This Alert assists you in making considerable strides in gaining that industry knowledge and understanding it.

This Alert is intended to be used in conjunction with the AICPA general *Audit Risk Alert—2001/2002* (Product No. 022280kk).

Industry and Economic Developments

The U.S. Business Environment

As of fourth quarter 2001, and even before the events of September 11, the U.S. economy was weak and its outlook uncertain. Adding further agitation and uncertainty to that weak and uncertain economic picture are the untold ramifications of the September 11 attacks on America. The effects of those attacks may further unhinge consumer confidence, decrease corporate earnings, increase layoffs, and further depress the stock market. To be sure, the short-term economic picture looks unclear.

Still, the financial underpinnings of the U.S. economy remain strong. Inflation has moved toward being contained, interest rates have been cut, taxes have been lowered, energy prices have fallen, and the public debt has diminished. Additionally, in response to the September 11 attacks, government stimulus measures are likely to be enacted in the form of increased spending on defense, spending on recovery efforts, direct aid to certain industries, and further tax cuts. The potential seeds of economic recovery are incubating. So, while the health of the economy appears uncertain and might continue to worsen before it achieves stability and then improves, the economic malaise could be short-lived and mild.

General Industry Trends and Conditions

The economy and the stock market have been dominated by the high-technology industry in the past several years. The desire to enter this industry seems unaffected by strong competition and the tragic experience of some of the new high-tech companies that have gone bankrupt.

The pervasive impact of high-technology on our overall economy has been dramatic. It is hard to pick up a newspaper without reading something about the so-called new economy, which is made up of all high-tech sectors. Discussions about the Internet, Web sites, portals, electronic commerce (e-commerce), electronic business (e-business), dot-com companies, and the like abound. Analysts estimate that, over the past several years, technology spending accounted for about 30 percent of the growth in gross domestic product (GDP). In addition, technology has helped to increase productivity, which, in turn, has allowed our economy to grow at such a fast pace for so long without sparking inflation.

During the last half of 2000, however, the long market expansion and record-setting price levels came to an end. Stock prices of most high-tech companies declined, bringing the whole market down with them. Even before the September 11 terrorist attacks, the high-tech industry was experiencing a tremendous slowdown. Several things led to this slowdown:

- *Telecom got derailed.* Telecommunications carriers are cutting back expansion plans and smaller ones are dying. Many telecommunications entities built networks with enough excess capacity to last 10 years, which means they don't have to build more. This overbuilt situation hurts the firms that sell them equipment and services. In a recent survey by Forrester Research, 17 of 22 telecom carriers said spending in 2002 would be flat or lower than in 2001.
- *No "must have" technology.* Past tech booms were powered by innovations, such as the Web browser. But drying venture capital spending is choking innovation. Plus, the slow rollout of broadband[1] is hampering the growth of new technologies, such as Internet-delivered software, audio, and video.
- *Tech packs a smaller punch.* During the 1990s, tech spending grew up to 14 times faster than the GDP. Going forward, tech spending will grow only twice the GDP's normal growth rate of 3 percent, according to industry analysts.

Compounding this downturn are the effects of the September 11 attacks. Despite high-tech's role in helping companies and consumers cope with the attacks, continuing economic concerns could further weaken the already fragile high-tech industry. While some industry analysts say the attacks could spur new development for cell phones and other high-tech tools, for example, especially as travel slows, others say the events could hurt key sectors. The outcome remains uncertain.

Some high-tech sectors will probably be hurt more than others. Software stocks have been reeling since the attacks. On the other hand, makers of mainframe computers and some computer storage equipment are seeing more business, as companies beef up backup systems and disaster-recovery plans. The various sectors of the high-tech industry will all be affected by the current economic events, but each sector is likely to be affected differently, as explained in the next section.

1. Broadband is a means of transferring huge volumes of data almost instantly to Internet users via a cable pipe. Broadband technology offers Internet access that is more than 100 times faster than typical modems wired through cable or digital subscriber lines (DSL).

What Is High Technology and What Are Its Industry Segment Conditions?

It is difficult to find common ground on the precise definition of the high-technology industry. According to the AEA (formerly known as the American Electronics Association), the high-tech industry is made up of 45 Standard Industrial Classification (SIC) codes. These sectors fall into three broad categories—high-tech manufacturing, communications services, and software and computer-related services.

High technology is a lot like quality; people know it when they see it, but it is not easy to define. This means the definition of the high-technology industry varies greatly depending on the combination of products and services selected to define the industry. For the purposes of this Alert, we will use a definition which segments the industry into five classifications—personal computers; semiconductors; mainframes, servers, and storage; networking and telecommunications equipment; and software and services.

Personal Computers

This year, the demand for PCs fell due to the downturn in the overall economy and the decline in consumer and corporate spending. The year 2001 marks the turn away from double-digit growth in revenues for computer manufacturers. In addition, demand for PCs in Europe was softened by a combination of the strong dollar, a weak euro, and the general economic slowdown.

Computer makers already hurt by the downturn in U.S. consumer and corporate spending face another wave of spending cuts after the September 11 attacks. According to industry analysts, these spending cuts could shave up to 25 percent off projected sales in each of the next two quarters of 2001.

The global economy mirrors the U.S. economy, and the global market is in bad shape. Economies in Europe and Asia appeared to be weakening even before the terrorist attacks, and overseas sales of PCs may not stabilize until 2003, according to some analysts.

Analysts said the attacks might also imperil fourth-quarter computer sales, when revenues typically rise 20 percent because of holiday purchases. This year's final period was expected to get a lift from the impending release of Microsoft's new Windows XP operating system, but that lift is now considered unlikely.

Short product life cycles are a fundamental characteristic of this sector of the industry. For example, the life cycle of a desktop PC is thought to be two years or less, and it is estimated that up to 50 percent of profits for PCs and related products are generated in the first three to six months of sales. As a result, computer makers face the risk of inventory obsolescence. (See the "Inventory Valuation" section later in this Alert for a discussion of this issue.)

Computer manufacturers may enter into hedging transactions to protect themselves from fluctuating prices of the components used in the production of computers. As a result, computer manufacturers may be affected by Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards No. 133, *Accounting for Derivative Instruments and Hedging Activities*. (See the "Using Hedging Transactions to Manage Risk" section later in this Alert for more information on this topic.)

Semiconductors

Last year analysts were predicting revenue growth of 19 percent for semiconductor companies. But, by the middle of 2001, industry experts were predicting sales to tumble more than 20 percent for the year. IC Insights, a Scottsdale, Arizona, research firm, predicts that worldwide sales of chips will fall 21 percent—to $139 billion from $177 billion—in 2000. Gartner Dataquest predicts a worldwide decline of 25 percent. Consider these projections in light of the fact that the steepest industry decline on record was a 20 percent fall in 1985. Adding to the gloom is the fact that the double-digit growth for chips, components, and PCs is slipping quickly to single digits or no growth in China, Taiwan, and Europe.

After the September 11 attacks, analysts are now predicting a decline in revenues of up to 30 percent for the semiconductor industry. Chipmakers are likely to feel the effects of slower

consumer spending as they rely heavily on the PC industry for sales of microprocessors. Their flash-memory[2] business, however, may see a small up tick in demand as cellphone sales pick up in the wake of the tragedy.

Chipmakers are also feeling the effects of the disruption in air travel and restrictions on putting cargo on passenger planes. Many U.S. manufacturers send parts to and from Europe and Asia for assembly and testing. Forcing these companies to put those shipments on cargo-only flights will increase costs and slow delivery times.

Analysts are now saying a hoped-for recovery by the end of this year is looking less and less likely. They say that it may be the middle or end of 2002 before chipmakers start to see sales rebound.

In this sector of the industry, where rapid replacement of capital assets is common, you may need to ensure that your clients have appropriately considered the provisions of the recently issued FASB Statement No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets.*[3] (See the "Asset Impairment—A New FASB Standard" section later in this Alert for further discussion on this topic.)

Another implication for the shifting needs of product manufacturers and end users is the potential for rapid inventory obsolescence. New types of chips are continuously developed, rendering older ones to become quickly obsolete. Product life cycles continue to decrease, and communications protocols constantly change. As a

2. Flash-memory chips retain data even when the power is turned off. These chips are used in cellphones, digital cameras, MP3 players, and personal digital assistants (PDAs).

3. Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, supersedes FASB Statement 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 Accounting Principles Board Opinion No. 30, *Reporting the Results of Operations-Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions*, for the disposal of a segment of a business (as previously defined in that Opinion). This Statement also amends Accounting Research Bulletin No. 51, *Consolidated Financial Statements*, to eliminate the exception to consolidation for a subsidiary for which control is likely to be temporary.

result, you may need to consider an increased level of risk associated with inventory valuations. (For a further discussion, see the section titled "Inventory Valuation" later in this Alert.)

Mainframes, Servers, and Storage

Slower sales of higher-end, midrange systems in the United States and Western Europe held back worldwide server shipments to minimal growth in the second quarter of 2001. The worldwide server market grew 0.7 percent, according to Gartner Dataquest. While the market share positions of the top five worldwide vendors haven't changed, only Dell and IBM had positive year-over-year growth of 28 percent and 10 percent, respectively.

The economic slowdown predominantly affected high-end enterprise systems. Customers began to cut back or defer purchases of expensive high-end server models and focused more on lower-priced systems. However, sales of mainframes, servers, and storage systems have picked up recently, as companies try to bolster their backup and recovery systems. Analysts say that companies are scrambling to get capacity for high-end computing, and companies are taking disaster recovery more seriously.

Industry giants in this sector, such as IBM, will probably be affected less than many other high-tech companies because most of their revenue comes from long-term service contracts, software licenses, and financing programs, which will continue.

As with other segments of the high-tech industry, there is the potential for rapid inventory obsolescence. As demand for new types of servers and storage systems increase, older types may become obsolete. As a result, you may need to consider an increased level of risk associated with inventory valuations. (For a further discussion, see the section titled "Inventory Valuation" later in this Alert.)

Networking and Telecommunications Equipment

The Telecommunications Industry Association (TIA) announced that year-end U.S. factory sales of telecommunications equipment reached $100.3 billion in 2000, up 20.9 percent over the

same period in 1999. U.S. exports of telecommunications equipment at year end totaled $27.9 billion, a 23 percent increase over the previous year. While telephonic apparatus and parts represent the larger market segment at $8.6 billion, the stronger growth continued to be exports in fiber optic cable, other cable, and parts.

This good news notwithstanding, analysts expect most companies in the networking and telecommunications equipment sector to be affected negatively by the September 11 attacks, although some types of telecom gear appear to be selling well in the wake of the attacks. Equipment used to set up wireless networks and videoconferences and to route telephone calls over the Internet, which held up better in the aftermath of the attacks than the traditional phone system, are cited as examples.

Software and Services

Economic restraint has led many organizations to put discretionary spending on hold, causing worldwide spending on new software to grow just 6 percent in the first half of 2001. The segment's growth rate has slowed to less than one-half of last year's rate, when worldwide software spending increased 18 percent. Worldwide software spending for all of 2001 is projected to grow slightly less than 7 percent with new license revenue of approximately $77 billion.

The impact from the events on September 11 will extend and intensify the economic slowdown affecting the global software industry for the next 18 months. Industries that are likely to experience slower software purchases include the airlines, travel, automobiles, insurance, and new consumer PC segments. Software vendors may see an increase in new software spending and market hype in such segments as security, network, storage, systems management, and collaborative applications.

According to Gartner Dataquest, many small companies are vulnerable because they have no underlying maintenance or service revenue to provide at least some ongoing income when new license orders stop. There is a significant danger of these companies becoming cheap acquisition targets or disappearing totally from the market.

The main challenge for large and small vendors will be to manage their expenses with enough agility to remain solvent and profitable. Those vendors that have managed to build an order backlog into their business model—against which they can draw future revenue—will be more shielded from the immediate effects of this spending shortfall.

Other Economic and Regulatory Issues

High-Tech Survival Act

Legislation titled the High-Tech Survival Act has been introduced by Congressmen Fred Upton (R-Michigan) and Gene Green (D-Texas) provides economic relief to businesses in two ways:

1. The bill establishes a two-year recovery period—from the current five-year period—for depreciation of computers and other high-technology equipment. These include any wireless telecommunications equipment, any advanced services equipment, any network or network system equipment, and certain computer software.
2. The bill shortens the depreciation recovery period for spectrum license fees from 15 years to 7 years.

Most individuals in the high-tech industry believe that it is imperative that something be done to immediately stimulate our economy and ensure that Americans continue to support the nation's economic growth through these difficult times. According to industry observers, the High-Tech Survival Act will provide much needed relief to businesses, big and small, and to the high-tech industry, in particular.

China Membership in World Trade Organization (WTO)

High-tech companies must be extremely cautious in making investments in China, according to Gartner, Inc.

Western companies are intrigued by the vast potential market in China's population of 1.3 billion people. The country's economy has grown, on average, 8 percent per year for almost a quarter

century. This growth has created a huge demand for the products, services, and knowledge that Western companies can supply, especially those in the information technology (IT) industry. The Chinese government welcomes Western investment, but subordinates this desire for investment to its strategy of building up Chinese companies to compete in a global market. The Communist Party, government ministries, and the bureaucracy retain considerable control over the economy, implying that making business decisions involves more than just economics.

Issues of conducting technology business in China span beyond simple transfers of practices from here to there. One clear theme that emerged from Gartner's research is that development of China's technology sector is inhibited by the lack of a safe harbor for investment by small to medium foreign companies whose innovation drives the growth in the high-technology industries in developed countries. For these companies, despite the attractiveness of China's market and technically competent workforce, the maze of rules, regulations and corruption in China are a great hindrance. Without significant political and economic liberalization, foreign technology investment in China will continue to be lethargic and will be the province of companies large enough to make long-term investments and shrewd enough to avoid the pitfalls of China's multi-layered bureaucracy.

China's poor infrastructure and lack of familiarity with Western business norms mean that Western companies cannot simply transfer their practices into China, as noted above. China's leaders have a definite vision for the economy, and Western companies have to pay attention to this situation and its larger risks, such as geopolitical conflicts between China and the United States.

Audit Issues and Developments

Assessing Audit Risks in the Current Environment

The proper planning and execution of an audit has always required you to have a thorough understanding of the high-tech industry and the nature of your client's business. For most audit

firms, this in-depth understanding means that the most experienced partners and managers must become involved early and often in the audit process. In today's high-tech environment, your judgment, knowledge, and experience are even more important than it was in the past.

Audit Planning

As you prepare to conduct quarterly reviews and annual audits of high-tech companies, realize that your clients may be working in a new business environment—physically or generally—as a result of the September 11 terrorist attacks. It is important to gain an understanding of this new environment in order to adequately plan and perform the audit. Although not all high-tech companies were directly affected by the attacks, most in the industry will experience at least some indirect effects. Many clients will experience effects related to shifts in demand, collectibility of accounts receivable, or valuation of their investments, for example.

You may wish to begin the planning process early for the audit of clients affected by the attacks. Materials traditionally used to help you gain an understanding of the business and plan the audit may have been destroyed or rendered unavailable, for example, correspondence files, prior year's working papers, permanent files, financial statements, and auditor's reports. Evidential matter and information systems may have been destroyed, requiring recreating systems and data. Conditions may require the extension or modification of audit tests.

During the planning process, it is important to discuss the timing and extent of the recovery process with your client. You should also understand the client's processes for ensuring that the recovery of the accounting records is complete. In some companies, the internal audit function may have tested the recovery process and may be able to provide information regarding the nature of the process and any perceived weaknesses in it.

You may want to talk to the client about the status of its facilities. In cases in which your clients suffered direct effects of the September 11 events, it may be necessary to arrange for alternative

working space to accommodate the client and the audit staff. You may be helpful to the client in establishing immediate working space. When planning the audit, determine how any alternative working space might affect the use of technology and its application in the audit. Access to facilities and records also may affect the timing of audit procedures.

Consider the availability of needed documents and how to apply nontraditional auditing procedures to verify account balances, if necessary. By beginning the planning process early, you may be able to identify some of these issues early enough to allow your client time to recreate the information necessary for the audit.

Early planning also allows you more time to determine the most effective way to conduct the audit based on the extent of damage to the accounting records and your client's ability to recover.

Consideration of Fraud

Always keep in mind SAS No. 82, *Consideration of Fraud in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 316). This Statement provides the primary guidance on your responsibilities for detecting fraud-related misstatements when performing a financial statement audit. In general, SAS No. 82:

- Describes two types of misstatements due to fraud that are relevant to your consideration in a financial statement audit: (1) misstatements arising from fraudulent financial reporting and (2) misstatements arising from misappropriation of assets.
- Requires you to assess specifically the risk of material misstatement due to fraud on every audit and provides categories of fraud risk factors that you should consider in making that assessment. It provides examples of fraud risk factors that, when present, might indicate the presence of fraud.
- Provides guidance on how you should respond to the results of the assessment.

- Provides guidance on the evaluation of audit test results as they relate to the risk of material misstatement due to fraud.
- Describes related documentation requirements, including evidence of the performance of the assessment, including risk factors identified as present and your response thereto.
- Provides guidance regarding your communication about fraud to management, the audit committee, and others.

Some examples of fraud risk factors that may exist in high-tech entities include the following:

- The use by management of unusually aggressive accounting practices in recognizing revenue.
- Complicated criteria for recognizing sales transactions, making it difficult to assess the completion of the earnings process.(For additional information about revenue-recognition-related issues, see the "Revenue Recognition" section of this Alert.)
- Inadequate responses or an unwillingness to respond to inquiries about known regulatory or legal issues.
- Significant related party transactions.
- A significant portion of management compensation represented by bonuses, stock options, or other incentives.
- Excessive interest by management in maintaining or increasing an entity's stock price.

SAS No. 82 also identifies risk factors related to misstatements arising from fraudulent financial reporting, such as a high degree of competition or market saturation and rapidly changing technology or rapid product obsolescence. All of these factors are present in the high-tech industry, implying potential audit concerns.

Obtaining Audit Evidence

You must obtain sufficient competent evidential matter to provide a reasonable basis for the audit opinion. Some of the entities affected by the September 11 terrorist attacks may keep their records at a site that remains unaffected by the attack. Others may have sophisticated backups of their systems and data. In the cases where there are backups, consider whether the backed-up systems are processing data as intended and whether the backed-up data is valid in the new business environment.

Will it be necessary to perform extended walk-throughs and tests of controls to determine that controls continue to function effectively? When testing controls, be aware of the possible effect that key unfilled positions can have on internal control. Consider obtaining additional evidence to corroborate backed-up data. Of particular concern to the auditor is the client's completeness assertion because it may be difficult for you to obtain reasonable assurance that all material transactions have been recorded.

In cases in which systems and data have not been adequately backed-up, determine whether sufficient evidence can be obtained using other audit techniques. For example, you might use confirmation procedures to verify certain activity. Roll-forward procedures also may be effective. These techniques may also be useful to corroborate backed-up data.

In some cases, you may not be able to obtain sufficient evidence to support the audit opinion because sufficient competent audit evidence may not be recoverable. Your understanding of internal control may raise doubts about the auditability of an entity's financial statements, and performing only substantive tests may be ineffective or impossible. In those cases, you may be required to express a qualified opinion or a disclaimer of opinion because of a scope limitation.

Evaluating Going Concern

A number of high-tech industry sectors have experienced intense competition, recurring operating losses, negative cash flows, and

the inability to obtain debt or equity financing. These factors have resulted in a high rate of business failure. Add to this the current state of the economy and the effects of the September 11 terrorist attacks and you have a recipe for further business failures in the high-tech industry.

Accordingly, auditors should be alert to general economic and other conditions and events which, when considered in the aggregate, indicate that there could be substantial doubt about the entity's ability to continue as a going concern. Or, more specifically, think about the client's short-term cash requirements and cash-generating ability. These two issues alone are critical enough for survival to prompt auditors to consider whether clients that require additional cash in the next 12 months to maintain operations can continue as going concerns.

In general, conditions and events that might indicate caution about going concern issues could include (1) negative trends, such as recurring operating losses; (2) financial difficulties, such as loan defaults or denial of trade credit from suppliers; (3) internal challenges, such as substantial dependence on the success of a particular product line or service; or (4) external matters, such as disaster occurrences like the attacks of September 11, pending legal proceedings, or loss of a principal supplier. Also consider the case of an entity's excessive and unusual reliance on external financing, rather than on money generated from the company's own operations as a going-concern issue.

Auditor's Responsibilities Related to a Going-Concern Issue

Auditors should be aware of their responsibilities pursuant to SAS No. 59, *The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern* (AICPA, *Professional Standards*, vol. 1, AU sec. 341.02 and .03b). That statement provides guidance about conducting an audit of financial statements in accordance with generally accepted auditing standards (GAAS) to evaluate whether there is substantial doubt about a client's ability to continue as a going concern for a reasonable period of time.

Continuation of an entity as a going concern is generally assumed in the absence of significant information to the contrary. Information that significantly contradicts the going concern assumption, or the ability to remain a going concern, relates to the entity's inability to continue to meet its obligations as they become due without substantial disposition of assets outside the ordinary course of business, restructuring of debt, externally forced revisions of its operations, or similar actions. SAS No. 59 does not require you to design audit procedures solely to identify conditions and events that, when considered in the aggregate, indicate there could be substantial doubt about the entity's ability to continue as a going concern. The results of auditing procedures designed and performed to achieve other audit objectives should be sufficient for that purpose.

If there is substantial doubt about the entity's ability to continue as a going concern, you should consider whether it is likely that management plans can mitigate existing conditions and events and whether those plans can be effectively implemented. If you obtain sufficient competent evidential matter to alleviate doubts about going concern issues, you should give consideration to the possible effects on the financial statements and the adequacy of the related disclosures. If, however, after considering identified conditions and events, along with management's plans, you conclude that substantial doubt about the entity's ability to continue as a going concern remains, the audit report should include an explanatory paragraph to reflect that conclusion. In these circumstances, refer to the specific guidance set forth under SAS No. 59.

Businesses in Bankruptcy Reorganization

For those high-tech entities or operations that are under bankruptcy reorganization pursuant to chapter 11 of the Bankruptcy Code, or are emerging from it, consider whether the company is following the accounting guidance of Statement of Position (SOP) 90-7, *Financial Reporting by Entities in Reorganization Under the Bankruptcy Code*. Entities that filed for bankruptcy may have impairments that need to be recorded before fresh-start accounting under SOP 90-7.

Inventory Valuation

The primary literature on inventory accounting is Accounting Research Bulletin (ARB) No. 43, *Restatement and Revision of Accounting Research Bulletins*, chapters 3A and 4, which provide the following summary:

> Inventory shall be stated at the lower of cost or market, except in certain exceptional cases when it may be stated above cost. Cost is defined as the sum of the applicable expenditures and charges directly or indirectly incurred in bringing inventories to their existing condition and location. Cost for inventory purposes may be determined under any one of several assumptions as to the flow of cost factors (such as first-in, first-out; average; and last-in, last-out).

Whether inventory is properly stated at lower of cost or market can be a very significant issue for high-technology audit clients because of the rapid changes that can occur in many areas of the industry, and the need for entities to keep up with the newest technology. Examples of factors that may affect inventory pricing include

- Changes in a product's design that may have an adverse impact on the entity's older products, with older products not as salable as the newer versions.
- A competitor's introduction of a technologically advanced version of the product that may decrease salability of a client's products.
- Changes in the products promoted by the industry as a whole, such as a shift from analog to digital technology, that may affect salability.
- Changes in foreign economies that could result in such situations as slowdown of sales to that region or lower-priced imports from that region.
- Changes in technology to produce high-technology products that can give competitors a selling-price advantage.

- Changes in regulations that could affect the competitive environment.
- The entity's own product changes that may not be well researched due to the pressure to introduce new products quickly, resulting in poor sales or high returns.

The highly competitive environment and the rapid advancement of technological factors contribute to the common problem of rapid inventory obsolescence in the high-technology industry. As such, you should consider whether the carrying amount of inventories is appropriate.

You can look at many factors in determining the proper valuation of inventories. A few examples of those factors that may be useful include the following:

- Product sales trends and expected future demand
- Sales forecasts prepared by management as compared with industry statistics
- Anticipated technological advancements that could render existing inventories obsolete or that could significantly reduce their value
- Inventory valuation ratios, such as gross profit ratios, inventory turnover, obsolescence reserves as a percentage of inventory, and days' sales in inventory
- New product lines planned by management and their effects on current inventory
- New product announcements by competitors
- Economic conditions in markets where the product is sold
- Economic conditions in areas where competitive products are produced
- Changes in the regulatory environment
- Unusual or unexpected movements, or lack thereof, of certain raw materials for use in work-in-process inventory
- Levels of product returns

- Pricing trends for the type of products sold by the client
- Changes in standards used by the industry

These are not the only issues of importance to consider. You may need to address many other issues, including the client's taking of physical inventories in high-technology entities. Consider guidance set forth in SAS No. 1, *Codification of Auditing Standards and Procedures* (AICPA, *Professional Standards*, vol. 1, AU sec. 331.09–.13, "Inventories"). Among the issues for your consideration are the following:

- When dealing with some difficult types of inventory, such as chemicals used in the process, you may need to take samples for outside analysis. The work of a specialist may also be needed, and in this case you should follow the guidance set forth in SAS No. 73, *Using the Work of a Specialist* (AICPA, *Professional Standards*, vol. 1, AU sec. 336).
- The extent to which raw materials have been converted to work-in-process will need to be determined to assess the value of the work-in-process.
- Indications of old or neglected materials or finished goods need to be considered in the valuation of the inventory.
- The client's inventory held by others will need to be considered, as well as field service inventories for use in servicing the client's products.

Revenue Recognition

Revenue recognition continues to pose significant audit risk to auditors and has contributed to a perceived erosion in the integrity of the financial reporting process. The high technology industry represents one of the more challenging industries when it comes to the topic of revenue recognition.

Staff Accounting Bulletin (SAB) No. 101, *Revenue Recognition in Financial Statements*, summarizes the Securities and Exchange Commission (SEC) staff's views in applying generally accepted accounting principles (GAAP) to selected revenue recognition

issues. SAB No. 101 presents various fact patterns, questions, and interpretive responses concerning whether the following criteria of revenue recognition are met:

- Persuasive evidence of an arrangement exists.
- Delivery has occurred or services have been rendered.
- The seller's price to the buyer is fixed or determinable.
- Collectibility is reasonably assured.

Another SEC publication, SAB No. 101: *Revenue Recognition in Financial Statements—Frequently Asked Questions and Answers*, addresses recurring questions from preparers, auditors, and analysts about how to apply the guidance in SAB No. 101 to particular transactions.

SAB No. 101 reflects the basic principles of revenue recognition in GAAP and does not supersede any existing authoritative literature. Accordingly, while SAB No. 101 is directed specifically to transactions of public companies, management and auditors of nonpublic companies may find the guidance helpful in analyzing revenue recognition matters.

The SEC continues to see instances of questionable and inappropriate revenue recognition practices. Significant issues encountered recently include:

- Complex arrangements that provide for separate, multiple deliverables (for example, multiple products and/or services), at different points in time, during the contract term.
- Nonmonetary (for example, barter) transactions where fair values are not readily determinable with a sufficient degree of reliability).

The SEC has requested that the Emerging Issues Task Force (EITF) address certain of these issues to clarify the application of GAAP in these transactions. However, the SEC staff generally believes that the existing accounting literature provides analogous guidance for a number of these issues, including SOP 97-2, *Software Revenue Recognition*; Accounting Principles Board (APB)

Opinion No. 29, *Accounting for Nonmonetary Transactions*; SOP 81-1, *Accounting for Performance of Construction-Type and Production-Type Contracts*; FASB Statement of Financial Accounting Concepts No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises*; and FASB Concept Statement No. 6, *Elements of Financial Statements.*

AICPA's New Audit Guide on Revenue Recognition

The AICPA recently issued a new Audit Guide, *Auditing Revenue in Certain Industries.* One purpose of this Guide is to assist auditors in auditing assertions about revenue in selected industries not covered by existing AICPA Audit and Accounting Guides. You can look to this Guide for descriptions and explanations of auditing standards, procedures, and practices as they relate to auditing assertions about revenue in both the computer software and high-tech manufacturing industries.

This Guide:

- Discusses the responsibilities of management, boards of directors, and audit committees for reliable financial reporting.
- Summarizes key accounting guidance regarding whether and when revenue should be recognized in accordance with GAAP.
- Identifies circumstances and transactions that may signal improper revenue recognition.
- Summarizes key aspects of the auditor's responsibility to plan and perform an audit under GAAS.
- Describes procedures that the auditor may find effective in limiting audit risk arising from improper revenue recognition.

Help Desk—You may order *Auditing Revenue in Certain Industries* (Product No. 012510kk) from the AICPA at (888) 777-7077.

Auditing in a Paperless Environment

When clients rely on technology to manage and analyze information, audit strategies change. For example:

- Audit evidence that previously existed in paper form may be available electronically only. Accessing electronic audit evidence may require you to become proficient in the use of data extraction or other audit software tools.
- The design and operation of internal control in a computer environment is much different than in a predominately manual environment.

Be aware of the unique audit issues in a highly computerized environment. In addition, you should identify the risks of material misstatement that can arise during the transition from a highly manual environment to a more computerized operating environment.

For further information and guidance on auditing in this paperless environment, see the AICPA Audit Practice Release *Auditing in Common Computer Environment* (Product No. 021059kk), which alerts you to the changes you need to consider in computer environment. The recently issued SAS No. 94, *The Effect of Information Technology on the Auditor's Evaluation of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 319), is also a good resource regarding auditing guidance in a paperless environment. There is a more complete explanation of SAS No. 94 in the "Recent Auditing and Attestation Pronouncements" section of this Alert.

How Employee Layoffs Might Affect Your Engagements

Many companies continue to experience layoffs during the recent economic downturn. Since January 2001, announcements of job cuts just keep coming. U.S. companies have reported approximately 650,000 layoffs through late spring 2001. The layoff trend is broad based, affecting not only industries that were racing ahead until recent months, such as technology and telecommunications entities, but also businesses once thought to be recession-proof, for example, food and consumer products.

Healthy companies are also using layoffs as a tool to reduce costs and accumulate earnings as they maneuver through this economic downturn. What do layoffs imply for you as you plan your engagements?

If your high technology clients are experiencing, or have experienced, layoffs, they will need to properly account for employee-related termination charges, such as severance package charges, restructuring charges, and voluntary separation charges. In addition, management may need to properly account for outplacement services offered to their departing employees and bonuses and educational allowances offered to assist employees in contending with the loss of their jobs. Here we offer some highlights of the accounting literature and other topics related to terminations to help provide guidance regarding issues related to layoffs.

- EITF 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"), addresses the timing of liability recognition for certain employee termination benefits in addition to the financial statement disclosures that should be made for those charges.
- FASB Statement No. 88, *Employers' Accounting for Settlements and Curtailments of Defined Benefit Pension Plans and for Termination Benefits*, establishes standards for accounting for curtailments and termination benefits, among other issues. Practitioners should refer to paragraphs 6 through 14 for guidance on curtailment and paragraphs 15 through 17 for guidance on termination benefits.
- FASB Statement No. 106, *Employers' Accounting for Postretirement Benefits Other Than Pensions*, requires recording as a loss the effect of curtailment, for example, termination of employees' services earlier than expected, which may or may not involve closing a facility or discontinuing a segment of a business. Refer to paragraphs 96 through 99 for guidance on how to account for plan curtailment. The Statement also provides guidance on how to measure the effects of termination benefits in paragraphs 101 and 102.

- FASB Statement No. 112, *Employers' Accounting for Postemployment Benefits*, an amendment of FASB Statements No. 5 and No. 43, requires that entities providing postemployment benefits to their former or inactive employees accrue the cost of such benefits. Accrual would occur in accordance with FASB Statement No. 5, *Accounting for Contingencies*, when four conditions are met. Inactive employees include those who have been laid off, regardless of whether they are expected to return to work. Postemployement benefits that can be attributed to layoffs can include salary continuation, supplemental unemployment benefits, severance benefits, job training and counseling, and continuation of benefits, such as health care benefits and life insurance coverage.

  FASB Statement No. 112 does not require that the amount of postemployment benefits be disclosed. The financial statement shall disclose if an obligation for postemployment benefits is not accrued because the amount cannot be reasonably estimated.

- FASB Statement No. 132, *Employers' Disclosures about Pensions and Other Postretirement Benefits*, addresses disclosures only (that is, not measurement or recognition) and standardizes the disclosure requirements for pensions and other postretirement benefits. Among other disclosures, the Statement requires the disclosure of the amount of any gain or loss recognized due to a settlement or curtailment. Additionally, the cost of providing special or contractual termination benefits recognized during the period and a description of the nature of the event are required to be disclosed.

- SAS No. 1, *Codification of Auditing Standards and Procedures* (AICPA, *Professional Standards*, vol. 1, AU sec. 560, "Subsequent Events") describes matters related to subsequent events. Use this guidance as you inquire of and discuss with the management matters involving unusual terminations of participants, such as terminations arising from a sale of a division or layoffs, in addition to other matters.

- Significant layoffs can have a serious effect on an entity's internal control structure and financial reporting and accounting systems. Employees who remain at the company may feel overwhelmed by their workloads, may have insufficient time to complete their tasks completely and accurately, and may be performing too many tasks and functions. With additional workloads and requirements for the performance of added tasks, the company might experience challenges to maintaining an adequate segregation of duties in addition to other experiences affecting internal control.
- The auditor may need to consider the possible effects that key unfilled positions can have on internal control. Entities that have experienced strong financial reporting and accounting controls before layoffs could see those controls deteriorate due to the lack of employees and to redefined employee tasks.

Consider these issues related to employee layoffs when you plan and perform the audit and you assess control risk. Remember that gaps in key positions, and other changes related to reorganization or release of employees, may cause control weaknesses representing reportable conditions that you should communicate to management and the audit committee in accordance with SAS No. 60, *Communication of Internal Control Related Matters Noted in an Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 325), as amended. Also see SAS No. 55, *Consideration of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 319), as amended, that can help provide a framework to help the auditor obtain an understanding of internal control.

Risks of Overseas Expansion

Competing in foreign markets is complex and fraught with risks, many of which are indiscernible at first glance. The political risks in some nations are quite high, but, even in countries that have relative political stability, complexities may arise. Each country

has its own market characteristics, regulations and laws, and accounting standards.

If your client has or is considering venturing into foreign markets, it is important for you to gain an understanding of the risks of doing business in those markets. Consider whether the client has an effective process for identifying and managing those risks. See also the important discussion related to China's admission into the WTO in the previous "Other Economic and Regulatory Issues" section of this Alert.

Using Hedging Transactions to Manage Risk

Many high-technology entities enter into hedging transactions to manage various risks. The most common risks that lend themselves to hedging strategies include those related to interest rate or foreign currency exposures.

FASB Statement No. 133, *Accounting for Derivative Instruments and Hedging Activities*, provides the primary guidance on accounting for hedging transactions. In addition, the AICPA recently issued SAS No. 92, *Auditing Derivative Instruments, Hedging Activities, and Investments in Securities* (AICPA, *Professional Standards*, vol. 1, AU sec. 391), which provides guidance on auditing hedging transactions. The AICPA also recently issued a new Audit Guide, *Auditing Derivative Instruments, Hedging Activities, and Investments in Securities*, that provides practical guidance for implementing SAS No. 92 concerning all types of audit engagements. If your client holds derivative instruments or engages in hedging transactions, it is a good idea to become thoroughly familiar with the authoritative accounting and auditing literature.

> **Help Desk**—You may obtain a copy of the Audit Guide *Auditing Derivative Instruments, Hedging Activities, and Investments in Securities* (Product No. 012520kk) by contacting the AICPA member satisfaction group at (888) 777-7077 by going online at cpa2biz.com.

Accounting Issues and Developments

Business Combinations—A New FASB Standard

In June 2001, the FASB issued FASB Statement No. 141, *Business Combinations*, to address financial accounting and reporting issues for business combinations. This Statement supersedes APB Opinion No. 16, *Business Combinations*, and FASB Statement No. 38, *Accounting for Preacquisition Contingencies of Purchased Enterprises.*

Under FASB Statement No. 141, all business combinations will be accounted for using one method—the purchase method. Given the economic environment of the high-technology industry, mergers and acquisitions have been, and continue to be, prevalent. Therefore, this change to a single method of accounting for business combinations may have major implications for high-tech companies.

Under APB Opinion No. 16, business combinations were accounted for using one of two methods, the pooling-of-interests method (pooling method) or the purchase method. Use of the pooling method was required whenever 12 criteria were met; otherwise, the purchase method was used. Because those 12 criteria did not distinguish economically dissimilar transactions, similar business combinations were accounted for using different methods, producing dramatically different results.

The provisions of FASB Statement No. 141 reflect a fundamentally different approach to accounting for business combinations. The single-method approach reflects the conclusion that virtually all business combinations are acquisitions and, thus, all business combinations should be accounted for in the same way that other asset acquisitions are accounted for—based on the values exchanged. Specifically, FASB Statement No. 141 changes the accounting for business combinations in APB Opinion No. 16 in the following respects:

- FASB Statement No. 141 requires that all business combinations be accounted for by a single method—the purchase method.

- In contrast to APB Opinion No. 16, which required separate recognition of intangible assets that can be identified and named, FASB Statement No. 141 requires that intangible assets be recognized as assets apart from goodwill if they meet one of two criteria—the contractual-legal criterion or the separability criterion.
- In addition to the disclosure requirements in APB Opinion No. 16, FASB Statement No. 141 requires disclosure of the primary reasons for the business combination and of the allocation of purchase price paid to the assets acquired and liabilities assumed by major balance sheet caption.

The provisions of FASB Statement No. 141 apply to all business combinations initiated after June 30, 2001. The Statement also applies to all business combinations accounted for using the purchase method for which the date of acquisition is July 1, 2001, or later. (See the "Accounting Pronouncement and Guidance Update" section of this Alert for additional information related to this Standard.)

Goodwill and Other Intangible Assets—A New FASB Standard

The FASB issued FASB Statement No. 142, *Goodwill and Other Intangible Assets*, in June 2001. This Statement supersedes APB Opinion No. 17, *Intangible Assets*, and addresses how to account for intangible assets that are acquired individually or with a group of other assets upon their acquisition. This Statement also addresses how to account for goodwill and other intangible assets after they have been initially recognized in the financial statements. The nature and activities of the high technology industry lend importance to this new standard. Be aware of its guidelines, especially regarding your high-technology clients.

FASB Statement No. 142 changes the unit of account for goodwill and takes a very different approach to how to account for goodwill and other intangible assets subsequent to their initial recognition. Because goodwill and some intangible assets will no longer be amortized, the reported amounts of goodwill and intangible assets will not decrease at the same time and in the same

manner as under previous standards. Specifically, FASB Statement No. 142 changes the subsequent accounting for goodwill and other intangible assets in the following respects:

- FASB Statement No. 142 adopts a more aggregate view of goodwill and bases the accounting for goodwill on the units of the combined entity into which an acquired entity is integrated. Those units are referred to as reporting units.
- APB Opinion No. 17 presumed that goodwill and all other intangible assets were wasting assets (that is, finite lived). FASB Statement No. 142 does not presume that those assets are wasting assets. Instead, goodwill and other intangible assets that have indefinite useful lives will not be amortized but, rather, will be tested at least annually for impairment.
- FASB Statement No. 142 provides specific guidance for testing goodwill for impairment. The annual test for goodwill impairment uses a two-step process that begins with an estimation of the fair value of a reporting unit. However, if certain criteria are met, the requirement to test goodwill for impairment annually can be satisfied without a remeasurement of the fair value of the reporting unit.

The provisions of FASB Statement No. 142 are required to be applied starting with fiscal years beginning after December 15, 2001. This Statement is required to be applied to all goodwill and other intangible assets recognized in the financial statements at that date. Goodwill and intangible assets acquired after June 30, 2001, will be subject immediately to the nonamortization provisions of FASB Statement No. 142.

Because there have been numerous combinations of high-tech companies in recent years, and because goodwill may represent a significant asset on the balance sheets of these combined companies, you should carefully consider the impact of any such change on your high-tech clients. Specifically, such a change will necessitate the need to identify the reporting units of the organization and test for impairment of goodwill at the reporting unit

level. This process will require extensive valuation judgments and calculations.

A good tool to use when auditing or valuing intangibles is the new AICPA Practice Aid, *Assets Acquired in a Business Combination to Be Used in Research and Development Activities: A Focus on Software, Electronic Devices, and Pharmaceutical Industries* (Product No. 006609kk).

Income Statement Classification

The appropriate classification of amounts within the income statement or balance sheet can be as important as the appropriate measurement or recognition of such amounts. Several EITF consensus provisions provide guidance on the proper classification of certain revenue and expense items. For example, consider EITF Issues No. 99-17, *Accounting for Advertising Barter Transactions*; No. 99-19, *Reporting Revenue Gross as a Principal versus Net as an Agent*; No. 00-10, *Accounting for Shipping and Handling Fees and Costs*; No. 00-14, *Accounting for Certain Sales Incentives*; all of which were to be applied no later than in the December 31, 2000, financial statements for calendar year-end companies. SEC registrants should apply the guidance provided in SEC Regulation S-X regarding classification of amounts in financial statements.

Recent EITF Issues Relevant to the High-Tech Industry

Auditors of high-tech companies should pay close attention to EITF issues because in the past several years the EITF addressed a number of topics relevant to the high-technology industry. The application of EITF consensus positions (category c of the GAAP hierarchy) effective after March 15, 1992, is mandatory under SAS No. 69, *The Meaning of* Present Fairly in Accordance With Generally Accepted Accounting Principles (AICPA, *Professional Standards*, vol. 1, AU sec. 411), as amended. In October 1999, the chief accountant of the SEC sent a list of Internet accounting issues to the EITF that the SEC staff believed warranted consideration by the EITF or another standard-setting body. Exhibit 1

contains a summary of EITF issues discussed in the past two years that are relevant to the high-tech industry.[4]

EXHIBIT 1

Resolution of SEC Internet Accounting Issues

Items in this Exhibit appear in the following order:

SEC Issue to Address
Priority (by SEC)
Where Found
EITF Status

Advertising barter transactions
Level 1
Issue No. 99-17
Consensus*

Gross vs. net revenue and display cost
Level 1
Issue No. 99-19
Consensus*

Accounting for the costs of developing a Web site
Level 1
Issues No. 00-2 and No. 00-20
Consensus* on No. 00-2, No. 00-20 (content) to be discussed further

Accounting for shipping and handling revenues and costs
Level 2
Issue No. 00-10
Consensus*

Accounting for the costs of computer files that are essentially films, music or other content
Level 2
To be discussed
May ultimately be addressed in Issue No. 00-20 (below)

Application of SOP 97-2 to arrangements that include the right to use software stored on another entity's hardware
Level 2
Issue No. 00-3
Consensus*

Accounting for "point" and other loyalty programs
Level 2
Issue No. 00-22
Discussed, but no consensus. Further discussion expected

(continued)

4. Exhibit 1 contains only those EITF issues related specifically to high-tech companies. Look to the EITF *Abstracts* for final language of all EITF issues. You can order the *Abstracts* directly from the FASB (www.fasb.org).

EXHIBIT 1—*(continued)*

Resolution of SEC Internet Accounting Issues

Accounting by the holder of an instrument (not defined as derivative instrument) with conversion or terms that are variable based on exercisability upon future events
Level 2
Issue No. 00-8
Consensus*

Accounting for coupons, rebates and discounts
Level 2
Issue No. 00-14
Consensus*

Accounting for service outages
Level 2
Classification addressed indirectly in No. 00-14
Consensus*

Accounting for advertising or other arrangements where the service provider guarantees a specified amount of activity
Level 3
To be discussed
Appears to be addressed in SAB No. 101, related Q&A, and Issue No. 00-22

Accounting for front-end and back-end fees
FE—potential SEC staff announcement BE—Level 3
To be discussed
Appears to be addressed in SAB No. 101, related Q&A, and Issue No. 00-21

Income statement classification of rebates and other discounts
Potential SEC staff announcement
Issue No. 00-14
Consensus*

Accounting for free or heavily discounted products
Potential SEC staff announcement
Issue No. 00-14
Consensus*

Accounting for access, maintenance and publication fees
Potential SEC staff announcement
To be discussed
Appears to be addressed in SAB No. 101, related Q&A, and Issue No. 00-21

Statement 131 disclosures about Internet portion of a company's business
No level assigned
Removed from agenda
N/A

* When consensus is reached it becomes a GAAP requirement.

Repricing of Employee Stock Options

Stock options are still an important accounting-related area for your high-tech clients. Knowledgeable workers are the prime assets of high-tech businesses and are the key to wealth creation. Accounting for their compensation sometimes raises difficult accounting issues when businesses include stock options in employee compensation packages.

High-tech businesses grant stock options to essential employees to attract, motivate, and retain them; they also grant stock options, awards of stock, or warrants to consultants, contractors, vendors, lawyers, finders, lessors, and others. Issuing equity instruments makes a lot of sense, partly because of the favorable accounting treatment and partly because the use of equity conserves cash and generates capital.

There are two permissible methods of accounting for employee stock options: APB Opinion No. 25, *Accounting for Stock Issued to Employees*, which uses the intrinsic value method, and FASB Statement No. 123, *Accounting for Stock-Based Compensation*, which uses the fair value method. Most businesses choose APB Opinion No. 25, which is easier to apply.

Stock options granted to consultants, contractors, and nonemployees for services rendered or goods purchased must be accounted for in accordance with FASB Statement No. 123. EITF Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other than Employees for Acquiring, or in Conjunction with, Selling Goods and Services*, offers guidance in applying FASB Statement No. 123 to these transactions.

With the downturn in share prices of many high-tech companies continuing throughout 2001, the stock options previously granted to many essential employees may now have lost much of their value. To retain these employees, many companies may reprice the options. FASB Interpretation No. 44, *Accounting for Certain Transactions Involving Stock Compensation*, is an interpretation of APB Opinion No. 25, and provides that "if the exercise price of a fixed stock option award is reduced, the award shall be accounted for as variable from the date of the modification to the

date the award is exercised, is forfeited, or expires unexercised." The EITF also addressed the repricing issue in EITF Topic No. D-91, *Application of APB Opinion No. 25, Accounting for Stock Issued to Employees, and FASB Interpretation No. 44, Accounting for Certain Transactions Involving Stock Compensation, to an Indirect Repricing of a Stock Option.*

FASB Interpretation No. 44 indicates that any modification or sequence of actions by a grantor to directly or indirectly reduce the exercise price of an option award causes variable accounting for the repriced or replacement award for the remainder of the award's life. The change from a fixed to a variable plan triggers the requirement to record income statement charges (or credits) at each reporting date. So, while the intrinsic value of the option may be zero at the repricing (or modification) date, from that date until the final exercise (or expiration or forfeiture), the company must report an expense or reversal of that expense even though the options are not vested. This expense is the difference between the fair value of the shares at each balance sheet date and the exercise price.

The change in accounting triggered by repricing requiring compensation to be recorded has no effect on cash flow. However, it may reduce net income and earnings per share. Management should be made aware of the consequences of making any modification to their option plans and outstanding options and the financial statement impact of giving equity instruments to nonemployees.

Asset Impairment—A New FASB Standard

High-technology products are susceptible to rapid obsolescence. Long-lived assets used by enterprises involved in the manufacture of such products may require significant retooling to retain their usefulness. In some cases, these assets may not lend themselves to modification and could be rendered obsolete. Additionally, the high-tech industry has experienced a spurt of merger and acquisition activity. The elimination of duplicate functions, which typically accompany a merger or acquisition, may affect the carrying

amount of certain assets. These are just a few of the examples of the instances in which the carrying amounts of recorded assets may not be recoverable and the provisions of FASB Statement No. 144 may need to be applied.

FASB Statement No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*[5] provides the primary guidance on accounting for the impairment of long-lived assets. In general, the accounting for the impairment of long-lived assets depends on whether the asset is to be held and used or held for disposal.

Long-Lived Assets Held and Used

Long-lived assets held and used should be reported at cost, less accumulated depreciation, and should be evaluated for impairment if facts and circumstances indicate that impairment may have occurred. Conditions or events such as the following may indicate a need for assessing the recoverability of the carrying amount of assets:

- A dramatic change in the manner in which an asset is used
- A reduction in the extent to which an asset is used
- Forecasts showing lack of long-term profitability
- A change in the law or business environment
- A substantial drop in the market value of an asset

If events and circumstances indicate that impairment may exist, the entity is required to estimate the future cash flows expected to result from the use of the asset and its eventual disposition. An asset is deemed to be impaired if its carrying amount exceeds the sum of the expected future cash flows (undiscounted and without interest charges) from the asset. The impairment is measured as the amount by which the carrying amount exceeds the fair value of the asset. After an impairment is recognized, the reduced carrying amount of the asset should be accounted for as the new cost of the asset and depreciated over the remaining useful life. Restoration of previously recognized impairment losses is prohibited.

5. See footnote 1.

Lack of an asset-impairment evaluation system may indicate a material weakness in an entity's internal controls. Further, a lack of documentation generally increases the extent to which you must apply professional judgment in evaluating the adequacy of management's writedowns.

Long-Lived Assets to Be Disposed of by Sale

Long-lived assets to be disposed of by sale (assets for which management has committed to a plan of disposal) should be reported at the lower of the carrying amount or fair value, less costs to sell. Subsequent revisions to fair value less costs to sell should be reported as adjustments to the carrying amount of the asset to be disposed of. However, the carrying amount may not be adjusted to an amount greater than the carrying amount of the asset before an adjustment was made to reflect the decision to dispose of the asset.

Although some long-lived assets might have previously been subject to APB Opinion No. 30, FASB Statement No. 144 amended APB Opinion No. 30 *Reporting the Results of Operations—Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions*. The provisions of FASB Statement No. 144 apply to all long-lived assets. Therefore, gains or losses on disposal of a discontinued operation are no longer measured on a net realizable value basis, and future operating losses are no longer recognized before they occur. (See the "Accounting Pronouncement and Guidance Update" section of this Alert for additional information related to this Standard.)

Assets to Be Disposed of Other Than by Sale

Assets that are to be abandoned, exchanged for a similar productive asset, or distributed to owners in a spin-off are to be considered as held and used until they are disposed of. If the asset is to be abandoned, the depreciable life is revised in accordance with APB Opinion No. 20, *Accounting Changes*. If the asset is to be exchanged for a similar productive asset or distributed to owners in a spin-off, an impairment loss is to be recognized at the date of exchange or distribution, if the carrying amount of the asset exceeds its fair value at that date.

The provisions of FASB Statement No. 144 are effective for financial statements issued for fiscal years beginning after December 15, 2001, and interim periods within those fiscal years, with early implementation encouraged. The provisions of the Statement generally are to be applied prospectively.

Research and Development Costs

Ongoing innovation is the heart of competition in the high-tech industry and is required for survival. Consequently, most high-tech companies devote a substantial portion of their resources to research and development (R&D) activity. According to paragraphs 8a and 8b of FASB Statement No. 2, *Accounting for Research and Development Costs*:

> Research is planned search or critical investigation aimed at discovery of new knowledge with the hope that such knowledge will be useful in developing a new product or service.
>
> Development is the translation of research findings or other knowledge into a plan or design for a new product or process...whether intended for sale or use.

High-tech management may reduce net loss or increase earnings by capitalizing R&D costs, which are significant for many companies in the high-technology industry. However, FASB Statement No. 2, as interpreted by FASB Interpretation No. 4, *Applicability of FASB Statement No. 2 to Business Combinations Accounted for by the Purchase Method*, prohibits capitalization and requires R&D to be expensed when incurred, except for acquired R&D with alternative future uses purchased from others. In addition to the requirement to expense internal R&D, FASB Statement No. 2 requires disclosure in the financial statements regarding the total amount of R&D costs charged to expense.

Some high-tech companies acquire their assets through mergers and acquisitions. One purpose of these business combinations is to acquire in-process R&D. You may need to hire a technology specialist to determine which acquired technology objects have alternative future uses. For clients with technology

with alternative future uses, you should verify that they are properly valued and capitalized.

A newly issued AICPA Practice Aid, *Assets Acquired in a Business Combination to Be Used in Research and Development Activities: A Focus on Software, Electronic Devices, and Pharmaceutical Industries* (Product No. 006609kk) may be helpful in valuing these intangible assets. The Practice Aid is available from the AICPA Order Department at (888) 777-7077.

Accounting and Regulatory Guidance Related to the September 11 Terrorist Attacks

In addition to the obvious economic implications, a number of accounting and auditing issues are raised as a result of the September 11 attacks. These issues will affect those businesses and auditors directly affected by the attacks and those businesses and auditors who were not directly affected, but whose clients, vendors, suppliers, and others were. Some regulatory bodies may provide guidance as a result of the attacks, including extending some filing dates. Consider notifying your clients of Web sites so they can monitor sites that contain accounting and regulatory guidance. See the AICPA general *Audit Risk Alert 2001/2002* (Product No. 022280kk) for additional information about auditing and accounting matters related to the September 11 attacks.

EITF Issue No. 01-10, *Accounting for the Impact of the Terrorist Attacks of September 11, 2001*

The EITF decided against the use of an extraordinary item treatment for losses incurred in connection with the September 11 terrorist attacks. The EITF observes that the economic effects of the attacks were so extensive and pervasive that it would be impossible to capture them in any one financial statement line item. It concluded that showing part of the effect as an extraordinary item would hinder, rather than help, effective communication for financial statement users.

Auditing and Attestation Pronouncement and Guidance Update

Presented below is a list of recently issued auditing and attestation pronouncements, guides, and other guidance issued since the publication of last year's Alert. See the AICPA *Audit Risk Alert—2001/02* (Product No. 022280kk) for a summary explanation of these issuances. For information on auditing and attestation standards issued subsequent to the writing of this Alert, please refer to the AICPA Web site at www.aicpa.org/members/div/auditstd/technic.htm. You may also look for announcements of newly issued standards in the *CPA Letter* and *Journal of Accountancy*.

To obtain copies of AICPA standards and guides, contact the Member Satisfaction Center at (888) 777-7077 or go online at www.cpa2biz.com.

SAS No. 94	*The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 319) (See next section of this Alert for additional information.)
SOP 00-3	*Accounting by Insurance Enterprises for Demutualizations and Formations of Mutual Insurance Holding Companies and for Certain Long-Duration Participating Contracts*
SOP 01-3	*Performing Agreed-Upon Procedures Engagements That Address Internal Control Over Derivative Transactions as Required by the New York State Insurance Law*
SSAE No. 10	*Attestation Standards: Revision and Recodification* (AICPA, *Professional Standards*, vol. 2, AT secs. 101–701)
Audit Guide	*Auditing Derivative Instruments, Hedging Activities, and Investments in Securities* (see next section of this Alert for additional information)
Audit Guide	*Auditing Revenue in Certain Industries* (See the related discussion in the "Revenue Recognition" section of this Alert.)
Audit Guide	*Audit Sampling*
Audit Guide	*Analytical Procedures*
Practice Alert 01-1	*Common Peer Review Recommendations*
Practice Alert 01-2	*Audit Considerations in Times of Economic Uncertainty*

Of the pronouncements, guides, and other guidance listed above, we present more detailed discussion of SAS No. 94 below because of its potential relevance to your high technology clients. This summary, and others presented throughout this Alert, relating to technical standards are for informational purposes only and should not be relied upon as a substitute for a complete reading of the applicable standard.

SAS No. 94, *The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit*

SAS No. 94 was issued in May 2001. This statement amends SAS No. 55, *Consideration of Internal Control in a Financial Statement Audit*, and provides guidance to auditors about the effect of IT[6] on internal control, and on the auditor's understanding of internal control and assessment of control risk. The Auditing Standards Board (ASB) believes the guidance is needed because entities of all sizes increasingly are using IT in ways that affect their internal control and the auditor's consideration of internal control in a financial statement audit. Consequently, in some circumstances, auditors may need to perform tests of controls to perform an effective audit.

SAS No. 94:

- Incorporates and expands the concept from SAS No. 80, *Amendment to Statement on Auditing Standards No. 31*, Evidential Matter (AICPA *Professional Standards*, vol. 1, AU sec. 326.14), that in circumstances where a significant is electronically transmitted, processed, or maintained, the auditor may determine that it is not practical or possible to restrict detection risk to an acceptable level by performing only substantive tests for one or more financial statement assertions. In such circumstances, the auditor should gather evidential matter to use in assessing control risk.

6. According to Statement on Auditing Standards No. 94, *The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 319), information technology encompasses automated means of originating, processing, storing, and communicating information, and includes devices, communication systems, computer systems (including hardware and software components and data), and other electronic devices.

- Describes how IT may affect internal control, evidential matter, and the auditor's understanding of internal control and assessment of control risk.
- Describes both the benefits and risks of IT to internal control, and how IT affects the components of internal control, particularly the control activities and information and communication components.
- Provides guidance to help auditors determine whether specialized skills are needed to consider the effect of computer processing on the audit, to understand the controls, or to design and perform audit procedures.
- Clarifies that in obtaining an understanding of the entity's financial reporting process, the auditor should understand the automated and manual procedures an entity uses to prepare financial statements and related disclosures, and how misstatements may occur.
- Updates terminology and references to IT systems and controls.

SAS No. 94 does not:

- Eliminate the alternative of assessing control risk at the maximum level and performing a substantive audit, if that is an effective approach.
- Change the requirement to perform substantive tests for significant account balances and transaction classes.

The effective date of the amendments is for audits of financial statements for periods beginning on or after June 1, 2001. Earlier application is permissible.

AICPA Audit Guide *Auditing Derivative Instruments, Hedging Activities, and Investments in Securities*

This new Guide (Product No. 012520kk) provides practical guidance for implementing SAS No. 92 on all types of audit engagements. The Guide includes an overview of derivatives and

securities, a summary of accounting guidance, and a discussion of the three elements of the auditing framework: inherent risk, control risk, and substantive procedures. Additionally, the Guide includes practical illustrations and case studies.

Accounting Pronouncement and Guidance Update

Presented below is a list of recently issued accounting pronouncements and other guidance issued since the publication of last year's Alert. See the AICPA *Audit Risk Alert—2001/02* (Product No. 022280kk) for a summary explanation of these issuances. For information on accounting standards issued subsequent to the writing of this Alert, please refer to the AICPA Web site at www.aicpa.org, and the FASB Web site at www.fasb.org. You may also look for announcements of newly issued standards in the *CPA Letter* and *Journal of Accountancy.*

FASB Statement No. 141	*Business Combinations* (See the previous section "Business Combinations—A FASB Standard" of this Alert.)
FASB Statement No. 142	*Goodwill and Other Intangible Assets* (See the previous section "Goodwill and Other Intangible Assets—A New FASB Standard"of this Alert)
FASB Statement No. 143	*Accounting for Asset Retirement Obligations*
FASB Statement No. 144	*Accounting for the Impairment or Disposal of Long-Lived Assets* (See the previous section "Asset Impairment—A New FASB Standard" of this Alert)
FASB Technical Bulletin No. 01-1	*Effective Date for Certain Financial Institutions of Certain Provisions of Statement 140 Related to the Isolation of Transferred Financial Assets*
SOP 01-1	*Amendment to Scope of Statement of Position 95-2, Financial Reporting by Nonpublic Investment Partnerships, to Include Commodity Pools*
SOP 01-2	*Accounting and Reporting by Health and Welfare Benefit Plans*
AICPA Audit and Accounting Guide	*Audits of Investment Companies*
Questions and Answers	*FASB Statement No. 140*
Practice Aid	*Assets Acquired in a Business Combination to Be Used in Research and Development Activities: A Focus on Software, Electronic Devices, and Pharmaceutical Industries*

On the Horizon

Auditors should keep abreast of auditing and accounting developments and upcoming guidance that may affect their engagements. Remember that exposure drafts are nonauthoritative and cannot be used as a basis for changing GAAP or GAAS. The AICPA general *Audit Risk Alert—2001/02* summarizes some of the more significant exposure drafts outstanding.

The following table lists the various standard-setting bodies' Web sites where you may obtain information on outstanding exposure drafts, including downloading a copy of the exposure draft.

Standard Setting Body	*Web Site*
AICPA Auditing Standards Board	www.aicpa.org/members/div/auditstd/drafts.htm
AICPA Accounting Standards Executive Committee	www.aicpa.org/members/div/acctstd/edo/index.htm
Financial Accounting Standards Board	www.rutgers.edu/Accounting/raw/fasb/draft/draftpg.html
Professional Ethics Executive Committee	www.aicpa.org/members/div/ethics/index.htm

Help Desk—The AICPA's standard-setting committees are now publishing exposure drafts of proposed professional standards exclusively on the AICPA Web site. The AICPA will notify interested parties by e-mail about new exposure drafts. To have your e-mail address put on the notification list for all AICPA exposure drafts, send your e-mail address to memsat@aicpa.org. Indicate "exposure draft email list" in the subject header field to help process the submissions more efficiently. Include your full name, mailing address and, if available, your membership and subscriber number in the message.

New Framework for the Audit Process

The ASB is reviewing the auditor's consideration of the risk assessment process in the auditing standards, including the necessary understanding of the client's business and the relationships among inherent, control, fraud, and other risks. The ASB has issued an

exposure draft on audit documentation and expects to issue a series of exposure drafts in 2002. Some participants in the process expect the final standards to have an effect on the conduct of audits that has not been seen since issuance of the "Expectation Gap" standards in 1988.

Some of the more important changes to the standards expected to be proposed are the following:

- A requirement for a more robust understanding of the entity's business and environment that is more clearly linked to the assessment of the risk of material misstatement of the financial statements. (Among other things, this will improve the auditor's assessment of inherent risk and eliminate the "default" to assess inherent risk at the maximum.)
- An increased emphasis on the importance of entity controls with clearer guidance on what constitutes a sufficient knowledge of controls to plan the audit.
- A clarification of how the auditor may obtain evidence about the effectiveness of controls in obtaining an understanding of controls.
- A clarification of how the auditor plans and performs auditing procedures differently for higher and lower assessed risks of material misstatement at the assertion level while retaining a safety net of procedures.

These changes collectively are intended to improve the guidance on how the auditor places the audit risk model in operation.

Keep abreast of the status of these projects and projected exposure drafts, inasmuch as they will substantially affect the audit process. For additional information, see the AICPA's Web site at www.aicpa.org.

AICPA Resource Central

The following publications deliver valuable guidance and practical assistance as potent tools to be used on your engagements.

- *Audit Risk Alert—2001/02* (Product No. 022280kk)

- Audit Guide *Auditing Derivative Instruments, Hedging Activities and Investments in Securities* (Product No. 012520kk)
- Audit Guide *Auditing Revenue in Certain Industries* (Product No. 012510kk)
- Audit Guide *Audit Sampling* (Product No. 012530kk)
- Audit Guide *Analytical Procedures* (Product No. 012551kk)
- Practice Aid *Auditing Estimates and Other Soft Accounting Information* (Product No. 010010kk)
- *Accounting Trends & Techniques—2001* (Product No. 009893kk)
- Practice Aid *Preparing and Reporting on Cash- and Tax-Basis Financial Statements* (Product No. 006701kk)
- Practice Aid *Considering Fraud in a Financial Statement Audit: Practical Guidance for Applying SAS No. 82* (Product No. 008883kk)
- New! AICPA Practice Aid *Assets Acquired in a Business Combination to Be Used in Research and Development Activities: A Focus on Software, Electronic Devices, and Pharmaceutical Industries* (Product No. 006609kk)

Audit and Accounting Manual

The *Audit and Accounting Manual* is a valuable nonauthoritative practice tool designed to provide assistance for audit, review, and compilation engagements. It contains numerous practice aids, samples, and illustrations, including audit programs; auditors' reports; checklists; and engagement letters, management representation letters, and confirmation letters.

CD-ROM

The AICPA is currently offering a CD-ROM product titled *reSource: AICPA's Accounting and Auditing Literature.* This CD-ROM enables subscription access to the following AICPA Professional Literature products in a Windows format: AICPA *Professional Standards, Technical Practice Aids,* and *Audit and Accounting Guides*

(available for purchase as a set that includes all Guides and the related Audit Risk Alerts, or as individual publications). This dynamic product allows you to purchase the specific titles you need and includes hypertext links to references within and between all products.

Educational Courses

The AICPA has developed a number of continuing professional education courses that are valuable to CPAs working in the high-technology industry. Those courses include:

- *AICPA's Annual Accounting and Auditing Workshop* (2000–2001 Edition) (Product No. 737061kk (text) 187078kk (video)). Whether you are in industry or public practice, this course keeps you current and informed, and shows you how to apply the most recent standards.
- *SFAS 133: Derivative and Hedge Accounting* (Product No. 735180kk). This course helps you understand GAAP for derivatives and hedging activities. Also, you will learn how to identify effective and ineffective hedges.
- *SEC Reporting* (Product No. 736745kk). This course will help the practicing CPA and corporate financial officer learn to apply SEC reporting requirements. It clarifies the more important and difficult disclosure requirements.
- *Internal Control Implications in a Computer Environment* (Product No. 730617kk). This practical course analyzes the effects of electronic technology on internal controls and provides a comprehensive examination of selected computer environments, from traditional mainframes to popular personal computer set-ups.

Online CPE

The AICPA offers an online learning tool, *AICPA InfoBytes*. An annual fee ($95 for members and $295 for nonmembers) will offer unlimited access to over 1,000 hours of online CPE in one- and two-hour segments. Register today for *Infobytes* at cpa2biz.com.

CPE CD-ROM

The Practitioner's Update (Product No. 738110kk) CD-ROM helps you keep on top of the latest standards. Issued twice a year, this cutting-edge course focuses primarily on new pronouncements that will become effective during the upcoming audit cycle.

Member Satisfaction Center

To order AICPA products, receive information about AICPA activities, and find help on your membership questions, call the AICPA Member Satisfaction Center at (888) 777-7077.

Technical Hotline and Ethics Hotline

Do you have a complex technical question about GAAP; other bases of accounting; accounting, auditing, compilation engagements; review engagements; or other technical matters? If so, you may use the AICPA's Accounting and Auditing Technical Hotline. AICPA staff will research your question and call you back with their answer. You can reach the Technical Hotline at (888) 777-7077.

In addition to the Technical Hotline, the AICPA also offers an Ethics Hotline. Members of the AICPA's Professional Ethics Team answer inquiries concerning independence and other behavioral issues related to the application of the AICPA Code of Professional Conduct. You can reach the Ethics Hotline at (888) 777-7077.

Web Sites

Look for additional helpful Web sites in Appendix A of this alert.

AICPA Online

AICPA Online, at www.aicpa.org, offers CPAs the unique opportunity to stay abreast of matters relevant to the CPA profession. AICPA Online informs you of developments in the accounting and auditing world as well as developments in congressional and political affairs affecting CPAs. In addition, AICPA Online offers information about AICPA products and services, career resources, and online publications.

CPA2Biz

This new Web entity, at cpa2biz.com, is the product of an independently incorporated joint venture between the AICPA and state societies. CPA2Biz currently offers a broad array of traditional and new products, services, communities, and capabilities so CPAs can better serve their clients and employers. Some features cpa2biz.com provides or will provide include the following:

- Online access to AICPA and other professional products, including authoritative and nonauthoritative literature, training, and tools.
- Online CPE.
- A wide assortment of business solutions that CPAs can offer to their small business clients. These solutions are a comprehensive aggregation of "best of breed" software products combined with the training, tools, and support CPAs need to successfully expand their practices into the areas of outsourced payroll and human resource benefits administration and E-commerce.
- Web-site development and hosting.
- Hosed wireless messaging.
- Customer relationship management.

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This Audit Risk Alert replaces *High-Technology Industry Developments—2000/01. High-Technology Industry Developments* is published annually. As you encounter audit or industry issues that you believe warrant discussion in next year's Alert, please feel free to share them with us. Any other comments that you have about the Alert would also be appreciated. You may e-mail these comments to *lgivarz@aicpa.org* or write to:

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APPENDIX A
The Internet—An Auditor's Research Tool

Here are some useful Web sites that may provide valuable information as you plan your client engagements.

Name of Site	*Content*	*Internet Address*
American Institute of CPAs	Summaries of recent auditing and other professional standards as well as other AICPA activities	www.aicpa.org
Financial Accounting Standards Board	Summaries of recent accounting pronouncements and other FASB activities	www.fasb.org
The Electronic Accountant	World Wide Web magazine that features up-to-the-minute news for accountants	www.electronicaccountant.com
AuditNet	Electronic communications among audit professionals	www.cowan.edu.au/mra/home.htm
CPAnet	Links to other Web sites of interest to CPAs	www.cpalinks.com/
Accountant's Home Page	Resources for accountants and financial and business professionals	www.computercpa.com/
Double Entries	A weekly newsletter on accounting and auditing around the world	www.csu.edu.au/lists.anet/ADBLE-L/index.html
U.S. Tax Code Online	A complete text of the U.S. Tax Code	www.fourmilab.ch/ustax/ustax.html
Federal Reserve Bank of New York	Key interest rates	www.ny.frb.org/pihome/statistics/dlyrates
Cybersolve	Online financial calculators, such as ratio and breakeven analysis	www.cybersolve.com/tools1.html
FedWorld. Gov	U.S. Department of Commerce-sponsored site providing access to government publications	www.fedworld.com

(continued)

Name of Site	*Content*	*Internet Address*
Hoovers Online	Online information on various companies and industries	www.hoovers.com
Ask Jeeves	Search engine that uses a user-friendly question format. Provides simultaneous search results from other search engines as well (e.g., Excite, Yahoo, AltaVista)	www.askjeeves.com
Vision Project	Information on the profession's vision project	www.cpavision.org/horizon
Internet Bulletin for CPAs	CPA tool for Internet sites, discussion groups, and other resources for CPAs	www.kentis.com/ib.html
Governmental Accounting Standards Board	Summaries of recent accounting pronouncements and other GASB activities	www.gasb.org

In addition to these Web sites, be sure to review those listed in the "On the Horizon" section of this Alert.

APPENDIX B
Trust Assurance Services

WebTrust^{SM} and SysTrust^{SM} services are available for businesses wishing to address concerns about security and privacy issues, among others. For example, the AICPA, in conjunction with the Canadian Institute of Chartered Accountants (CICA), has developed WebTrust and SysTrust, which offer the opportunity for businesses to take action and stem the tide of compromised Web site activities and operations. There are various principles and criteria represented under WebTrust and SysTrust programs. Some of these principles are identical in name and the criteria that support these principles are similar in impetus as well.

WebTrust

We read again and again about everything from Internet businesses selling or sharing private customer information to consumer fraud. Internet users and the businesses that serve them are justifiably concerned about the integrity of the businesses and parties they're dealing with on the Internet.

WebTrust programs offer several types of assurances for business activities by B2B, B2C, and service provider clients. Some of these assurances include:

- WebTrust for Security gives assurance that an e-commerce system provides security for the data it transmits and stores.
- WebTrust for Availability lends assurance that a Web site provides access to an entity's sites as advertised or promised in a service-level agreement.
- WebTrust for Online Privacy assures that the Web site's disclosed privacy practices and related controls have been evaluated and independently verified.

- WebTrust for Business Practices/Transaction Integrity provides assurance with respect to the completeness and accuracy of processing of electronic transactions sent over the Internet.
- WebTrust for Confidentiality provides assurance on the confidentiality of data exchanged over electronic networks such as the Internet or a Virtual Private Network.
- The WebTrust Certification Authorities Program assures that certification authorities (third-party organizations that help enable parties to conduct secure e-business transactions) have certain controls in place that are consistent with WebTrust principles and criteria to provide secure Internet transactions.

There are various WebTrust seals available so that companies can visually display their compliance with WebTrust principles and criteria.

> **Help Desk**—For more detailed information on WebTrust and its certification programs, go to the AICPA WebTrust Web sites at www.aicpa.org/assurance/webtrust/index.htm and www.webtrust.org.

SysTrust

Information systems have become increasingly complex, fast, and integrated, and the number and materiality of the transactions processed by such systems continue to increase year by year. To respond to the needs of management and customers for assurance on the reliability of such systems that they often depend on for their business-related transactions, the AICPA and the CICA have joined forces in developing an attestation service called SysTrust.

SysTrust is crafted under the attestation standards in which the CPA performs procedures to determine whether the controls over a system are operating with sufficient effectiveness to enable the system to function reliably. SysTrust uses the following four principles to determine whether a system is reliable:

- *Availability* refers to whether the system operates and provides information in accordance with the specified requirements of that system, and whether the system is accessible for routine processing and maintenance.
- *Security* refers to whether the system is protected against unauthorized physical and electronic access. Restricting access to a system prevents potential abuses of system components, theft of system resources, misuse of system software, and improper access to private and confidential information. Security also refers to restrictions on the type of information that can be stored and the use of the information captured by the system.
- *Integrity* refers to whether the system processes the information it receives completely, accurately, promptly, and in accordance with the required authorizations.
- *Maintainability* refers to the entity's ability to make changes in the system in a manner that supports current and future reliability. The system should be able to be updated so that it continues to provide system availability, security, and integrity.

Systems reliability is necessary to assure system users that controls are in place relating to their transactions. Ultimately, reliable systems can produce a constant and predictable revenue stream, with minimum related costs to benefit e-business users and other stakeholders.

Help Desk—For more information on SysTrust, visit the Web site for SysTrust at www.aicpa.org/assurance/systrust/index.htm

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