FORM 10-K/A

Annual report pursuant to section 13 and 15(d) [amend]

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FILER

TUT SYSTEMS INC

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SIC: **3661** Telephone & telegraph apparatus

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K/A

(Mark One)

☒ **Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the fiscal year ended December 31, 2004

☐ **Transition Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from to

Commission File Number: 000-25291

TUT SYSTEMS, INC.

(Exact name of Registrant as specified in its charter)

Delaware	**94-2958543**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
6000 SW Meadows Drive, Suite 200 Lake Oswego, Oregon	**97035**
(address of principal executive offices)	(zip code)

Registrant' s telephone number, including area code: **(971) 217-0400**

Securities registered pursuant to Section 12(b) of the Act:

None

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, $0.001 par value
(Title of Class)

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

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

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

The aggregate market value of voting and non-voting stock held by non-affiliates of the Registrant was approximately $47,697,332 as of June 30, 2004 based on the closing price of the common stock as reported on The Nasdaq National Market for June 30, 2004. There were 25,181,610 shares of the Registrant' s common stock issued and outstanding on February 1, 2005.

EXPLANATORY NOTE

The undersigned registrant hereby amends and restates in its entirety, its Annual Report on Form 10-K for the fiscal year ended December 31, 2004 (the "Original Filing"). Specifically Part III and the third paragraph of Note 13 of the Notes to the Consolidated Financial Statements of this Annual Report. Other than the third paragraph of Note 13, this Amendment does not reflect events that have occurred after the February 3, 2005 filing date of the Original Filing, or modify or update the disclosures presented in the Original Filing, except to reflect the corrections described above. Information with respect to those events has been or will be set forth, as appropriate, in the Company' s subsequent periodic filings, including its quarterly reports filed on Form 10-Q. Any reference to facts and circumstances at a "current" date refer to such facts and circumstances as of the filing date of the Original Filing.

TUT SYSTEMS, INC.

ANNUAL REPORT ON FORM 10-K
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PART I

IMPORTANT NOTE ABOUT FORWARD-LOOKING STATEMENTS

This Form 10-K/A contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements may generally be identified by the use of such words as "expect," "anticipate," "believe," "intend," "plan," "will," or "shall," or the negative of those terms. We have based these forward-looking statements on our current expectations and projections about future events. Such forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from those projected in such statements. These risks and uncertainties include those set forth under "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." The forward-looking statements contained in this annual report include, but are not limited to statements about the following: (1) our belief that video products will provide most of our growth opportunities for the foreseeable future, (2) our belief that the number of telco video subscribers will grow significantly between now and 2007, (3) our intention to expand and further specialize our video trunking products for surveillance and broadcast TV backhaul applications, (4) our anticipation that we will introduce products to support new technologies, (5) our belief that our cash and cash equivalents as of December 31, 2004 are sufficient to fund our operating activities and capital expenditures for at least the next twelve months, (6) our expectation that customers outside of the United States will represent a significant and growing portion of our revenue, (7) our belief that the market for digital video processing systems will expand, (8) our belief that lower encoding rates of new technologies will extend the reach of video services and enable delivery of HDTV over copper networks, (9) our intention to strengthen our direct sales force, (10) our anticipation that first commercial availability of advanced MPEG capabilities for our Astria product family will occur in the first half of 2005, (11) our belief that our products can serve the market for digital video and high-speed data access products outside the United States, (12) our belief that our facilities will be adequate to meet our requirements for the foreseeable future, (13) our belief that our total liability to settle the Whalen v. Tut Systems, Inc. et. al litigation will not exceed $3.5 million, (14) our belief that demand for (and sales of) our products will increase, (15) our expectation

that our research and development expenses will increase in proportion to our revenue, (16) our expectation that our sales and marketing expenses will increase in proportion to our revenue, (17) our expectation that capital expenditures in 2005 will equal those in 2004 and will be funded from operations, (18) our expectation that our aggregate foreseeable future contractual obligations is no more than $5.1 million, and (19) our expectation that the amount of cash used to fund our operations will decrease in 2005.

The cautionary statements contained under the caption "Risk Factors" and other similar statements contained elsewhere in this report and including the documents that are incorporated by reference, identify important factors with respect to such forward-looking statements, including certain risks and uncertainties that could cause our actual results, performance or achievements expressed or implied by such forward-looking statements to vary.

Although we believe that the expectations reflected in such forward-looking statements are based upon reasonable assumptions, no assurance can be given that such expectations will be attained or that any deviations will not be material. We disclaim any obligation or undertaking to disseminate any updates or revision to any forward-looking statement contained herein or reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

ITEM 1. BUSINESS

Overview

We design, develop, and sell digital video processing systems that enable telephony-based service providers to deliver broadcast quality digital video signals over their networks. We also offer digital video processing systems that enable private enterprise and government entities to transport video signals over satellite, fiber, radio, or copper networks for surveillance, distance learning, and TV production applications. We also offer broadband transport and service management products that enable the provisioning of high speed Internet access and other broadband data services over existing copper networks within hotels and private campus facilities.

Historically, we derived most of our sales from our broadband transport and service management products. In November 2002, we acquired VideoTele.com or VTC, from Tektronix, Inc. to extend our product offerings to include digital video processing systems. As a result, our revenue increased from $9.4 million in 2002 to $32.2 million in 2003. Revenue declined to $25.0 million in 2004 due to a slowing demand for our video processing systems from independent telephone companies. Video-based products now represent a majority of our sales and will provide most of our growth opportunities for the foreseeable future. Our net loss in 2004 was $13.5 million compared with a net loss of $5.5 million in 2003 and a net loss of $41.6 million in 2002.

Industry Background and Dynamics

Growing Demand for Bundled Voice, Data, and Video Services

Historically, traditional telephone companies have been the sole providers of voice services to the residential market in the United States. Over the past several years, cable television operators, with competition from satellite television providers beginning in the 1990s, have become the primary providers of multi-channel broadcast TV services. More recently, traditional telephone companies and cable operators have become direct competitors for the growing market for high-speed Internet access. In addition, many large cable system operators have begun to offer local and long distance telephone service to their customers as part of a bundle of services, including voice, data, and video over the same network on the same bill. Thus, telcos are now at risk of losing traditional voice lines to both cable operators offering bundled services and to wireless telephone vendors that compete on mobility and price.

As a result of these competitive threats, large telcos are beginning to use their existing digital subscriber line, or DSL, and fiber-to-the-home infrastructures to offer broadcast TV services and better compete for the end customer with a bundled offering of voice, data, and video services. DSL technologies use sophisticated signal blending techniques to deliver data through copper wires. Fiber-to-the-home refers to optical fiber that is installed from a telephone switch directly to a subscriber' s home. In the meantime, many small independent operating telephone companies, or IOCs, and international carriers are already installing or planning to install digital video headends to offer broadcast TV service over their DSL and fiber infrastructures. According to a report released by InStat/MDR in April 2003, the number of telco video subscribers worldwide will increase from 572,000 at the end of 2003 to over 19.0 million by the end of 2007.

Technical Challenges for Delivering Broadcast Quality Video over Telco Networks

To deliver broadcast quality video, a non-satellite-based service provider must install a digital TV headend to receive both national and local broadcast TV signals and to properly process these signals for delivery over fiber, cable, or copper-based DSL infrastructures. The limitations on the amount of data that telco DSL facilities can transmit in a fixed amount of time (such limitations are often referred to as bandwidth) when compared to the high bandwidth capacity of cable facilities means that telco headends require greater video processing performance. For example, video headends deployed by cable operators have been able to simply pass high speed

satellite-fed TV signals directly to their cable networks without further video compression. Telcos, however, must use video headends that compress the variable data transmission rate of the source signal to a low constant data transmission rate over their DSL networks. Additionally, telco networks often are comprised of multiple hardware platforms that use varying sets of rules, or protocols, for transmitting signals. Therefore, to deliver video services, telcos require digital TV headends that are capable of converting video signals between different hardware platforms using various protocols.

Technical Advancements Are Increasing the Available Market for Telcos to Deliver Video

The bandwidth and distance limitations of the copper-based infrastructure from the telco to the subscriber' s home constrain both the number of video channels that may be delivered simultaneously over a DSL system and the number of customers that are reachable from a telco central office. Emerging advancements in video compression technology will soon enable high quality video streams to be transported at much lower data transfer speeds. These emerging advancements are expected to lower data transfer rates by more than 65% relative to technologies currently used in existing satellite and cable facilities. These emerging compression advancements also introduce the possibility of delivering high-definition television over bandwidth constrained DSL lines for the first time. Additionally, there are DSL advancements emerging that expand the available bandwidth from the telco to the subscriber' s home thereby supporting higher DSL data transfer rates over longer distances. The combination of these advancements will enable telcos to reach a higher percentage of their customers with a larger number of video channels.

While DSL technology will continue to dominate telco broadband networks for the foreseeable future, telephone companies are beginning to construct fiber networks to their customers' homes. Though fiber-to-the-home will eliminate bandwidth limitations on delivering higher speed data services and high-quality video offerings, telephone companies deploying fiber-to-the-home will require advanced video processing to convert signals between multiple protocols used in their networks.

The Market for Enterprise and Government Video Systems

Private enterprises and government entities also use digital video processing systems to distribute video for applications that include corporate training, video and film production, video surveillance, and distance education. In these applications, the particular video source to be encoded may be a signal from a local TV station that needs to be brought back to a regional or statewide digital TV headend that may be 100 miles away, it may be a signal received from an outdoor surveillance camera that needs to reach a decoder or personal computer for viewing hundreds of miles away, or it may be a signal from a university seminar that needs to feed multiple remote classroom sites. This market is also characterized by tradeoffs between the cost of long-distance broadband facilities and the cost of video encoding systems to reduce the need for additional bandwidth. We believe that this market will also expand as advanced video encoding techniques lower the bandwidth requirements for transmitting video signals.

Our Solutions

Our suite of products is focused on enabling the delivery of broadcast quality video over traditional telco networks. We leverage VTC' s previous 20 years of experience to develop video-based products that meet the special video processing requirements of telcos. Unlike standard cable headends, our Astria digital video headend solution converts the high and varying data transfer rate signal received as input from a satellite or terrestrial source into a lower constant data transfer rate video stream for subsequent delivery over a telco' s DSL or fiber-to-the-home access network. Our high-performance, cost-effective systems are based on the standards developed by the Motion Pictures Expert Group, or MPEG, including MPEG-1 and MPEG-2. We are developing upgrades to the Astria family of products (for introduction in 2005) to support the emerging MPEG-4 and Microsoft or VC-1 compression technologies that will provide lower encoding rates and more advanced interactivity than the current MPEG standards. We believe that the lower encoding rates of these new technologies will extend the reach of video services and enable high-definition TV to be delivered over bandwidth-constrained copper networks. Customers for our Astria video content processing systems include independent operating companies in North America, such as Oxford Networks, and international incumbent carriers, such as PCCW in Hong Kong.

Our M2 video processing systems use software and hardware components from our digital TV headend systems packaged in a smaller form factor to encode video signals for transmission over private or government networks. Our M2 products are used for applications such as studio-to-transmitter transport, video surveillance, and distance education. We sell our M2 video processing systems to TV broadcasters, government agencies, and educational institutions.

We also offer broadband transport and service management products that enable the provisioning of high speed Internet access and other broadband data services over existing copper networks within hotels and private campus facilities. Customers for our broadband data systems include system integrators, competitive carriers for the hospitality industry and private educational and commercial entities.

Strategy

Our objective is to be the leading provider of video content processing solutions for the delivery of broadcast and on-demand

video services to residential customers over telephony networks. Key elements of our business strategy are as follows:

Maintain Market Leadership in North American Telco Market for Digital TV Headends

We believe that our installed base of digital video headend systems represents over 50% of the North American headend market for video over DSL services. Our strategy is to maintain this leadership position with continued enhancements to the Astria product line as more and larger telephone companies in North America begin to introduce bundled voice, data and video services. Our development efforts are focused on introducing new compression technologies such as MPEG-4 and VC-1 that will be available as an upgrade option to our installed base. These compression technologies will enable our telco customers to address a larger percentage of their geographic market and deliver advanced video services such as high-definition TV.

Expand Sales Efforts to International Markets

While we continue to grow our North American customer base, we will be strengthening our direct sales force to focus on major European service providers that see a need for a bundled voice, data and video offering. In Asia, we are developing relationships with value-added distributors and partners to focus on key opportunities to market and sell our Astria products. Many of the larger European and Asian service providers represent an opportunity to sell multiple digital TV headends.

Accelerate Market Adoption of Video Over Telco Networks

To encourage service providers to more rapidly accept the business case for video over telco networks, we are working simultaneously on several initiatives to:

- Continue to educate the market on the viability of existing digital video processing solutions by using our customers as references and benchmarks for prospective customers. To do so, we will continue to host user group conferences, speak at public conferences, issue joint press releases with new customers and arrange meetings between potential and current customers;

- Offer advanced encoding technologies as soon as practical that lower the data transfer rate of video streams to extend the reach of video over DSL networks and allow new services such as high-definition TV;

- Continue to work with partners to simplify and lower the cost of deploying end-to-end solutions; and

- Continue to work with and lead standards bodies to facilitate the rapid adoption of new technologies and standards.

Partner with Leading Industry Vendors to Provide End-to-End Solutions

To deliver a complete end-to-end video solution, we are partnering with leading industry vendors that provide key system elements such as broadband access systems, network switches and routers, customer premises set-top boxes, video-on-demand systems and service management software that, together with our Astria content processor products, provide a complete video solution. As a result, we have focused our business development and strategic marketing efforts on working with such partners to facilitate a cost-effective, ready-to-deploy, high-performance solution based on customers' architecture and business requirements. Our strategy with these partners is to design, develop and market end-to-end systems solutions that will allow any form of video content (including broadcast TV, video-on-demand and streaming media from the Internet) to be carried over any telephony network to any TV, personal computer, or mobile end-user device.

Leverage Our Digital TV Headend Expertise in Additional Markets

We will continue to incorporate software and hardware components developed for our digital TV headend systems into our M2 video processing systems to meet the growing need for advanced surveillance and broadcast applications. Additionally, we will continue to partner with other industry vendors on applications for new potential customers, such as large corporations and educational institutions. We intend to expand and further specialize our video products for surveillance and broadcast TV backhaul applications, and we will seek new distribution channels for our M2 product line.

Selectively Pursue Acquisitions to Expand Our Markets and Product Offerings

In addition to our internal research and development efforts, we continually evaluate acquisitions of companies and technologies that could extend our product offerings, technology expertise, industry knowledge and global customer base. Since 2000, we have completed four acquisitions, including the acquisition of VideoTele.com in November 2002. The products and technologies that we acquired through these acquisitions have facilitated our entry into new markets, expanded our product line in existing markets, and added

additional technical expertise to develop new products for evolving markets in the future. In order to provide additional financial resources, we entered into an Agreement and Plan of Merger with CoSine Communications, Inc., or CoSine on January 7, 2005. The proposed merger will be a stock-for-stock transaction valued at approximately $24.1 million. Upon closing, we will issue approximately 6.0 million shares of our common stock to the shareholders of CoSine. We expect the transaction to result in net cash to us of approximately $22.8 million, and is expected to close as soon as practicable following approval by the stockholders of both companies. We are acquiring CoSine primarily to provide additional liquidity. We will honor CoSine' s existing customer' s support agreements, but do not expect to offer its products of sale to new customers. We will not have any additional employees or facilities as a result of the transaction. Going forward, we anticipate our acquisition efforts will be focused on targets that will extend our existing video-based products and markets.

Our Products

We design, develop and sell video content processing systems and broadband transport and service management products. Our digital TV headend system enables telephony-based service providers to transport broadcast quality digital video signals across their networks and our digital video transmission systems optimize the delivery of video signals across enterprise, government and education networks. Our broadband transport and service management products enable the transmission of broadband data over existing hotels and private campus networks.

Video Processing Systems

Our video processing products must interoperate with other products from third parties to enable a complete end-to-end broadcast TV system. To ensure proper interoperation for our customers, we offer a system integration service whereby we purchase, assemble, configure and test key components together before delivering the integrated system to the customer. Typical third-party components include satellite receivers, antennas and decoders, network switches and routers, radio frequency modulation units, and service management software.

Astria CP (Content Processor)

Our Astria CP is a digital video processing platform typically used by carriers at a digital TV headend location to convert hundreds of TV channels into low, constant-data-transmission-rate video formats for delivery over any broadband access network. It is a third-generation, video processing system that we have specifically designed for the digital TV marketplace. The Astria CP uses our patent-pending QualView™ software applications to deliver high quality video when converting satellite-based variable data transmission rate video and audio signals to low, constant-data-transmission-rate content for delivery over telco networks. These QualView applications can separate the desired TV channels from a mix of over 200 channels received from various satellites, lower the data transmission rate of the desired channels, and convert the video signals to the appropriate network interface and protocol. The Astria CP also supports encoder modules that convert uncompressed video signals to compressed constant-data-transmission-rate video streams.

Each Astria CP can process up to 200 video and audio channels, depending on the type of processing required. The Astria CP works with various telephone company copper, fiber, or cable networks providing ultimate flexibility when designing a commercial video delivery system. The Astria CP may be populated with a mix of video encoders and flexible processor modules, which in turn may be configured and reconfigured with a simple QualView software download to enable a variety of video processing functions. Up to 12 system modules may be configured within a single Astria chassis.

Today the Astria CP processes video content in standard MPEG-1 or MPEG-2 formats. We are developing upgrades to the Astria family of products to support the emerging MPEG-4 and VC-1 encoding technologies. These new technologies will provide lower encoding rates and more advanced interactivity than MPEG standards previously provided. We anticipate first commercial availability of these capabilities in the first half of 2005. These capabilities will enable our customers to reach the next stage data transmission rate reduction without having to upgrade their complete headend, thus preserving the customer' s original investment. This will also enable video streams to be easily viewed from the large base of personal computers running MPEG-4 Windows Media players.

Astria RCP (Remote Content Processor)

For service providers delivering digital TV over regional or statewide networks, our Astria RCP provides an affordable way to distribute video signals sourced from a single digital TV headend. The Astria RCP typically accepts pre-processed TV channels from a centralized Astria CP via a fiber backbone network and performs appropriate network and protocol conversion for delivery of the video streams over a variety of telco access networks. The Astria RCP can also be used to encode and compress local TV channels. This flexibility allows service providers to place Astria RCPs at the edge of a fiber optic transport network to deliver aggregated and localized content to a specific region or community. The ability to add or drop channels into the line-up at the edge of the transport network allows service providers to incorporate local programming, advertising, and emergency alert system content. This capability enables a service provider to offer a customized mix of channels and content that is relevant to local subscribers. The Astria RCP comes in two versions, a 12-slot version based on the same chassis as the Astria CP and a 6-slot version. In contrast to the Astria CP, the RCP does not process the high, variable-data-transmission-rate signals received from satellites.

Aveon™ Element Management System

Our Aveon Element Management System enables the service provider to configure and monitor Astria CP and RCP systems across wide area networks. The ability to use Aveon to create a single network view of the system gives service providers a simple to use yet powerful tool for controlling all aspects of operating a video network from a single management location.

M2 Video Processing Systems for Enterprise and Government Applications

Our M2 video processing system leverages the software components and hardware modules used within the Astria CP, but M2 products are packaged in a smaller form factor for private enterprise and government markets.

Our M2-400 system was introduced in the second quarter of 2003 and is our premier digital video system for delivering mission critical, high-quality video in real-time for private network applications. Each M2-400 chassis is designed to hold multiple encoders, decoders and network interfaces. The M2-400 system supports up to 6 system modules in contrast to the Astria CP that supports up to 12 system modules. The M2-400 works across satellite, radio, or fiber networks. An embedded web server controls and manages the M2 product line via an intuitive web-based graphical user interface, enabling administration of the product from any location on the network. The M2-400 is also supported by third-party scheduling software for video conferencing and distance learning applications.

Our M2-10x system was also introduced in 2003 for video applications that only require a single encoder or decoder per end-point. For example, one of our digital TV headend customers uses the M2-10E at a remote location to encode local events on site for addition to their basic lineup of broadcast TV channels. This capability helps them differentiate their service offering from the national network-based offerings of the satellite television vendors.

Broadband Transport and Service Management Products

Prior to our entry into the video processing business in November 2002, our primary focus was on the sale of our broadband transport and service management products. The market for these systems is characterized by the need to transport high-speed data signals across private buildings or campus locations, where the only available transmission facility is composed of copper telephone wires. We have been a participant in this market since the introduction of our first XL Ethernet extension product in 1992. Applications within this market include: i) connecting hotel guests to broadband Internet services over the hotel' s telephone wires, ii) connecting video surveillance cameras, back office PC' s, and railroad station ticket machines to a backbone network, and iii) connecting two local area networks, or LANs, across a business campus without having to run new wires or cables.

Our Expresso line of products uses proprietary transmission technology to provide a low-cost, easy to install solution that can deliver broadband Internet access to multiple nodes over a single pair of copper wire for broadband Internet applications across multi-tenant complexes such as hotels, apartments and private campus facilities. We recently added Ethernet over very high speed DSL line cards to our existing Expresso chassis. This higher speed application enables our customers to deliver broadcast TV, video-on-demand service, and Internet service throughout a multi-tenant complex.

Our XL line of Ethernet extension products is often used by individual enterprises to extend their data networks over distances that cannot be accommodated by standard Ethernet wiring. Various XL products operate over distances of up to 20,000 feet, at data transmission rates up to 10 Mbps, all over a single pair of ordinary telephone wires. In certain situations, these XL products are used in combination with our M2 products to support the encoding of local content to feed digital video headends.

Our Expresso and XL transport products are augmented by our Expresso subscriber management system, which authenticates users, manages bandwidth and IP addresses, and processes credit card or password information for billing purposes. Subscriber management systems are typically found in hotels that offer broadband Internet service to guests, in campus housing complexes to manage broadband Internet access, and in wireless Wi-Fi "hot spots" such as hotel lobbies and Internet cafes.

Customers and Markets

Our target customers for our Astria video content processing systems are telephony-based incumbent local exchange companies, independent operating telephone companies and international post, telephone and telegraph companies that aim to deliver advanced video services over their existing copper, fiber or coaxial cable infrastructures. Target customers for our M2 video processing systems include TV broadcasters, government agencies, and educational institutions. Target customers for our broadband data systems are system integrators, competitive carriers for the hospitality industry, and private educational and commercial entities.

Service Providers

Over 100 independent operating companies, or IOCs, in the United States now use our Astria products to deliver digital TV over

DSL and other broadband networks. We installed our first commercial digital TV headend at Chibardun Telephone Cooperative in Dallas, Wisconsin in 2000. Since that time, we have deployed our digital TV headend solution to IOCs that range in size from 5,000 to over 90,000 access lines.

Our international sales to service providers have been concentrated among three large carriers. In 2002, Telenor AS, Norway' s largest telecommunications provider with more than 1.8 million customers, launched digital TV services over its network using an Astria CP. In 2003, PCCW, which acquired the former Hong Kong Telephone Company in 2000, launched service to its customers from an Astria headend and signed up more than 150,000 customers to its Broadband TV service in the first two months after launch. Currently, PCCW is delivering service to more than 365,000 customers from an Astria headend. Additionally in 2003, our broadband transport and service management products were deployed by Telefonos de Mexico, S.A., or TelMex, to offer a national "hot spot" wireless Internet in Mexico' s major public facilities such as airports, hotel lobbies, restaurants and hospitals.

We expect the small to medium size independent telephone operating companies in the United States to remain the primary near-term market for Astria products. The larger North American tier one and International carriers continue to explore and test the markets and technologies for DSL-based video services.

Distributors and System Integrators

We market our broadband transport and service management products to domestic and international system integrators who in turn market and sell our products to educational and government institutions, commercial enterprises, regional competitive service providers and national carriers. Our distributors and system integrators include local resellers, large volume distributors such as Ingram Micro Inc., and international integrators such as Siemens AG in Europe.

Marketing, Sales and Customer Support

Marketing

We seek to increase both the demand and visibility of our products in the markets we serve through attendance at major industry tradeshows and conferences, distribution of sales and product literature, operation of a Company web site, direct marketing and ongoing communications with our customers, the press, and industry analysts. As appropriate, we enter into cooperative marketing and/or development agreements with strategic partners that may include key customers, and manufacturers of various products, including radio, fiber, video equipment, set-top boxes and others.

Sales

In North America, we sell our products primarily to service providers and through multiple sales channels, including a select group of regional value added resellers, system integrators and distributors. Internationally, we sell and market our products through systems integrators and distributors. We have regional account managers throughout the United States and sales offices in Beijing, China, Hong Kong, and Oxford, England. For the year ended December 31, 2004, we derived 23.3% of our revenue from customers outside of the United States. We believe that our products can serve the substantial emerging market for digital video and high-speed data access products outside of the United States.

Customer Support

We believe that consistent high-quality service and support is a key factor in attracting and retaining customers. Service and technical support of our products is coordinated by our customer support organization. Our systems application engineers, located in each of our sales regions, support pre-sales and post-sales activities. Customers can also access technical information and receive technical support via our web site.

Our systems integration group in Cary, Illinois integrates our solution with third-party equipment and then tests, delivers and installs complete headend systems for our customers that require an end-to-end solution.

Research and Development

Our research and development efforts are focused on enhancing our existing products and developing new products through our emphasis on early stage system engineering. As a result of our acquisition of VTC and the large market opportunity that it offers, most of our research and development efforts relate to our video content processing technologies. Research and development costs were $12.3 million, $7.9 million and $7.3 million for the years ended December 31, 2002, 2003 and 2004, respectively. The product development process begins with a comprehensive functional product specification based on input from the sales and marketing organizations. We incorporate feedback from end users and distribution channels, and through participation in industry events, industry organizations and standards development bodies, such as the Broadband World Forum and MPEG-4 Industry Forum. Key elements of our research and development efforts include:

Core Designs. We develop and/or acquire platform architectures and core designs that allow for cost-effective deployment and flexible upgrades that meet the needs of multiple markets and applications. These designs emphasize quick time to market and future cost reduction potential. The Astria, M2, Expresso, and Expresso SMS platforms are a direct result of this effort.

Product Line Extensions. We seek to extend our existing product lines through product modifications and enhancements in order to meet the needs of particular customers and markets. Products resulting from our product line extension efforts include the Astria RCP and the M2-400.

Use of Industry Standard Components. Our design philosophy emphasizes the use of industry standard hardware and software components whenever possible to reduce time to market, decrease the cost of goods, and reduce the risks inherent in new design. We maximize the use of third-party software for operating systems and certain protocol stacks, which allows our software engineers to concentrate on hardware-specific drivers, user interface software and advanced features.

New Technologies. We seek to enhance our product lines by incorporating emerging technologies, such as MPEG-4, VC-1 compression, advanced multi-service stream processing, higher speed fiber interfaces and new network management software features. Additionally, our active involvement in industry based standards associations, such as the MPEG-4 standards body, enables us to incorporate recommended platform architectures and standards into our technology.

Technical Standards Compliance. We design our various systems and product lines to incorporate technical standards developed by worldwide organizations, including International Telecommunications Union, Institute of Electrical and Electronic Engineers, American National Standards Institute, or ANSI, European Telecommunications Standards Institute, or ETSI, and the Full-Service VDSL Committee. Important capabilities supported by these standards include network quality of service, MPEG encoding, Internet Group Management Protocol, Dynamic Host Configuration Protocol, and Network Address Translation.

Intellectual Property

Our success and ability to compete depends in part upon on our proprietary technology and our ability to protect that technology. We rely on a combination of patent, copyright and trade secret laws and non-disclosure agreements to protect our proprietary technology. We currently hold 49 United States patents and have 17 United States patent applications pending. Furthermore, as a result of our acquisition of VTC, Tektronix has agreed not to assert against us or any of our affiliates or customers any of its patents that are based on applications filed prior to November 7, 2002 or that are based on inventions conceived or reduced to practice prior to that date where the assertion relates to our products for generating, processing or delivering video, audio or data for the education, entertainment, conferencing or security markets. We leverage readily available technology and standard components by adding proprietary software enhancements to gain competitive advantage, increase performance and lower cost. In addition, we have substantial trade secrets in the area of processing and managing video streams.

Manufacturing

We do not manufacture any of our own products. We rely on contract manufacturers and third-party OEMs to manufacture, assemble, test and package our products. We require International Organization for Standardization (ISO) 9002 registration for our contract manufacturers as a condition of qualification. We monitor each contractor' s manufacturing process performance through audits, testing and inspections. Each contractor' s quality is also rigorously assessed through incoming testing and inspection of packaged products received from each contractor. In addition, we monitor the reliability of our products through in-house repair, reliability audit testing and field data analysis.

We currently purchase a substantial portion of the raw materials and components used in our products through contract manufacturers. We forecast our product requirements to maintain sufficient product inventory to ensure that we can meet the required delivery times demanded by our customers. Our future success will depend in significant part on our ability to obtain manufactured products on time, at low costs and in sufficient quantities to meet demand.

Competition

The market for video and broadband data systems is intensely competitive, and we expect that this market will continue to become more competitive in the future. Our immediate competitors for digital TV markets are primarily small private companies that are focused on a more narrow product line than ours and thereby may be able to devote substantially more targeted resources to developing,

marketing and selling new products than we can. In targeting larger telco customers, we expect to compete with larger public companies, including Harmonic, Motorola and Tandberg Television. These competitors have achieved success in providing TV headend components for cable multiple system operators and satellite TV providers. Although their products have been designed specifically to meet the needs of cable networks, we expect these competitors to market some of their products for use in TV over DSL applications. We attribute our success in this market to the quality, cost-effectiveness, and unique capabilities of our Astria video content processing system.

Our competition in the market for surveillance, distance education, and broadcast applications primarily comes from small private companies and public companies such as Optibase and Tandberg that together offer a wide array of products with special features and functions. A few of these companies also compete with us in the digital TV headend market. Our competitive success in this market has depended upon having the right form factor and set of features required for a specific application, our long established distribution channels, and our ability to quickly modify an existing product to support the required features.

Our broadband transport and service management products business tends to compete against public network equipment providers, such as Paradyne Corporation, and private and foreign companies. To maintain our competitive position in the private broadband market, we have focused our product development efforts on cost reduction and feature enhancement. Our expertise in particular vertical markets such as the hospitality industry, and our relationships with system integrators in those markets allow us to compete more effectively against larger competitors. We believe that we are among the market leaders for broadband systems in the United States hospitality industry.

All of our competitors may undertake more extensive marketing campaigns, adopt more aggressive pricing policies and devote substantially more resources to developing new products than we can. There can be no assurance that we will be able to compete successfully against current or future competitors or that competitive pressures that we face will not harm our business.

Employees

As of December 31, 2004, we employed 115 people, including 20 in manufacturing operations and customer support, 45 in sales and marketing, 35 in research and development and 15 in general and administrative.

During 2002 and 2003, we reduced our work force as a result of a significant slowing in industry spending and the resulting adverse impact on our results of operations. None of our employees are represented by a labor union. We consider our relations with our employees to be good and we have experienced no work stoppages to date. Competition for skilled personnel in our industry remains strong and our future depends, in part on our ability to attract and retain a skilled workforce and key personnel. We cannot assure you that we will be successful in retaining key personnel or that we will be able to attract and retain skilled workers in the future.

Available Information

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, are available on our website at www.tutsystems.com when such reports are available on the Securities and Exchange Commission website. The contents of our website are not incorporated into this Form 10-K/A.

ITEM 2. PROPERTIES

As a result of our November 2002 acquisition of VTC, our executive and principal administrative and engineering facility totaling approximately 22,450 square feet is located in Lake Oswego, Oregon. We also have a facility, totaling approximately 17,000 square feet, located in Pleasanton, California. The lease for the Lake Oswego facility expires in October 2005, and the lease for the Pleasanton facility expires in June 2005. In addition, we have a product staging and warehouse facility totaling approximately 7,500 square feet in Cary, Illinois. The lease for this facility expires in June 2007. We have one minor facility in the United Kingdom that is leased month-to-month. Selling, marketing, operational and research and development activities are conducted at all of our facilities. We believe that our facilities will be suitable and adequate for the present purposes and that the productive capacity in such facilities is substantially being utilized.

ITEM 3. LEGAL PROCEEDINGS

Whalen v. Tut Systems, Inc. et al

On October 30, 2001, we and certain of our current and former officers and directors were named as defendants in *Whalen v. Tut Systems, Inc. et al.,* Case No. 01-CV-9563, a purported securities class action lawsuit filed in the United States District Court for the Southern District of New York. An amended complaint was filed on December 5, 2001. A consolidated amended complaint was filed on April 19, 2002. The consolidated amended complaint asserts that the prospectuses from our January 29, 1999 initial public

offering and our March 23, 2000 secondary offering failed to disclose certain alleged actions by the underwriters for the offerings. The complaint alleges claims against us and certain of our current and former officers and directors under Section 11 of the Securities Act of 1933, as amended, and under Section 10(b) and Rule 10b-5 of the Securities Exchange Act of 1934, as amended, and alleges claims against certain of our current and former officers and directors under Sections 15 and 20(a) of the Securities Act. The complaint also names as defendants the underwriters for our initial public offering and secondary offering. Similar suits were filed in the Southern District of New York challenging over 300 other initial public offerings and secondary offerings conducted in 1999 and 2000. Therefore, for pretrial purposes, the *Whalen* action is being coordinated with the approximately 300 other suits before United States District Court Judge Shira Scheindlin of the Southern District of New York under the matter *In Re Initial Public Offering Securities Litigation.* The individual defendants in the *Whalen* action, namely, Nelson Caldwell, Salvatore D 'Auria and Matthew Taylor, were dismissed without prejudice by an October 9, 2002 Order of the Court, approving the parties' October 1, 2002 Stipulation of Dismissal. On February 19, 2003, the Court issued an Opinion and Order denying the Company' s motion to dismiss.

A stipulation of settlement for the claims against the issuer-defendants, including the Company, has been submitted to the Court on June 14, 2004, in the *In Re Initial Public Offering Securities Litigation*. The settlement is subject to a number of conditions, most of which are outside of our control, including approval by the Court. The underwriters named as defendants in the *In Re Initial Public Offering Securities Litigation* (collectively, the "underwriter-defendants"), including the underwriters named in the *Whalen* suit, are not parties to the stipulation of settlement.

The stipulation of settlement provides that, in exchange for a release of claims against the settling issuer-defendants, the insurers of all of the settling issuer-defendants will provide a surety undertaking to guarantee plaintiffs a $1 billion recovery from the non-settling defendants, including the underwriter-defendants. The ultimate amount, if any, that may be paid on behalf of the Company will therefore depend on the final terms of the settlement, including the number of issuer-defendants that ultimately participate in the final settlement, and the amounts, if any, recovered by the plaintiffs from the underwriter-defendants and other non-settling defendants.

In the event that all or substantially all of the issuer-defendants participate in the final settlement, the amount that may be paid to the plaintiffs on behalf of the Company could range from zero to approximately $3.5 million, depending on plaintiffs' recovery from the underwriter-defendants and from other non-settling parties. If the plaintiffs recover at least $1 billion from the underwriter-defendants, no settlement payments would be made on behalf of the Company under the proposed terms of the settlement. If the plaintiffs recover less than $1 billion, we believe that our insurance will likely cover some or all of our share of any payments towards satisfying plaintiffs' $1 billion recovery deficit. Management estimates that its range of loss relative to this matter is zero to $3.5 million. Presently there is no more likely point estimate of loss within this range. As a consequence of the uncertainties described above regarding the amount we will ultimately be required to pay, if any, as of December 31, 2004, we have not accrued a liability for this matter.

We are subject to other legal proceedings, claims and litigation arising in the ordinary course of business. Our management does not expect that the ultimate costs to resolve these matters will have a material adverse effect on our consolidated financial position, results of operations, or cash flows.

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

No matters were submitted to a vote of security holders during the quarter ended December 31, 2004.

PART II

ITEM 5. MARKET FOR THE REGISTRANT' S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock has been quoted on the Nasdaq National Market under the symbol "TUTS" since our initial public offering in January 1999. The following table sets forth, for the periods indicated, the low and high closing sales prices per share of the common stock by quarter for 2003 and 2004, as reported on The Nasdaq National Market. Such quotations represent inter-dealer prices without retail markup, markdown or commission and may not necessarily represent actual transactions.

	High	Low
2003		
First Quarter	$ 1.60	$ 1.23
Second Quarter	4.65	1.45
Third Quarter	5.96	2.94
Fourth Quarter	6.66	4.47
2004		
First Quarter	7.49	3.83
Second Quarter	4.66	2.41
Third Quarter	3.54	1.69
Fourth Quarter	4.25	2.46

On February 1, 2005 the last reported sale price of our common stock on the Nasdaq National Market was $3.69 per share. As of February 1, 2005, there were 25,181,610 shares of our common stock outstanding and approximately 268 holders of record of our common stock.

We have not paid dividends in the past and we intend to retain earnings, if any, and will not pay dividends in the foreseeable future. Any future determination to pay dividends will be at the discretion of the board of directors and will be dependent upon our financial condition, results of operations, capital requirements, general business conditions and such other factors as our board of directors may deem relevant.

ITEM 6. SELECTED FINANCIAL DATA

The following table presents our selected consolidated financial data for, and as of the end of, each of the periods indicated. The selected consolidated financial data for, and as of the end of, the fiscal years ended December 31, 2000, 2001, 2002, 2003 and 2004 are derived from our audited consolidated financial statements. The selected consolidated financial data are not necessarily indicative of the results that may be expected for any future period. The selected consolidated financial data should be read in conjunction with "Management' s Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and notes included elsewhere in this report.

	Fiscal Year Ended December 31,				
	2000	2001	2002(5)	2003(5)	2004(5)
	(in thousands, except per share data)				
Statement of Operations Data:					
Total revenues	$ 71,991	$ 13,748	$ 9,371	$ 32,192	$ 24,992
Cost of goods sold	69,983(3)	40,489(2)	13,909(1)	15,646	16,980
Gross profit (loss)	2,008	(26,741)	(4,538)	16,546	8,012
Operating expenses					
Sales and marketing	19,945	12,413	8,695	7,479	8,096
Research and development	17,149	15,044	12,337	7,909	7,278
General and administrative	34,487(4)	10,148	5,060	4,476	4,336
Restructuring costs	–	2,311	9,147	292	—
In-process research and development	800	1,160	562	–	–
Impairment of intangible assets	–	32,551	–	128	202
Amortization of intangible assets	7,623	8,085	1,304	1,809	1,524
Total operating expenses	80,004	81,712	37,105	22,093	21,436
Loss from operations	(77,996)	(108,453)	(41,643)	(5,547)	(13,424)
Impairment of certain equity investments	(3,100)	–	(592)	–	–
Gain on sale of investments	–	–	–	–	125
Interest and other income (expense), net	6,998	4,127	610	30	(161)
Net loss	(74,098)	(104,326)	(41,625)	(5,517)	(13,460)
Net loss per common share attributable to common stockholders, basic and diluted	$ (4.98)	$ (6.39)	$ (2.45)	$ (0.28)	$ (0.63)
Shares used in computing net loss per share attributable to common stockholders, basic and diluted	14,866	16,326	16,957	19,996	21,392

	December 31,				
	2000	2001	2002	2003	2004
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash and cash equivalents	$ 102,614	$ 49,367	$ 25,571	$ 14,370	$ 12,440
Working capital	110,920	51,484	24,396	21,815	19,385
Total assets	205,588	78,992	39,729	42,771	27,965
Long-term debt	–	–	3,262	3,523	3,816
Total stockholders' equity	166,173	66,096	28,231	23,655	19,378

(1) Includes reserves for excess and obsolete inventory of $7,125.

(2) Includes reserves for excess and obsolete inventory of $34,237.

(3) Includes provision for loss on purchase commitments and abandoned products of $27,223.

(4) Includes provision for doubtful accounts of $22,546.

(5) Includes effect of acquisition of VideoTele.com on November 7, 2002.

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

The section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" set forth below contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. When used herein, the words "anticipates," "believes," "continue," "could," "estimates," "expects," "intends," "may," "plans," "seeks," "should," "will" or the negative of these terms or similar expressions are generally intended to identify forward-looking statements. Because these forward-looking statements involve risks and uncertainties, there are important factors that could cause actual results to differ materially from those expressed or implied by these forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. These forward-looking statements reflect current views of our management with respect to future events and are subject to these and other risks, uncertainties and assumptions. As a result, actual results may differ materially from the forward-looking statements contained herein. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by this paragraph.

Overview

Our Business

We design, develop, and sell digital video processing systems that enable telephony-based service providers to deliver broadcast quality digital video signals across their networks. We refer to these systems as digital TV headends or video content processing systems. We also offer digital video processing systems that enable private enterprise and government entities to transport video signals across satellite, fiber, radio, or copper facilities for surveillance, distance learning, and TV production applications.

We also offer broadband transport and service management products that enable the provisioning of high speed Internet access and other broadband data services over existing copper networks within hotels and private campus facilities.

Our History

Prior to November 2002, most of our sales were derived from our broadband transport and service management products. In 2000 and 2001, we acquired three companies (FreeGate Corporation, Xstreamis Limited and ActiveTelco, Inc.) and the assets from two other companies (OneWorld Systems, Inc. and ViaGate Technologies, Inc.) in order to expand our sales of broadband transport and service management products. However, the significant downturn in the world economy in general, and the telecommunications market in particular, beginning in late 2000 had a severe and sustained adverse effect on our business, financial condition and results of operations. Our sales of broadband transport and service management products decreased substantially beginning in 2001, which required us to take a number of restructuring efforts and incur significant impairment and other charges in order to realign our cost structure in light of the economic environment. For the period January 1, 2001 through December 31, 2004, we incurred an aggregate of $32.6 million in intangible asset impairment charges and $11.5 million in restructuring charges. In 2003, sales from our broadband transport and service management products stabilized, as we began to experience an improvement in sales of broadband transport and service management products to the hospitality industry.

With our November 2002 acquisition of Tektronix' s subsidiary VTC, we extended our product offerings to add video processing systems for digital TV headends and for the transmission of video signals over private and government networks. The acquisition of VTC resulted in significant changes in our business, including: (1) changes in our organizational structure and employee staffing; (2) relocation of our administrative offices, executive offices (as of January 2004) and a significant portion of our operations from Pleasanton, California to Lake Oswego, Oregon, the prior headquarters of VTC; (3) an expansion of our sales and marketing efforts to include VTC products; and (4) a reprioritization of our research and development efforts to focus on products associated with VTC product lines. With our acquisition of VTC, sales of video processing systems now represent a majority of our total revenues and will provide most of our growth

opportunities in the foreseeable future.

We earn revenue primarily by selling video content processing systems both directly and through resellers to telecommunications service providers. We also earn revenue by selling video transmission systems to TV broadcasters, government agencies and educational institutions, and by selling broadband transport and service management products directly and through distributors to the hospitality industry and to owners of private multi-tenant campus facilities.

Although international sales are still a material portion of our total sales, since our acquisition of VTC, international sales have represented a smaller percentage of our overall business relative to prior years. During the years ended December 31, 2002, 2003 and 2004, international sales represented 43.0%, 18.4% and 23.3% of our total sales.

Material Trends and Uncertainties

We pay close attention to and monitor various trends and uncertainties about our business. There is a growing demand by independent operating telephone companies to offer video services to their customer base. According to a report released by InStat/MDR in April 2003, the number of telco video subscribers worldwide will increase from 572,000 at the end of 2003 to over 19.0 million by the end of 2007. While this growing market presents opportunities to serve a larger customer base, we are also seeing the emergence of intense competition as more companies compete to sell digital TV headend products. We expect this market space will continue to become more competitive in the future. As we begin to target larger telco customers, we expect to compete with larger public companies, including Harmonic, Motorola and Tandberg Television. Our immediate competitors in the digital TV headend markets are primarily small private companies that are focused on a more narrow product line than ours and thereby may be able to devote substantially more targeted resources to developing, marketing and selling new products than we are able to. In addition, these companies may become targets for acquisition by larger companies, in which case we would face competitors with substantially greater name recognition, and technical, financial and marketing resources than we have. This increased competitive pressure may adversely affect the amount and timing of our revenue in future periods, thereby making it more difficult for us to accurately forecast our future revenue, and may also adversely affect our product and service margins.

The emergence of new technologies to serve the digital TV headend market means that we must continue to invest in these new technologies to maintain our market position. Digital subscriber line, or DSL, technologies use sophisticated signal blending techniques to transmit data through copper wires. The limitations on the amount of data that can be transmitted in a fixed amount of time (such limitations are referred to as bandwidth) and the distance data may be transmitted using copper wire constrain both the number of video channels that may be delivered simultaneously and the number of customers that are reachable from a telco central office over a DSL network. Emerging advancements in video compression technology will soon enable high quality video streams to be transported at lower data transfer rates than currently deployed. These emerging compression advancements also introduce the possibility of delivering high-definition television over bandwidth constrained asymmetric DSL, or ADSL, lines for the first time. ADSL is a new technology that allows more data to be transmitted over existing copper telephone lines compared with standard DSL. Additionally, DSL advancements are emerging that expand the available bandwidth from the telco to the subscriber thereby supporting higher DSL data transfer rates over longer distances. As our products continue to incorporate these new technological advancements, we expect the demand for our products will increase because our products will enable more telcos to reach more of their customers with a greater number of video channels. However, because of the increasing competition in the markets in which we compete, regardless of our revenue and product and service margins in future periods, we will have to continue to devote significant resources to research and development in future periods in order to continue to offer our customers competitive products that incorporate these emerging technologies. As a consequence, we expect that our research and development expenses will increase in 2005 compared to our spending in 2004.

As we continue to capitalize on the growing number of telcos deploying video services in the United States and abroad, we will also have to continue to aggressively market our new and existing products and expand our marketing and sales efforts domestically and internationally. Nevertheless, our operations have been and will continue to be subject to pressure from weakness in the overall technology sector as well as the digital media industry, the continued lengthening of our sales cycle and delays of customer purchasing decisions, which may continue to reduce our expected revenue. We believe that the lengthening of the purchase decision by prospective customers has occurred and may continue because of several factors that are affecting the overall digital TV headend market. Such factors include, but are not limited to, the delays in the introduction of advanced compression technologies and set top boxes early next year, the transition to more efficient data transmission technologies and the emergence of video signal encryption requirements. Nevertheless, given the opportunities offered by the growing number of telcos deploying video services and despite the length of the sales cycle, we expect our sales and marketing expenses to increase in 2005 compared to our spending in 2004.

Internal Controls and Disclosure Controls and Procedures

Evaluation of Fiscal Year 2003

Our Chief Executive Officer and Chief Financial Officer carried out an evaluation of the effectiveness of our disclosure controls

and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of December 31, 2003. This evaluation included various steps that our Chief Executive Officer and Chief Financial Officer undertook in an effort to ensure that our disclosure controls and procedures are designed to ensure that information required to be disclosed in our SEC reports was recorded, processed, summarized and reported within the time periods specified by the SEC and accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely discussions regarding required disclosure. This evaluation also included consideration of our internal controls and procedures for the preparation of our financial statements.

In January 2004 in connection with the completion of its audit of our financial statements for the year ended December 31, 2003, PricewaterhouseCoopers LLP, the Company' s independent auditors, advised management and the audit committee of the Board of Directors that it had identified deficiencies in our internal controls and processes relating to inventory management and reporting that it considered to be material weaknesses, as defined by Statement on Auditing Standards No. 60, "Communication of Internal Control Related Matters Noted in an Audit." The material weaknesses that PricewaterhouseCoopers identified related to inventory controls and the accounts payable process for the Company' s Videotele.com business, which the Company acquired in November 2002. Specifically:

1. Our internal controls were inadequate to properly record our inventory quantities in an accurate and timely manner; and

2. Our accounts payable process failed to adequately reconcile our accounts payable records with suppliers' records, considering what the suppliers had shipped to us prior to period end.

While these material weaknesses had an immaterial effect on our reported results, they nevertheless constituted deficiencies in our disclosure controls. In light of these material weaknesses and the requirements enacted by the Sarbanes-Oxley Act of 2002 and the related rules and regulations adopted by the SEC, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2003, our disclosure controls and procedures needed improvement and were not effective. Despite those deficiencies in our disclosure controls, management believed that there were no material inaccuracies, or omissions of material facts necessary to make the statements not misleading in light of the circumstances under which they were made, in the Form 10-K for our fiscal year ended December 31, 2003.

At the time of our acquisition of the Videotele.com business in November 2002, we had in place disclosure controls and procedures and processes for our existing business (i.e., our pre-November 2002 business) that our CEO and CFO at the time believed to be sufficient to record, process, summarize and report information required to be reported within the time periods specified by the SEC. Likewise, we had in place internal controls that our CEO and CFO believed at the time of the VTC acquisition to be sufficient to "provide reasonable assurance regarding the reliability of financial reporting and preparation of financial statements for external purposes in accordance with generally accepted accounting principles."

Since December 31, 2002, we continued to review our disclosure controls and procedures and internal controls periodically in connection with our Form 10-Q filings. Throughout 2003, our CEO and CFO continued to believe that our disclosure controls and procedures and internal controls allowed us to provide all material and necessary disclosure in a timely manner, as required by Exchange Act and the applicable rules thereunder.

In January 2004, during the audit of our financial statements for the year ended December 31, 2003, PricewaterhouseCoopers discovered the material weaknesses noted above and brought these weaknesses to our attention. Based on discussions with PricewaterhouseCoopers and the audit committee of our Board of Directors, we worked throughout our year-end 2003 accounting close and audit to identify the nature, scope and materiality of these weaknesses in our internal controls and their impact on our fiscal year 2003 financial statements and to determine the extent to which these internal control weaknesses might adversely affect our disclosure controls and procedures. Based on further detailed review of our internal controls as they relate to inventory and accounts payable during the fourth quarter of fiscal 2003, we determined that the accounts payable process had failed to record certain liabilities associated with VTC products that we purchased, principally from our contract manufacturer and certain other suppliers. We quantified this internal control weakness relating to accounts payable recordation by reconciling our records to that of our contract manufacturer and reviewing our liabilities with other vendors. We quantified the inventory process control weakness by taking complete physical inventories at each VTC inventory location and reconciling the results to our records. Upon completion of our analysis and testing, we identified an additional charge of approximately $34,000 to cost of goods sold related to the internal control weaknesses identified above. We recorded this charge prior to issuing our financial statements for the year ended December 31, 2003. In addition to our review of the financial statements for the year ended December 31, 2003, we re-confirmed that our accounts payable recordation and inventory controls were effective for the year ended December 31, 2002.

During our review of these internal controls weaknesses, we identified the cause of these internal control weaknesses to be the result of prior VTC accounting staff turnover that occurred during the first quarter of 2003. During this quarter, key accounting staff of VTC left the Company without sufficient time to transition all of the internal controls and institutional knowledge to our remaining finance and accounting staff.

In addition to identifying the above two internal control weaknesses relating to inventory and the accounts payable process, we

also tested our other internal controls to determine whether there were other such material weaknesses aside from the inventory and accounts payable weaknesses mentioned above that affected our financial statements for the fiscal year ended December 31, 2003. In particular, we tested our other internal controls by reviewing processes, analytical reviews and substantive testing that included other third-party confirmations and by reviewing activity subsequent to year-end 2003. Based on these tests, we did not identify any other material weaknesses in internal controls. Therefore, our CEO and CFO believed at the time of the original filing of the Form 10-K for our fiscal year ended December 31, 2003 on February 2, 2004 that they had reasonable grounds to conclude that the weaknesses in internal controls related solely to those items mentioned above and resulted in an immaterial charge of approximately $34,000.

Based on their review of our internal controls as described above, our CEO and CFO also assessed our disclosure controls and procedures for the fiscal year ended December 31, 2003. Our CEO and CFO believed at the time of the original filing of the Form 10-K for our fiscal year ended December 31, 2003 that they had reasonable grounds to conclude that, other than the inventory and accounts payable weaknesses that PricewaterhouseCoopers had identified, there were no other material weaknesses in our disclosure controls and procedures and that the information required to be reported in the Form 10-K was recorded, processed, summarized and reported within the time periods specified by the applicable Exchange Act rules.

In order to ensure that we have eliminated the two weaknesses in our internal controls for purposes of future reporting, we have taken significant efforts to improve our processes and procedures as they relate to inventory reporting and accounts payable reconciliation. The audit committee has taken an active role in these efforts, including overseeing management' s implementation of corrective measures. With respect to inventory management, we perform physical inventory counts at least at the end of each quarter. We have implemented improved inventory systems and accounting controls and have hired an additional full-time staff accountant to account for and control our inventory accounting, given our operations manager company-wide responsibility for inventory management, have expanded our inventory receiving process to include remote locations, as appropriate, and now reconcile inventory to each customer order and have reiterated to key operations and accounting personnel the importance of proper inventory management and control. Regarding accounts payable reconciliation, we now confirm our key accounts payable balances with our vendors and reconcile the confirmations to our accounting records on a quarterly basis.

Evaluation of Fiscal Year 2004

Our Chief Executive Officer and Chief Financial Officer conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as of December 31, 2004. Based on this evaluation, they concluded as of December 31, 2004 that our disclosure controls and procedures were effective. There were no changes in our internal control over financial reporting which occurred during the fourth quarter of fiscal year 2004 and which have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Definitions for Discussion of Results of Operations

Our discussion of our results of operations focuses on the following items from our income statement: Total revenues consists of product sales, and license and royalty fees. Product revenue consists of sales of our video processing systems, which includes both digital TV headend and video transmission systems. Product revenue also consists of revenue from our broadband transport and service management products. License and royalty fees consist of non-refundable license fees and royalties received by us for products sold by our licensees. Since our acquisition of VTC, a large part of our revenue has been associated with the sale of digital TV headends. Furthermore, each individual headend sale has represented a significant portion of our revenue. If we were to sell even one less system than our forecasted number of headend sales, our revenue would be materially impacted. As we did not enter into any new license or royalty agreements during 2002, 2003 or 2004, we expect minimal future license and royalty revenue.. Cost of goods sold, or COGS, consists of costs related to raw materials, contract manufacturing, personnel, overhead, test and quality assurance for products, and the cost of licensed technology included in our products. Raw materials, contract manufacturing and licensed technology are the principal elements of COGS and vary directly with product sales. Sales and marketing expense consists primarily of selling and marketing personnel costs, including sales commissions, travel, trade shows, promotions and outside services. Research and development expense consists primarily of personnel and facilities costs, contract consultants, outside testing services, and equipment and supplies associated with enhancing existing products and developing new products. General and administrative expense consists primarily of personnel costs for administrative officers and support personnel, professional services and insurance expenses. Amortization of intangible assets consists primarily of expenses associated with the amortization of technology and patents related to prior years' acquisitions.

Results of Operations

Years Ended December 31, 2002, 2003 and 2004.

Our acquisition of VTC has had a significant impact on every aspect of our financial statements since November 2002. This impact is reflected in the following discussion of our operating results. This should be considered when evaluating our period-to-period

comparisons of 2003 and 2004 relative to years prior to 2003.

The following table sets forth items from our statements of operations as a percentage of total revenues for the periods indicated:

	Year Ended December 31,		
	2002	**2003**	**2004**
Total revenues	100.0%	100.0%	100.0%
Cost of goods sold	148.4	48.6	67.9
Gross profit (loss)	(48.4)	51.4	32.1
Operating expenses:			
Sales and marketing	92.8	23.2	32.4
Research and development	131.7	24.6	29.1
General and administrative	54.0	13.9	17.3
Restructuring costs	97.6	0.9	—
In-process research and development	6.0	–	–
Impairment of intangible assets	–	0.4	0.8
Amortization of intangible assets	13.9	5.6	6.1
Total operating expenses	396.0	68.6	85.7
Loss from operations	(444.4)	(17.2)	(53.6)
Impairment of certain equity investments	(6.3)	–	–
Gain on sale of investments	–	–	0.5
Interest and other income (expense), net	6.5	0.1	(0.6)
Net loss	(444.2)%	(17.1)%	(53.7)%

Total Revenues. For the year ended December 31, 2004, our total revenue decreased by 22.3% to $25.0 million from $32.2 million for the year ended December 31, 2003. We operate in a single business segment across two related markets. We measure our product revenue by our two product lines only and therefore are unable to further quantify the impact of individual products on our revenue. During this same period, our product revenue from video processing systems decreased by 24.7% to $18.0 million from $23.9 million for the year ended December 31, 2003. During 2004, we experienced a slowing demand for our video processing systems from independent operating telephone companies compared to 2003. We believe the decrease in video processing systems product revenue was primarily due to the adverse effect of several digital TV headend sales not closing during the period as expected. We continue to experience a variety of factors that are causing prospective customers to delay their purchase decisions. Certain prospective customers have indicated to us that factors causing these delays include, but are not limited to, their anticipation of the introduction and general availability of advanced compression technologies later in 2005, customers' decisions to use more efficient data transmission technologies (decisions that some of our customers wish to make before they commit to purchasing headends) and customers' decisions about using emerging video signal encryption technologies (decisions that some of our customers wish to make before they commit to purchasing headends). We expect sales of video processing systems to remain unchanged until the expected introduction during the first half of 2005 of new products containing advanced compression technologies, including MPEG-4. Product revenue from the sale of our broadband transport and service management products decreased by 15.7% to $7.0 million in 2004 from $8.3 million in 2003. The decrease in broadband transport and service management products revenue was primarily the result of customers choosing competing products that transmit data via wireless data transmission technologies instead of our products (which transmit data over telephone wires). Accordingly, we expect sales of broadband transport and service management products to remain unchanged until the expected new product introductions during the first half of 2005. For the year ended December 31, 2004, our license and royalty revenue decreased by 93.2% to $50,000 from $0.7 million for the year ended December 31, 2003. As we did not enter into any new license or royalty agreements during 2002, 2003 or 2004, we expect minimal future license and royalty revenue.

For the year ended December 31, 2003, our product revenue increased by 243.5% to $32.2 million from $9.4 million for the year ended December 31, 2002. This $22.9 million increase in product revenue was due solely to the sale of our video processing systems. Fiscal year 2003 was the first full year that included revenue from products associated with our VTC acquisition in November 2002. For the year ended December 31, 2003, our license and royalty revenue decreased by 9.0% to $0.7 million from $0.8 million for the year ended December 31, 2002.

Cost of Goods Sold. For the year ended December 31, 2004, our cost of goods sold increased by 8.3%, or $1.3 million, to $17.0 million from $15.6 million for the year ended December 31, 2003. Included in cost of goods are the effects of changes in our reserves for excess and obsolete inventories. These reserves were primarily related to lower of cost or market adjustments for raw materials and reserves for finished

goods in excess of what we reasonably expected to sell in the foreseeable future. During 2004, cost of goods sold included a charge for an increase in our reserves for excess and obsolete inventories of $1.0 million. This charge was primarily associated with our video processing systems products. In 2003, cost of goods sold was reduced as a result of a decrease in our reserves for excess and obsolete inventories of $1.5 million. The decrease in our reserves for excess and obsolete inventories in 2003 was because we were able to sell certain products for which we had originally set aside reserves in prior years. In addition to this $2.5 million increase included in costs of goods from the change in reserves for excess and obsolete inventories from 2003 to 2004, other significant increases in cost of goods sold included increases in labor expenses of $0.5 million, outside contractor expenses of $0.2 million and freight costs of $0.2 million. Partially offsetting these increases was a decrease in material cost of $2.4 million. Our gross profit declined in 2004 compared to 2003 due to decreased sales volume for both our video processing systems and our broadband transport and service management products. The cost increases previously mentioned, including the increase in our reserves for excess and obsolete inventories also negatively affected our gross profit in 2004 when compared to 2003.

For the year ended December 31, 2003, our cost of goods sold increased by 12.5% to $15.6 million from $13.9 million for the year ended December 31, 2002. Cost of goods sold increased by $1.7 million between 2002 and 2003, primarily due to costs associated with increased product sales, particularly from sales related to video processing systems of $11.3 million, partially offset by the effects of changes in our reserves for excess and obsolete inventories of $8.6 million and decreases in costs associated with sales of our broadband transport and service management products of $1.0 million. In 2003, we reduced our reserves for excess and obsolete inventories by $1.5 million because we were able to sell certain products for which we had originally set aside reserves in prior years. At the time these reserves were established, we expected a decline in sales due to the decline in the telecommunications market and general economic conditions at the time. These changes in reserves are reflected in cost of goods sold. Our gross profit improved in 2003 compared to 2002 due to the increased sales volume relating to VTC products resulting in a gross margin increase of $11.5 million, reduction in cost of goods sold for our broadband transport and service management products of $1.0 million and the effect of changes in our reserves of $8.6 million.

Sales and Marketing. For the year ended December 31, 2004, our sales and marketing expenses increased by 8.2% to $8.1 million from $7.5 million for the year ended December 31, 2003. The increase of $0.6 million in sales and marketing expense was due to a year-over-year increase in personnel related costs of $0.2 million due to additional headcount added during the year, $0.1 million for promotional and advertising costs, $0.2 million for facilities and infrastructure expenses and $0.1 million in outside services expenses.

For the year ended December 31, 2003, our sales and marketing expenses decreased by 14.0% to $7.5 million from $8.7 million for the year ended December 31, 2002. The decrease of $1.2 million in sales and marketing expense was due to a year-over-year decrease of $0.4 million of personnel related costs, a $0.3 million decrease in depreciation expense and a $0.5 million decrease in facilities and infrastructure expenses.

Research and Development. For the year ended December 31, 2004, our research and development expense decreased by 8.0% to $7.3 million from $7.9 million for the year ended December 31, 2003. The $0.6 million decrease in our research and development expense was due to a year-over-year decrease in personnel related costs. Our capital expenditures for research and development were $1.1 million in 2003 and $0.1 million in 2004.

For the year ended December 31, 2003, our research and development expense decreased by 35.9% to $7.9 million from $12.3 million for the year ended December 31, 2002. The $4.4 million decrease in our research and development expense was primarily due to a year-over-year decrease of $1.8 million in personnel related costs, a $1.2 million decrease in project materials costs and a $1.3 million decrease in facilities and infrastructure expenses. We continued to reduce research and development expenses in 2003 to bring them into better alignment with our revenues at that time.

General and Administrative. For the year ended December 31, 2004, our general and administrative expense decreased by 3.1% to $4.3 million from $4.5 million for the year ended December 31, 2003. The $0.2 million decrease in our general and administrative expense was primarily due to a decrease in personnel related costs of $0.2 million, lower insurance costs of $0.3 million offset by higher relocation costs of $0.1 million and outside service costs of $0.4 million.

For the year ended December 31, 2003, our general and administrative expense decreased by 11.5% to $4.5 million from $5.1 million for the year ended December 31, 2002. The $0.6 million decrease in our general and administrative expense included decreases of $0.4 million in personnel expenses, $0.6 million in depreciation expense, $0.7 million in professional services expenses, and $0.6 million in insurance. Partially offsetting these year-over-year expense reductions was the benefit of a $2.3 million bad debt recovery in 2002 that was not repeated in 2003. We recorded as an expense $10.7 million relating to our pending settlement of certain litigation matters. We also recorded an equal and offsetting gain to reflect the fact that, as of December 31, 2003, our insurance carriers had agreed to pay the settlement amounts for those litigation matters.

Restructuring Costs. We incurred restructuring costs of $0.3 million for the year ended December 31, 2003 and $9.1 million for

the year ended December 31, 2002. We did not incur any restructuring costs for the year ended December 31, 2004.

In August 2003, we implemented a restructuring program that included a workforce reduction and relocation. This restructuring program resulted in restructuring costs of $0.3 million in the third quarter of 2003. The restructuring costs consisted of $0.2 million in workforce reduction charges related primarily to severance and fringe benefits and $0.1 million in relocation expenses. As a result of this 2003 restructuring, we reduced our workforce by approximately 11.0%.

In August 2002, we implemented a restructuring program that included a workforce reduction, closure of our New Jersey research and development facility, and disposal of certain of our fixed assets. As a result of this restructuring program, we recorded restructuring costs of $0.9 million in the third quarter of 2002. These restructuring costs consisted of $0.5 million in workforce reduction charges relating primarily to severance and fringe benefits and $0.4 million relating to closure of the New Jersey facility. In November 2002, we undertook further restructuring efforts that included an additional workforce reduction, the termination of our former headquarter' s lease in Pleasanton, California and the disposal of certain fixed assets. As a result of these November 2002 efforts, we recorded restructuring costs of $8.3 million, comprising severance and employee outplacement expenses of approximately $0.6 million, $2.4 million to terminate our Pleasanton, California lease early, $2.3 million for abandonment of leasehold improvements, $2.4 million for abandonment of fixed assets and $0.5 million to terminate various equipment leases. In aggregate, we reduced our workforce by approximately 53.0% in fiscal 2002.

In-Process Research and Development. During the years ended December 31, 2004 and 2003 we did not incur any expenses related to in-process research and development. Amounts expensed as in-process research and development were $0.6 million in 2002.

For the year ended December 31, 2002, our in-process research and development expense of $0.6 million was solely related to in-process research and development purchased from VTC in November 2002. We expensed the purchased in-process technology upon acquisition because technological feasibility of the technology had not been established and there were no future alternative uses for the technology. We estimated the in-process technology percentage of completion to be 20%, 40% and 50% for the Astria, M2 and software product lines, respectively. We determined the value of this in-process technology by estimating the cost to develop the purchased in-process technology into a commercially viable product, estimating the net cash flows from the sale of the product after the completion of the in-process technology and discounting the net cash flows back to their present value using a risk-weighted discount rate of 30%. Research and development costs to bring in-process technology from VTC to technological feasibility were completed in 2003.

Impairment of Intangible Assets. During the first quarter of 2004, we determined that certain of the technology acquired as part of the purchase of the ViaGate Technology assets had become impaired. As a result, we recorded an impairment charge of $0.2 million to write off the book value of the intangible assets associated with this technology. During the second quarter of 2003, we recorded an impairment charge of $0.1 million to write off the book value of certain technology acquired as part of the acquisition of the assets of ViaGate. There were no such impairments for the year ended December 31, 2002.

Amortization of Intangible Assets. Amortization of intangible assets is comprised of intangibles related to the acquisitions of Vintel in 1999, FreeGate, OneWorld assets and Xstreamis in 2000, ActiveTelco in 2001, and VTC in 2002. The remaining intangible assets subject to amortization from these acquisitions consist primarily of completed technology and patents. For the year ended December 31, 2004, amortization of intangible assets decreased 15.8% to $1.5 million from $1.8 million for the year ended December 31, 2003. For the year ended December 31, 2003, amortization of intangible assets increased by 38.7% to $1.8 million from $1.3 million for the year ended December 31, 2002. The $0.3 million decrease in 2004 when compared with 2003 was the result of an intangible asset becoming fully amortized in 2004. The $0.5 million increase in 2003 when compared with 2002 was primarily the result of a full year of the additional amortization associated with the intangible assets arising from our VTC acquisition in November 2002.

Gain on sale of Investments. The gain on sale of investments for the year ended December 31, 2004, resulted from the sale of certain equity investments that had been written down to zero in a previous year.

Impairment of Certain Equity Investments. Impairment of certain equity investments consisted of the recognition of expense related to the write-off of $0.6 million invested in one privately-held company during the year ended December 31, 2002. The value of our investment was impaired due to uncertainty associated with the on-going viability of this business in the current network infrastructure industry. There were no such impairments of our equity investments for the years ended December 31, 2003 and 2004.

Interest and Other Income, Net. Interest and other income, net consists primarily of interest income and expense and foreign currency exchange gains and losses. For the year ended December 31, 2004, our interest and other income, net decreased to an expense of $0.2 million from an income of $30,000 for the year ended December 31, 2003. The decrease was due to interest expense associated with the $3.8 million note issued in connection with our purchase of VTC in November 2002. For the year ended December 31, 2003, our interest and other income, net decreased to $30,000 from $0.6 million for the year ended December 31, 2002. The decrease in 2003 of $0.6 million compared with 2002 was primarily the result of lower interest rates on lower average cash balances and increased interest expense associated with the note issued in connection with our purchase of VTC.

Liquidity and Capital Resources

Cash and cash equivalents totaled $12.4 million at December 31, 2004, compared with cash and cash equivalents of $14.4 million at December 31, 2003, reflecting a net reduction in cash and cash equivalents of $2.0 million.

Cash used in operating activities was $9.7 million for the year ended December 31, 2004, compared with $10.9 million for the year ended December 31, 2003. The reduction in cash used in operating activities was primarily due to a higher net loss in 2004 compared with 2003, which was partially offset by lower accounts receivable balances, lower accounts payable balances and a higher provision for excess and obsolete inventory in 2004, compared with the same period in 2003.

Additions to property and equipment were $1.2 million and $1.4 million in 2003 and 2004, respectively. In 2005 we expect capital expenditures to be comparable to 2004. We expect these capital expenditures to be funded from operations.

Cash provided by financing activities in 2004 consisted of $8.7 million from the issuance of 4.6 million additional common shares in a secondary offering and $0.5 million from the issuance of common stock related to the exercise of stock options and purchases made pursuant to the employee stock purchase plan.

The net decrease in cash and cash equivalents of $11.2 million during the year ended December 31, 2003, resulted primarily from our use of $10.9 million for operating activities and the purchase of property and equipment of $1.2 million. The net decrease in cash and cash equivalents from these uses was offset by $0.9 million in proceeds from the issuance of common stock related to the exercise of stock options and purchases made pursuant to the employee stock purchase plan of $0.1 million and $0.8 million related to the acquisition of VTC.

The following table sets forth our contractual obligations as of December 31, 2004:

Contractual obligations	Total	Payments due by period Less than 1 year	1-3 years	3-5 years	More than 5 years
Long-Term Debt Obligations	$ 3,816	$ –	$ –	$ 3,816	$ –
Operating Lease Obligations	810	731	79	–	–
Purchase Obligations	469	469	–	–	–
Total	$ 5,095	$ 1,200	$ 79	$ 3,816	$ –

We do not have any off balance sheet arrangements.

On September 23, 2004, we entered into a revolving asset based credit facility ("credit facility"), with Silicon Valley Bank ("the Bank"). This facility has a term of two years and expires on September 23, 2006. Borrowings under the credit facility are formula based and limited to the lesser of $7.0 million or an amount based on a percentage of eligible accounts receivable and eligible inventories. The interest rate on outstanding borrowings is equal to the bank' s prime rate, 5.25% as of December 31, 2004, plus 0.5%. The rate may increase by 1.0% if we do not meet certain financial covenants. The credit facility is secured by all of our assets, and contains various covenants. Based on the maximum percentages of eligible accounts receivable and eligible inventory levels, borrowings available under this facility were $4.7 million as of December 31, 2004. We had no outstanding borrowings under this credit facility at December 31, 2004.

As part of our acquisition of VTC from Tektronix in November 2002, we issued a note payable to Tektronix for $3.2 million, with repayment in sixty months, or by November 2007. The interest rate on this note is 8% and is compounded annually. Through January 31, 2006, the accrued interest is added to the principal balance of the note. Thereafter, we will pay accrued interest on this note commencing on January 31, 2006 and on each April 30, July 31 and October 31 thereafter until the principal balance is paid in full. Principal and accrued interest on the note payable is $3.8 million at December 31, 2004.

We have incurred substantial losses and negative cash flows from operations since inception. For the year ended December 31, 2004, we incurred a net loss of $13.5 million, negative cash flows from operating activities of $9.7 million, and have an accumulated deficit of $295.5 million.

In order to provide additional financial resources, we entered into an Agreement and Plan of Merger with CoSine Communications, Inc., or CoSine on January 7, 2005. The proposed merger will be a stock-for-stock transaction valued at approximately $24.1 million. Upon closing, we will issue approximately 6.0 million shares of our common stock to the shareholders of CoSine. We expect the transaction to result in net cash to Tut Systems of approximately $22.8 million, and is expected to close as soon as practicable following approval by the stockholders of both companies. We are acquiring CoSine primarily to provide additional liquidity. We will honor CoSine' s existing customers' support agreements, but do not expect to offer its products for sale to new customers. We will not have any additional employees or facilities as a result of the transaction.

The transaction is conditioned upon approval of the merger by the holders of a majority of the shares of CoSine common stock, and approval of the issuance of additional shares of common stock by the holders of a majority of the shares of Tut Systems common stock, as well as other customary closing conditions.

We believe that our cash and cash equivalents and availability under our credit facility as of December 31, 2004, are sufficient to fund our operating activities and capital expenditure needs for at least the next twelve months. In future periods, we generally anticipate that our working capital will begin to increase as a result of several factors, including our expectation that our revenue will increase and our net loss will decrease in 2005 as compared to 2004. Accordingly, we expect the amount of cash used to fund our operations to decrease in 2005. However, in the event that we do not meet our revenue and earnings expectations, we may require additional cash to fund our operations. Failure to generate positive cash flow in the future could have a material adverse effect on our ability to achieve our intended business objectives.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting periods. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We have identified the policies below as critical to our business operations and the understanding of our results of operations.

Revenue recognition. We generate revenue primarily from the sale of hardware products, including third-party products, through professional services, and through the sale of our software products. We sell products through direct sales channels and through distributors. Generally, product revenue is generated from the sale of video processing systems and components and the sale of broadband transport and service management products. Turnkey solution revenue is principally generated by the sale of complete end-to-end video processing systems that are designed, developed and produced according to a buyer' s specifications.

Product revenue is generated primarily from the sale of complete end-to-end video processing systems generally referred to as turnkey solutions. Turnkey solutions are multi-element arrangements, which consist of hardware products, software products, professional services and post contract support. Sales of turnkey solutions are classified as product revenue in the statement of operations.

Product revenue is also generated from the sale of video processing component products and the sale of broadband transport and service management products. We sell these products through our own direct sales channels and also through distributors.

Our revenue recognition policies for turnkey solutions are in accordance with SOP 97-2, *Software Revenue Recognition,* as amended, which is the authoritative guidance for recognizing revenue on software transactions and transactions in which software is more than incidental to the arrangement. SOP 97-2 requires that revenue recognized from software arrangements be allocated to each element of the arrangement based on the relative fair values of the elements, such as hardware, software products, maintenance services, installation, training or other elements. Under SOP 97-2, the determination of fair value is based on objective evidence that is specific to the vendor. If such evidence of fair value for any undelivered element of the arrangement does not exist, all revenue from the arrangement is deferred until such time that evidence of fair value does exist or until all elements of the arrangement are delivered, subject to certain limited exceptions set forth in SOP 97-2, as amended. SOP 97-2 was amended in February 1998 by SOP 98-4, *Deferral of the Effective Date of a Provision of SOP 97-2* and was amended again in December 1998 by SOP 98-9, *Modification of SOP 97-2, Software Revenue Recognition, with Respect to Certain Transactions*. Those amendments deferred and then clarified, respectively, the specification of what was considered vendor specific objective evidence of fair value for the various elements in a multiple element arrangement.

In the case of software arrangements that require significant production, modification or customization of software, which encompasses all of our turnkey arrangements, SOP 97-2 refers to the guidance in SOP 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts.* We recognize revenue for all turnkey arrangements in accordance with SOP 97-2 and SOP 81-1. Excluding the PCS element of the multi-element arrangement, for which we have established vendor specific objective evidence of fair value (as defined by SOP 97-2), revenue from turnkey solutions is generally recognized using the percentage-of-completion method, as stipulated by SOP 81-1. The percentage-of-completion method reflects the portion of the anticipated contract revenue that has been earned that is equal to the ratio of labor effort expended to date to the anticipated final labor effort, based on current estimates of total labor effort necessary to complete the project. Revenue from the PCS element of the arrangement is deferred at the point of sale and recognized over the term of the PCS period. Generally, the terms of the turnkey solution sales provide for billing of approximately 90% of the contract value prior to the time of delivery to the customer site, with an additional approximately 9% of the contract value billed upon substantial completion of the project and the balance upon customer acceptance. The contractual arrangements relative to turnkey solutions include customer acceptance provisions. However, such provisions are generally considered to be incidental to the arrangement in its entirety because customers are fully obligated with respect to approximately 99% of the contract value irrespective of whether acceptance occurs or not.

For direct sales of video processing systems component products not included as part of turnkey solutions and the direct sale of broadband transport and service management products, we recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred, the fee is fixed or determinable, and collection is reasonably assured.

Significant management judgments and estimates must be made in connection with the measurement of revenue in a given period. We follow specific and detailed guidelines for determining the timing of revenue recognition. At the time of the transaction, we assess a number of factors, including specific contract and purchase order terms, completion and timing of delivery to the common-carrier, past transaction history with the customer, the creditworthiness of the customer, evidence of sell-through to the end user, and current payment terms. Based on the results of the assessment, we may recognize revenue when the products are shipped or defer recognition of revenue until evidence of sell-through occurs and cash is received. In order to recognize revenue, we must also make a judgment regarding collectibility. Management' s judgment of collectibility is applied on a customer-by-customer basis pursuant to our credit review policy. We sell to customers for which there is a history of successful collection and to new customers for which such history may not exist. New customers are subject to a credit review process, which evaluates the customers' financial position and ability to pay. New customers are typically assigned a credit limit based on a review of their financial position. Such credit limits are only increased after a successful collection history with the customer has been established. If it is determined from the outset of an arrangement that collectibility is not probable based upon our credit review process, no credit is extended and revenue is recognized on a cash-collected basis.

We also maintain accruals and allowances for all cooperative marketing and other programs, as necessary. Estimated sales returns and warranty costs are based on historical experience and are recorded at the time revenue is recognized, as necessary. Our products generally carry a one year warranty from the date of purchase. To date, warranty costs have been insignificant to the overall financial statements taken as a whole.

License and royalty revenue consists of nonrefundable up-front license fees, some of which may offset initial royalty payments, and royalties received by us for products sold by our licensees. Currently, the majority of our license and royalty revenue is comprised of non-refundable license fees paid in advance. Such revenue is recognized ratably over the period during which post-contract customer support is expected to be provided or upon delivery and transfer of agreed upon technical specifications in contracts where essentially no further support obligations exist. Future license and royalty revenue is expected to consist primarily of royalties received by us for products sold by our licensees. As we did not enter into any new license or royalty agreements during 2002, 2003 or 2004, we expect minimal future license and royalty revenue.

Inventories. Inventories are stated at the lower of cost or market. Cost is computed using standard cost, which approximates actual cost on a first-in, first-out basis. We record provisions to write down our inventory and related purchase commitments for estimated obsolescence or unmarketable inventory equal to the difference between the cost of the inventory and the estimated market value based upon assumptions about the future demand and market conditions. If actual future demand or market conditions are less favorable than we estimate, additional inventory provisions may be required.

Recent Accounting Pronouncements

In December 2004, the FASB issued SFAS No. 123(R) (revised 2004), "Share-Based Payment", which amends FASB Statement No. 123 and will be effective for public companies for interim or annual periods beginning after June 15, 2005. The new standard will require us to expense employee stock options and other share-based payments. The FASB believes the use of a binomial lattice model for option valuation is capable of more fully reflecting certain characteristics of employee share options compared to the Black-Scholes options pricing model. The new standard may be adopted in one of three ways - the modified prospective transition method, a variation of the modified prospective transition method or the modified retrospective transition method. We are currently evaluating how we will adopt the standard and evaluating the effect that the adoption of SFAS 123(R) will have on our financial position and results of operations.

In November 2004, the FASB issued SFAS No. 151, *Inventory Costs, an amendment of ARB No. 43, Chapter 4.* This statement amends the guidance in ARB No. 43, Chapter 4, *Inventory Pricing*, to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). Paragraph 5 of ARB No. 43, Chapter 4, previously stated that "...under some circumstances, items such as idle facility expense, excessive spoilage, double freight, and rehandling costs may be so abnormal as to require treatment as current period charges..." SFAS No. 151 requires that those items be recognized as current-period

charges regardless of whether they meet the criterion of "so abnormal." In addition, this statement requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. The provisions of SFAS 151 shall be applied prospectively and are effective for inventory costs incurred during fiscal years beginning after June 15, 2005, with earlier application permitted for inventory costs incurred during fiscal years beginning after the date this Statement was issued. The adoption of SFAS No. 151 is not expected to have a material impact on our financial position and results of operations.

In December 2004, the FASB issued SFAS No. 153, *Exchanges of Nonmonetary Assets, an amendment of APB Opinion No. 29*. The guidance in APB Opinion No. 29, *Accounting for Nonmonetary Transactions*, is based on the principle that exchanges of nonmonetary assets should be measured based on the fair value of assets exchanged. The guidance in that Opinion, however, included certain exceptions to that principle. This Statement amends Opinion 29 to eliminate the exception for nonmonetary exchanges of similar productive assets that do not have commercial substance. A nonmonetary exchange has commercial substance if the future cash flows of the entity are expected to change significantly as a result of the exchange. SFAS No. 153 is effective for nonmonetary exchanges occurring in fiscal periods beginning after June 15, 2005. The adoption of SFAS No. 153 is not expected to have a material impact on our financial position and results of operations.

Additional Risk Factors that Could Affect our Operating Results and the Market Price of our Stock

We have a history of significant losses, and we may never achieve profitability.

We have incurred substantial net losses and experienced negative cash flow for each quarter since our inception. As of December 31, 2004, we had an accumulated deficit of $295.5 million. We expect to incur losses in the near future. Moreover, we may never achieve profitability and, if we do so, we may not be able to maintain profitability. We may not be able to generate a sufficient level of revenue to offset our current level of expenditures. Moreover, because our expenditures for sales and marketing, research and development, and general and administrative functions are relatively fixed in the short term, we may be unable to adjust our spending in a timely manner to respond to any unanticipated decline in revenue. If we fail to achieve profitability within the timeframe expected by securities analysts or investors, then the market price of our common stock will likely decline.

Each sale of our digital headend systems represents a significant portion of our revenue for any given quarter. Our failure to meet our quarterly forecast of sales of digital headend systems in any given quarter could have a material adverse impact on our financial results for a given quarter.

Since we acquired VTC in November 2002, a large part of our quarterly revenue is associated with the sale of digital headend systems. Each sale represents a significant portion of our revenue for each quarter. We base our operating forecast on our historical sales. Because of the high cost per unit of our digital headend systems, if we were to sell even one less system than our forecasted number of headend sales per quarter, such a decrease in sales would have a material and adverse impact on our revenue for that quarter, and we may fail to meet investor expectations.

We operate in an intensely competitive marketplace, and many of our competitors have better resources than we do.

Our primary competitors in the digital TV headend market are small private companies that are focused on a more narrow product line than ours, thereby allowing these competitors to devote substantially more targeted resources to developing and marketing new products than we can. As we target larger telco customers for our video content processing systems, we expect more competition from large public companies like Harmonic, Inc., Tandberg Television ASA, and Motorola, Inc., all of which have substantially greater financial, technical and other resources than we do. These competitors have achieved success in providing headend components for cable multiple system operators and satellite TV providers and, we expect these competitors to market some of their products for use in TV over DSL applications. For example, in the past, Harmonic provided video content processing systems to SaskTel, a large Canadian telephone service provider. Harmonic also recently announced that it will provide video content processing systems to Video Networks Limited, a video-over-DSL provider in the United Kingdom.

Our competition in the market for video transmission processing products primarily comes from small private companies such as SkyStream Networks and public companies such as Optibase Inc. and Tandberg Television that together offer a wide array of products with special features and functions. Our broadband transport and service management business tends to compete against public, private and foreign network equipment companies.

To the extent that any of these current or potential future competitors enter or expand further into our markets, develop superior technology and products or offer superior prices or performance features relative to our products, such competition could result in lost sales and severe downward pressure on our pricing, either of which would adversely affect our revenue and profitability.

Commercial acceptance of any technological solution that competes with technology based on communication over copper telephone wire could materially and adversely impact demand for our products, our revenue and growth strategy.

The markets for video content processing, transmission and high-speed data access systems and services are characterized by several competing communication technologies, including fiber optic cables, coaxial cables, satellites and other wireless facilities. Many of our products are based on communication over copper telephone wire. Because there are physical limits to the speed and distance over which data can be transmitted over copper wire, our products may not be a viable solution for customers requiring service at performance levels beyond the current limits of copper telephone wire. Our customer base is concentrated on telephone service providers that have a large investment in copper wire technology. If these customers lose market share to their competitors who use competing technologies that are not as constrained by physical limitations as copper telephone wire, and that are able to provide faster access, greater reliability, increased cost-effectiveness or other advantages, demand for our products will decrease. Moreover, to the extent that our customers choose to install fiber optic cable or other transmission media as part of their infrastructure, or to the extent that homes and businesses install other transmission media within buildings, demand for our products may decline. The occurrence of any one or more of these events would harm demand for our products, which would thereby adversely affect our revenue and growth strategy.

If the projected growth in demand for video services from telephone service providers does not materialize or if our customers find alternative methods of delivering video services, future sales of our video content processing systems will suffer.

We manufacture video content processing systems that enable telephone service providers to offer video services to their customers. Our customers, the telephone service providers, face competition from cable companies, satellite service providers and wireless companies. For some users, these competing solutions provide fast access, high reliability and cost-effective solutions for delivering data, including video services. Telephone service providers hope to maintain their market share in their core business of voice telephony as well as increase their revenue per customer by offering their customers more services, including video services and high-speed data services. However, if the telephone service providers find alternative ways of maintaining and growing their market share in their core business that do not require that they offer video services, demand for our products will decrease substantially. Moreover, if technological advancements are developed that allow our customers to provide video services without upgrading their current system infrastructure, or that offer our customers a more cost-effective method of delivering video services, sales of our video content processing systems will suffer. Alternatively, even if the telephone service providers choose our video content processing systems, the service providers may not be successful in marketing video services to their customers, in which case our sales would decrease substantially.

Our operating results fluctuate significantly from quarter to quarter, and this may cause the price of our stock to decline.

Over the last 12 quarters, our sales per quarter have fluctuated between $9.2 million and $2.0 million. Over the same periods, our loss from operations as a percentage of revenue has fluctuated between approximately 5.2% and 1,274% of revenue. We anticipate that our sales and operating margins will continue to fluctuate. We expect this fluctuation to continue for a variety of reasons, including: the timing of customers' purchase decisions, acceptance of our new products and possible cancellations; competitive pressures, including pricing pressures from our partners and competitors; delays or problems in the introduction of our new products; announcements of new products, services or technological innovations by us or our competitors; and management of inventory levels.

The sales cycle for video content processing systems is long and unpredictable, which requires us to incur high sales and marketing expenses with no assurance that a sale will result.

The sales cycle for our headend systems can be as long as 12-18 months. Additionally, with respect to the sale of our products to U.S. and foreign government organizations, we may experience long sales cycles as a result of government procurement processes. As a result, while we continue to incur costs associated with a particular sale prior to payment from the customer, we may not recognize revenue from efforts to sell particular products for extended periods of time.

As a result, our quarter-to-quarter comparisons of our revenue and operating results may not be meaningful and may not provide an accurate indicator of our future performance. Our operating results in one or more future quarters may fail to meet the expectations of investment research analysts or investors, which could cause an immediate and significant decline in the trading price of our common stock.

If we fail to accurately forecast demand for our products, our revenue, profitability and reputation could be harmed.

We rely on contract manufacturers and third-party equipment manufacturers, or OEMs, to manufacture, assemble, test and package our products. We also depend on third-party suppliers for the materials and parts that constitute our products. Our reliance on contract manufacturers, OEMs and third-party suppliers requires us to accurately forecast the demand for our products and coordinate our efforts with those of our contract manufacturers, OEMs and suppliers. We often make significant up-front financial commitments with our contract manufacturers, OEMs and suppliers in order to procure the raw materials and begin manufacturing and assembly of the products. If we fail to accurately forecast demand or coordinate our efforts with our suppliers, OEMs and contract manufacturers, we may face supply, manufacturing or testing capacity constraints. These constraints could result in delays in the delivery of our products, which could lead to the loss of existing or potential customers and could thereby result in lost sales and damage to our reputation, which would

adversely affect our revenue and profitability. Further, we outsource the manufacturing of our products based on forecasts of sales. If orders for our products exceed our forecasts, we may have difficulty meeting customers' orders in a timely manner, which could damage our reputation or result in lost sales. Conversely, if our forecasts exceed the orders we actually receive and we are unable to cancel future purchase and manufacturing commitments in a timely manner, our inventory levels would increase. This could expose us to losses related to slow moving and obsolete inventory, which would have a material adverse effect on our profitability.

If we fail to develop and introduce new products in response to the rapid technological changes in the markets in which we compete, we will not remain competitive.

The markets for video content processing, transmission and high-speed data access systems are characterized by rapid technological developments, frequent enhancements to existing products and new product introductions, changes in end-user requirements and evolving industry standards. To remain competitive, we must continually improve the performance, features and reliability of our products. For example, advancements in compression technology are leading the video content processing industry to begin the transition to next generation compression standards. These advances will allow for further reductions in the bandwidth required to deliver standard definition video channels and introduce the possibility of delivering high-definition television over asymmetric digital subscriber lines, or ADSL, for the first time. ADSL is a new technology that allows more data to be transmitted over copper telephone lines than standard DSL. Further advances in compression technology, or the emergence of new industry standards would require that we further redesign our products to incorporate, and remain compatible with, emerging technologies and industry standards.

We cannot assure you that we will be able to respond quickly and effectively to technological change. We may have only limited time to enter certain markets, and we cannot assure you that we will be successful in achieving widespread acceptance of our products before competitors can offer products and services similar or superior to our products. If we fail to introduce new products that address technological changes or if we experience delays in our product introductions, our ability to compete would be adversely affected, thereby harming our revenue, profitability and growth strategy.

We depend on international sales for a significant portion of our revenue, which subjects our business to a number of risks. If we are unable to generate significant international sales, our revenue, profitability and share price could be materially and adversely affected.

Sales to customers outside of the United States accounted for approximately 43.0%, 18.4% and 23.3% of revenue for the years ended December 31, 2002, 2003 and 2004, respectively. Sales and operating activities outside of the United States are subject to inherent risks, including fluctuations in the value of the United States dollar relative to foreign currencies; tariffs, quotas, taxes and other market barriers; political and economic instability; restrictions on the export or import of technology; potentially limited intellectual property protection; difficulties in staffing and managing international operations and potentially adverse tax consequences. Any of these factors may have a material adverse effect on our ability to grow or maintain international revenue.

We expect sales to customers outside of the United States to represent a significant and growing portion of our revenue. However, we cannot assure you that foreign markets for our products will develop at the rate or to the extent that we anticipate. If we fail to generate significant international sales, our revenue, profitability and share price could be materially and adversely affected.

Fluctuations in interest and currency exchange rates may decrease demand for our products.

Substantially all of our foreign sales are invoiced in U.S. dollars. As a result, fluctuations in currency exchange rates could cause our products to become relatively more expensive for international customers, thereby reducing demand for our products. We anticipate that we will generally continue to invoice foreign sales in U.S. dollars. We do not currently engage in foreign currency hedging transactions. However, as we expand our current international operations, we may allow payment in foreign currencies and, as a result, our exposure to foreign currency transaction losses may increase. To reduce this exposure, we may purchase forward foreign exchange contracts or use other hedging strategies. However, we cannot assure you that any currency hedging strategy would be successful in avoiding exchange-related losses. Any such losses would adversely impact our profitability.

If our contract manufacturers, third-party OEMs and third-party suppliers fail to produce quality products or parts in a timely manner, we may not be able to meet our customers' demands.

We do not manufacture our products. We rely on contract manufacturers and OEMs to manufacture, assemble, package and test substantially all of our products and to purchase most of the raw materials and components used in our products. Additionally, we depend on third-party suppliers to provide quality parts and materials to our contract manufacturers and OEMs, and we obtain some of the key components and sub-assemblies used in our products from a single supplier or a limited group of suppliers. Neither we nor our contract manufacturers or OEMs have any guaranteed supply arrangements with the suppliers. If our suppliers fail to provide a sufficient supply of key components, we could experience difficulties in obtaining alternative sources at reasonable prices, if at all, or in altering product designs to use alternative components. Moreover, if our contract manufacturers or OEMs fail to deliver quality products in a timely

manner, such failure would harm our ability to meet our scheduled product deliveries to customers. Delays and reductions in product shipments could increase our production costs, damage customer relationships and harm our revenue and profitability. In addition, if our contract manufacturers and OEMs fail to perform adequate quality control and testing of our products, we would experience increased production costs for product repair and replacement, and our profitability would be harmed. Moreover, defects in products that are not discovered in the quality assurance process could damage customer relationships and result in product returns or product liability claims, each of which could harm our revenue, profitability and reputation.

Design defects in our products could harm our reputation and our revenue, profitability and reputation.

Any defect or deficiency in our products could reduce the functionality, effectiveness or marketability of our products. These defects or deficiencies could cause customers to cancel or delay their orders for our products, reduce revenue or render our product designs obsolete. In any of these events, we would be required to devote substantial financial and other resources for a significant period of time to develop new product designs. We cannot assure you that we would be successful in addressing any design defects in our products or in developing new product designs in a timely manner, if at all. Any of these events, individually or in the aggregate, could harm our revenue, profitability and reputation.

Our business depends on the integrity of our intellectual property rights. If we fail to adequately protect our intellectual property, our revenue, profitability, reputation or growth strategy could be adversely affected.

We attempt to protect our intellectual property and proprietary technology through patents, trademarks and copyrights, by generally entering into confidentiality or license agreements with our employees, consultants, vendors, strategic partners and customers as needed, and by generally limiting access to and distribution of our trade secret technology and proprietary information. However, any of our pending or future patent or trademark applications may not ultimately be issued as patents or trademarks of the scope that we sought, if at all, and any of our patents, trademarks or copyrights may be invalidated, deemed unenforceable, or otherwise challenged. In addition, other parties may circumvent or design around our patents and other intellectual property rights, may misappropriate our proprietary technology, or may otherwise develop similar, duplicate or superior products. Further, the intellectual property laws and our agreements may not adequately protect our intellectual property rights and effective intellectual property protection may be unavailable or limited in certain foreign countries in which we do business or may do business in the future.

The telecommunications and data communications industries are characterized by the existence of extensive patent portfolios and frequent intellectual property litigation. From time to time, we have received, and may in the future receive, claims that we are infringing third parties' intellectual property rights. Any present or future claims, with or without merit, could be time-consuming, result in costly litigation, divert management time and attention and other resources, cause product shipment delays or require us to enter into royalty or licensing agreements. Such royalty or licensing agreements, if required, may not be available on terms acceptable to us. In addition, any such litigation could force us to cease selling or using certain products or services, or to redesign such products or services. Further, we may in the future initiate claims or litigation against third-parties for infringement of our intellectual property rights or to determine the scope and validity of our intellectual property rights or those of competitors. Such litigation could result in substantial costs and diversion of resources. Any of the foregoing could have an adverse effect upon our revenue, profitability, reputation or growth strategy.

If we fail to provide our customers with adequate and timely customer support, our relationships with our customers could be damaged, which would harm our revenue and profitability.

Our ability to achieve our planned sales growth and retain customers will depend in part on the quality of our customer support operations. Our customers generally require significant support and training with respect to our products, particularly in the initial deployment and implementation stage. As our systems and products become more complex, we believe our ability to provide adequate customer support will be increasingly important to our success. We have limited experience with widespread deployment of our products to a diverse customer base, and we cannot assure you that we will have adequate personnel to provide the levels of support that our customers may require during initial product deployment or on an ongoing basis. Our failure to provide sufficient support to our customers could delay or prevent the successful deployment of our products. Failure to provide adequate support could also have an adverse impact on our reputation and relationship with our customers, could thereby prevent us from gaining new customers and could harm our revenue and profitability.

If we fail to manage our expanding operations, our ability to increase our revenues and improve our results of operations could be harmed.

We anticipate that, in the future, we may need to expand certain areas of our business to grow our customer base and exploit market opportunities. In particular, we expect to face numerous challenges in the implementation of our business strategy to focus on selling our products to the larger, more established service providers. To manage our operations, we must, among other things, continue to implement and improve our operational, financial and management information systems, hire and train additional qualified personnel, continue to expand and upgrade core technologies and effectively manage multiple relationships with various customers, suppliers and other third-parties. We cannot assure you that our systems, procedures or controls will be adequate to support our operations or that our management will be able to achieve the rapid execution necessary to exploit fully the market for our products or systems. If we are unable to manage our operations effectively, our revenue, operations and share price could be harmed.

If material weaknesses in our internal controls over financial reporting were to develop (such as those that our independent registered public accounting firm identified in the fourth quarter of fiscal 2003) and we were unable to remedy such weaknesses in an effective- and timely manner, such weaknesses could materially and adversely affect our ability to provide the public with timely and accurate material information about our Company, which could harm our reputation and share price.

In January 2004, our independent registered public accounting firm identified deficiencies in our internal controls that they considered to be material weaknesses. Based on these weaknesses, our CEO and CFO determined that, as of December 31, 2003, our disclosure controls and procedures were not sufficient to record, process, summarize and report information required to be reported within the time periods specified by the SEC and accumulated and communicated to our management, including our CEO and CFO, to allow timely discussions regarding required disclosure. These material weaknesses related to our inventory and our accounts payable processes, both of which affect our balance sheet and may also affect our income statement reporting. We believe that we have fully addressed these issues, and, therefore, our Chief Executive Officer' s and Chief Financial Officer' s evaluation of our disclosure controls and procedures as of December 31, 2004 concluded that they were effective. (See Item 9A of this Form 10-K for further discussion of these weaknesses as well as for our Chief Executive Officer' s and Chief Financial Officer' s evaluation as of December 31, 2004.) In order for investors and the equity analyst community to make informed investment decisions and recommendations about our securities, it is important that we provide them with accurate and timely information in accordance with the Exchange Act and the rules promulgated thereunder. Material weaknesses in our internal controls over financial reporting and our disclosure controls and procedures would hinder the flow of timely and accurate information to investors. If such material weaknesses were to develop and we did not address them in a timely matter, investors might sell our shares and industry analysts might either make incorrect recommendations about our Company or else end coverage of our company altogether, any of which results could harm our reputation and adversely impact our share price.

We are currently engaged in a securities class action lawsuit, which, if it were to result in an unfavorable resolution, could adversely affect our reputation, profitability and share price.

We are currently engaged as a defendant in a lawsuit (i.e., *Whalen v. Tut Systems, Inc. et al.*) that alleges securities law violations against us and certain of our current and former officers and directors under Section 11 of the Securities Act of 1933, as amended, and Section 10(b) and Rule 10b-5 of the Securities Exchange Act of 1934, as amended. While we have reached a settlement with the plaintiffs in this lawsuit, the settlement is subject to certain contingencies, including court approval of the terms of settlement. If the court does not approve this settlement, or any other applicable contingencies are not resolved or otherwise addressed, we would be required to resume litigation in this matter. If we were to resume litigation in this matter, there is no assurance that we would prevail and, if the outcome of such litigation were unfavorable to us, our reputation, profitability and share price could be adversely affected.

If our products do not comply with complex government regulations, our product sales will suffer.

We and our customers are subject to varying degrees of federal, state and local as well as foreign governmental regulation. Our products must comply with various regulations and standards defined by the Federal Communications Commission, or FCC. The FCC has issued regulations that set installation and equipment standards for communications systems. Our products are also required to meet certain safety requirements. For example, Underwriters Laboratories must certify certain of our products in order to meet federal safety requirements relating to electrical appliances to be used inside the home. In addition, certain products must be Network Equipment Building Standard certified before certain of our customers may deploy them. Any delay in or failure to obtain these approvals could harm our business, financial condition or results of operations. Outside of the United States, our products are subject to the regulatory requirements of each country in which our products are manufactured or sold. These requirements are likely to vary widely. If we do not obtain timely domestic or foreign regulatory approvals or certificates, we would not be able to sell our products where these regulations apply, which could prevent us from maintaining or growing our revenue or achieving profitability.

In addition, regulation of our customers may adversely impact our business, operating results and financial condition. For example, FCC regulatory policies affecting the availability of data and Internet services and other terms on which telecommunications companies conduct their business may impede our entry into certain markets. In addition, the increasing demand for communications systems has exerted pressure on regulatory bodies worldwide to adopt new standards, generally following extensive investigation of competing technologies. The delays inherent in this governmental approval process may cause the cancellation, postponement or rescheduling of the installation of communications systems by our customers, which in turn may harm our sale of products to these customers.

If we lose key personnel or are unable to hire additional qualified personnel as necessary, we may not be able to manage our business successfully, which could materially and adversely affect our growth strategy, reputation and share price.

We depend on the performance of Salvatore D' Auria, our President, Chief Executive Officer and Chairman of the Board, and on other senior management and technical personnel with experience in the video and data communications, telecommunications and high-speed data access industries. The loss of any one of them could harm our ability to execute our business strategy, which could adversely affect our reputation and share price. Additionally, we do not have employment contracts with any of our executive officers. We believe that our future success will depend in large part on our continued ability to identify, hire, retain and motivate highly skilled employees who are in great demand. We cannot assure you that we will be able to do so.

We routinely evaluate acquisition candidates and other diversification strategies.

We have completed a number of acquisitions as part of our efforts to expand and diversify our business. For example, we acquired our video content processing and video transmission businesses from Tektronix in November 2002 when we purchased its subsidiary, VTC. In order to provide additional financial resources, we entered into an Agreement and Plan of Merger with CoSine Communications, Inc., or CoSine on January 7, 2005. The proposed merger will be a stock-for-stock transaction valued at approximately $24.1 million. Upon closing, we will issue approximately 6.0 million shares of our common stock to the shareholders of CoSine. We expect the transaction to result in net cash to us of approximately $22.8 million, and is expected to close as soon as practicable following approval by the stockholders of both companies. We are acquiring CoSine primarily to provide additional liquidity. We will honor CoSine' s existing customer' s support agreements, but do not expect to offer its products of sale to new customers. We will not have any additional employees or facilities as a result of the transaction. We intend to continue to evaluate new acquisition candidates, divestiture and diversification strategies, and if we fail to manage the integration of acquired companies, it could adversely affect our operations and growth strategy. Any acquisition involves numerous risks, including difficulties in the assimilation of the acquired company' s employees, operations and products, uncertainties associated with operating in new markets and working with new customers, and the potential loss of the acquired company' s key employees. Additionally, we may incur unanticipated expenses, difficulties and other adverse consequences relating to the integration of technologies, research and development, and administrative and other functions. Any future acquisitions may also result in potentially dilutive issuances of our equity securities, acquisition or divestiture related write-offs and the assumption of debt and contingent liabilities. Any of the above factors could adversely affect our revenue, profitability, operations or growth strategy.

Our stock price is volatile, and, if you invest in our Company, you may suffer a loss of some or all of your investment.

The market price and trading volume of our common stock has been subject to significant volatility, and this trend may continue. In particular, trading volume historically has been low and the market price of our common stock has increased dramatically in recent months. Since the announcement of our acquisition of VTC, the closing price of our common stock, as traded on the Nasdaq National Market, has fluctuated from a low of $1.23 to a high of $7.49 per share. The value of our common stock may decline regardless of our operating performance or prospects. Factors affecting our market price include:

- our perceived prospects;
- variations in our operating results and whether we have achieved our key business targets;
- the limited number of shares of our common stock available for purchase or sale in the public markets;

differences between our reported results and those expected by investors and securities analysts;

announcements of new contracts, products or technological innovations by us or our competitors; and

market reaction to any acquisitions, joint ventures or strategic investments announced by us or our competitors.

Recent events have caused stock prices for many companies, including ours, to fluctuate in ways unrelated or disproportionate to their operating performance. The general economic, political and stock market conditions that may affect the market price of our common stock are beyond our control. The market price of our common stock at any particular time may not remain the market price in the future. In the past, securities class action litigation has been instituted against companies following periods of volatility in the market price of their securities. Any such litigation, if instituted against us, could result in substantial costs and a diversion of management' s attention and resources.

Future sales of shares of our common stock could cause our stock price to decline.

Substantially all of our common stock may be sold without restriction in the public markets, subject only in the case of shares held by our officers and directors and affiliates to volume and manner of sale restrictions (other than as described in the following sentence). The approximately 3.3 million shares of common stock that we issued to Tektronix in connection with our November 2002 acquisition of VTC are restricted securities, as that term is defined in Rule 144 under the Securities Act, and therefore subject to certain restrictions. However, we are contractually obligated to file and keep effective a registration statement in order to allow Tektronix to sell these shares to

the public. Likewise, Tektronix has the right (subject to certain exceptions) to include these shares in certain registration statements pursuant to which we may sell shares of our common stock.

Sales of a substantial number of shares of common stock in the public market, whether or not in connection with this offering, or the perception that these sales could occur could materially and adversely affect our stock price and make it more difficult for us to sell equity securities in the future at a time and price we deem appropriate.

Our charter, bylaws, retention and change of control plans and Delaware law contain provisions that could delay or prevent a change in control.

Certain provisions of our charter and bylaws and our retention and change of control plans, the "Plans," may have the effect of making it more difficult for a third-party to acquire, or of discouraging a third-party from attempting to acquire, control of us. The provisions of the charter and bylaws and the Plans could limit the price that certain investors may be willing to pay in the future for shares of our common stock. Our charter and bylaws provide for a classified board of directors, eliminate cumulative voting in the election of directors, restrict our stockholders from acting by written consent and calling special meetings, and provide for procedures for advance notification of stockholder nominations and proposals. In addition, our Board has the authority to issue up to 5,000,000 shares of preferred stock and to determine the price, rights, preferences, privileges and restrictions, including voting rights, of those shares without any further vote or action by the stockholders. The issuance of preferred stock, while providing flexibility in connection with possible financings or acquisitions or other corporate purposes, could have the effect of making it more difficult for a third-party to acquire a majority of our outstanding voting stock. The Plans provide for severance payments and accelerated stock option vesting in the event of termination of employment following a change of control. The provisions of the charter and bylaws, and the Plans, as well as Section 203 of the Delaware General Corporation Law, to which we are subject, could discourage potential acquisition proposals, delay or prevent a change of control and prevent changes in our management.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

As of December 31, 2004, we did not have investments. An immediate 10% change in interest rate would be immaterial to our financial condition or results of operations.

The principal amount of cash and cash equivalents at December 31, 2004, totaled $12.4 million with a related weighted average interest rate of 1.14 %. Our long-term debt of $3.8 million at December 31, 2004, carries a weighted average fixed interest rate of 8.0% per annum with principal payment of the entire note payable balance due in November 2007. We do not have short term notes payable.

The table below presents principal amounts and related weighted average interest rates by year for our cash and cash equivalents, and debt obligations.

	Maturity Fiscal Year					
	2004	2005	2006	2007	Thereafter	Total
	(dollars in thousands)					
Assets:						
Cash and cash equivalents	$ 12,440	$ –	$ –	$ –	$ –	$ 12,440
Average interest rate	1.14%	–	–	–	–	1.14%
Liabilities:						
Long-term debt	–	–	–	$ 4,060	–	$ 4,060
Average interest rate	8.0%	8.0%	8.0%	8.0%	–	8.0%

The estimated fair value of our cash and cash equivalents approximates the principal amounts reflected above based on the maturities of these financial instruments.

Although payments under certain of our operating leases for our facilities are tied to market indices, we are not exposed to material interest rate risk associated with our operating leases.

Foreign Currency Risk

We transact business primarily in the U.S. dollar. To date, the effect of changes in foreign currency exchange rates on revenue has

not been material, as the majority of our revenue is earned in U.S. dollars. An increase in the value of the U.S. dollar relative to foreign currencies could make our products more expensive and, therefore, reduce demand for our product.

For our foreign subsidiaries whose functional currency is the local currency, we translate assets and liabilities to U.S. dollars using the period-end exchange rates and translate revenues and expenses to U.S. dollars using average exchange rates during the period. Foreign currency exchange gains and losses arising from translation of foreign subsidiary financial statements are reported as a separate component on our Statement of Stockholders' Equity. To date, the effect of changes in foreign currency exchange rates on translation has not been material.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

TUT SYSTEMS, INC.
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of
Tut Systems, Inc.

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Tut Systems, Inc. (the Company) and its subsidiaries at December 31, 2004 and 2003, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2004 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and the financial statement schedule are the responsibility of the Company' s management; our responsibility is to express an opinion on these financial statements and the financial statement schedule based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP
Portland, Oregon
February 2, 2005, except as to the third paragraph of Note 13 as to which the date is February 11, 2005

TUT SYSTEMS, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except per share amounts)

	December 31, 2003	December 31, 2004
ASSETS		
Current assets:		
Cash and cash equivalents	$ 14,370	$ 12,440

Accounts receivable, net of allowance for doubtful accounts of $47 and $139 in 2003 and 2004, respectively		7,062		6,585
Insurance settlement receivable		10,725		—
Inventories, net		4,181		3,994
Prepaid expenses and other		1,026		1,137
Total current assets		37,364		24,156
Property and equipment, net		1,722		1,874
Intangibles and other assets		3,685		1,935
Total assets	$	42,771	$	27,965
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities:				
Accounts payable	$	3,055	$	2,221
Accrued liabilities		1,516		2,324
Legal settlement liability		10,725		—
Deferred revenue		253		226
Total current liabilities		15,549		4,771
Note payable		3,523		3,816
Other liabilities		44		–
Total liabilities		19,116		8,587
Commitments and contingencies (Note 8)				
Stockholders' equity:				
Preferred stock, $0.001 par value, 5,000 shares authorized, no shares issued and outstanding in 2003 and 2004, respectively		–		–
Common stock, $0.001 par value, 100,000 shares authorized, 20,274 and 25,180 shares issued and outstanding in 2003 and 2004, respectively		20		25
Additional paid-in capital		305,777		315,006
Accumulated other comprehensive loss		(89)		(140)
Accumulated deficit		(282,053)		(295,513)
Total stockholders' equity		23,655		19,378
Total liabilities and stockholders' equity	$	42,771	$	27,965

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

TUT SYSTEMS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	Years Ended December 31,					
		2002		**2003**		**2004**
Revenues:						
Product	$	8,582	$	31,474	$	24,942
License and royalty		789		718		50
Total revenues		9,371		32,192		24,992
Cost of goods sold		13,909		15,646		16,980
Gross profit (loss)		(4,538)		16,546		8,012

Operating expenses:			
Sales and marketing	8,695	7,479	8,096
Research and development	12,337	7,909	7,278
General and administrative	5,060	4,476	4,336
Restructuring costs	9,147	292	–
In-process research and development	562	–	–
Impairment of intangible assets	–	128	202
Amortization of intangible assets	1,304	1,809	1,524
Total operating expenses	37,105	22,093	21,436
Loss from operations	(41,643)	(5,547)	(13,424)
Impairment of certain equity investments	(592)	–	–
Gain on sale of investments	–	–	125
Interest and other income (expense), net	610	30	(161)
Net loss	$ (41,625)	$ (5,517)	$ (13,460)
Net loss per share, basic and diluted (Note 2)	$ (2.45)	$ (0.28)	$ (0.63)
Shares used in computing net loss per share, basic and diluted (Note 2)	16,957	19,996	21,392

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

TUT SYSTEMS, INC. CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (in thousands)

	Common Stock		Additional	Deferred	Notes Receivable	Accumulated Other	Accumulated	Total
	Shares	Amount	Paid-in Capital	Compensation	From Stockholders	Comprehensive (Loss) Income	Deficit	Stockholders' Equity
Balance, January 31, 2002	16,411	16	301,182	(17)	(96)	(78)	(234,911)	66,096
Components of comprehensive loss:								
Unrealized losses on other investments	–	–	–	–	–	(48)	–	(48)
Foreign currency translation adjustment	–	–	–	–	–	(15)	–	(15)
Net loss	–	–	–	–	–	–	(41,625)	(41,625)
Total comprehensive loss								(41,688)
Common stock issued in conjunction with VideoTele.com	3,283	4	3,608	–	–	–	–	3,612

purchase acquisition								
Common stock issued for cash upon exercise of stock options	11	–	14	–	–	–	–	14
Common stock issued under employee stock purchase plan	91	–	84	–	–	–	–	84
Amortization related to unearned compensation	–	–	–	17	–	–	–	17
Repayment/ forgiveness of notes receivable issued to stockholders	–	–	–	–	96	–	–	96
Balance, December 31, 2002	19,796	20	304,888	–	–	(141)	(276,536)	28,231
Components of comprehensive loss:								
Unrealized gain on other investments	–	–	–	–	–	74	–	74
Foreign currency translation adjustment	–	–	–	–	–	(22)	–	(22)
Net loss	–	–	–	–	–	–	(5,517)	(5,517)
Total comprehensive loss	–	–	–	–	–	–	–	(5,465)
Common stock issued for cash upon exercise of stock options	440	–	831	–	–	–	–	831
Common stock issued under employee stock purchase plan	38	–	58	–	–	–	–	58
Balance, December 31, 2003	20,274	$ 20	$ 305,777	$ –	$ –	$ (89)	$ (282,053)	$ 23,655
Components of comprehensive loss:								
Unrealized gain on other investments	–	–	–	–	–	(23)	–	(23)

Foreign currency translation adjustment	–	–	–	–	–	(28)	–	(28)
Net loss	–	–	–	–	–	–	(13,460)	(13,460)
Total comprehensive loss	–	–	–	–	–	–	–	(13,511)
Common stock issued in secondary offering, net	4,600	5	8,706					8,711
Common stock issued for cash upon exercise of stock options	226	–	323	–	–	–	–	323
Common stock issued under employee stock purchase plan	80	–	200	–	–	–	–	200
Balance, December 31, 2004	25,180	$ 25	$ 315,006	$ –	$ –	$ (140)	$ (295,513)	$ 19,378

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

TUT SYSTEMS, INC. CONSOLIDATED STATEMENTS OF CASH FLOWS (in thousands)

	Years Ended December 31,		
	2002	**2003**	**2004**
Cash flows from operating activities:			
Net loss	$ (41,625)	$ (5,517)	$ (13,460)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	3,163	1,097	1,273
Noncash interest income and amortization of discounts on investments	37	–	–
Abandonment of fixed assets	4,822	–	–
Provision for (recovery of) doubtful accounts	(2,277)	36	92
Provision for excess and obsolete inventory and abandoned products	7,125	225	1,542
Write-off of certain equity investments	592	–	–
Impairment of intangible assets	–	128	202
Amortization of intangible assets	1,304	1,809	1,524
Write-off of in-process research and development	562	–	–
Deferred interest on note payable	–	261	293
Change in operating assets and liabilities, net of businesses acquired:			
Accounts receivable	2,090	(5,126)	385
Inventories	3,195	(518)	(1,355)
Prepaid expenses and other assets	3,390	72	(138)
Accounts payable and accrued liabilities	(5,828)	(2,665)	(70)

TUT SYSTEMS, INC. NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (in thousands, except per share amounts)

Deferred revenue	(889)	(703)	(27)
Net cash used in operating activities	(24,339)	(10,901)	(9,739)
Cash flows from investing activities:			
Purchase of property and equipment	(426)	(1,189)	(1,425)
Proceeds from maturities of short-term investments	3,105	–	–
Acquisition of businesses, net of cash acquired	758	–	–
Net cash provided by (used in) investing activities	3,437	(1,189)	(1,425)
Cash flows from financing activities:			
Proceeds from credit facility	–	–	2,562
Repayment of credit facility	–	–	(2,562)
Proceeds from issuances of common stock, net	98	889	9,234
Other	37	–	–
Net cash provided by financing activities	135	889	9,234
Net decrease in cash and cash equivalents	(20,767)	(11,201)	(1,930)
Cash and cash equivalents, beginning of year	46,338	25,571	14,370
Cash and cash equivalents, end of year	$ 25,571	$ 14,370	$ 12,440
Supplemental disclosure of cash flow information:			
Interest paid during the year	$ 47	$ 3	$ 1
Income taxes paid during the year	$ 1	$ 1	$ 1
Noncash financing activities:			
Common stock issued in connection with the VideoTele.com acquisition in 2002	$ 3,612	$ –	$ –

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

NOTE 1–DESCRIPTION OF BUSINESS:

The Company designs, develops, and sells digital video processing systems that enable telephony-based service providers to deliver broadcast quality digital video signals over their networks. The Company also offers video processing systems that enable private enterprise and government entities to transport video signals over satellite, fiber, radio, or copper networks for surveillance, distance learning, and TV production applications. The Company also designs, develops and markets broadband transport and service management products that enable the provisioning of high speed Internet access and other broadband data services over existing copper networks within hotels and private campus facilities.

Historically, the Company derived most of its sales from its broadband transport and service management products. In November 2002, the Company acquired VideoTele.com, or VTC, from Tektronix, Inc. to extend its product offerings to include digital video processing systems. As a result, the Company' s revenue increased from $9,371 in 2002 to $24,992 in 2004. Video-based products now represent a majority of the Company' s sales.

The Company has incurred substantial losses and negative cash flows from operations since inception. For the year ended December 31, 2004, the Company incurred a net loss of $13,460 and negative cash flows from operating activities of $9,739, and has an accumulated deficit of $295,513 at December 31, 2004. Management believes that its cash and cash equivalents and availability under the credit facility as of December 31, 2004, are sufficient to fund operating activities and capital expenditure needs for at least the next twelve months. In future periods, the Company generally anticipates that working capital will begin to increase as a result of several factors, including the expectation that revenue will increase and its net loss will decrease in 2005 as compared to 2004. Accordingly, the Company expects the amount of cash used to fund our operations to decrease in 2005. However, in the event that the Company does not meet its revenue and earnings expectations, the Company may require additional cash to fund operations. Failure to generate positive cash flow in the future could have a material adverse effect on the Company' s ability to achieve its intended business objectives. See note 13 for further details on the Plan of Merger with CoSine Communications and Copper Mountain Networks.

NOTE 2−SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

Principles of consolidation

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

Use of estimates

The preparation of consolidated financial statements in conformity with generally accepted accounting principles in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. The most significant estimates include valuation of inventories and accounts receivable, estimation of loss on purchase commitments, estimation of percentage-of-completion on revenue contracts, the recoverability of long-lived assets and estimation of range of losses under contingencies. Actual results could differ from those estimates.

Fair value of financial instruments

The fair value of the Company' s cash and cash equivalents, accounts receivable, accounts payable and note payable approximate their carrying value due to the short maturity or market rate structure of those instruments.

Cash and cash equivalents

Cash equivalents are stated at cost or amortized cost, which approximates fair value. The Company includes in cash and cash equivalents all highly liquid investments that mature within three months of their purchase date. Management determines the appropriate classification of debt securities at the time of purchase and re-evaluates that designation as of each balance sheet date.

Inventories

Inventories are stated at the lower of cost or market. Cost is computed using standard cost which approximates actual cost on a first-in, first-out basis. The Company records provisions to write down its inventory and related purchase commitments for estimated obsolescence or unmarketable inventory equal to the difference between the cost of the inventory and the estimated market value based upon assumptions about the future demand and market conditions. If actual future demand or market conditions are less favorable than those estimated by the Company, additional inventory provisions may be required.

Property and equipment

Property and equipment are stated at cost less accumulated depreciation. The Company provides for depreciation by charges to expense which are sufficient to write off the cost of the assets over their estimated useful lives on the straight-line basis. Leasehold improvements are amortized over the lesser of the lease term or the estimated useful life of the improvement. Useful lives by principal classifications are as follows:

Office equipment	3-5 years

Computers and software	3-7 years
Test equipment	3-5 years
Leasehold improvements	1-7 years

When assets are sold or otherwise disposed of, the cost and accumulated depreciation are removed from the asset and accumulated depreciation accounts, respectively. Upon the disposition of property and equipment, the accumulated depreciation is deducted from the original cost and any gain or loss on that sale or disposal is credited or charged to income.

Maintenance, repairs, and minor renewals are charged to expense as incurred. Expenditures which substantially increase an asset' s useful life are capitalized.

Intangible assets

Intangible assets are stated at cost less amortization. Intangible assets consist of completed technology and patents, contract backlog, customer lists, maintenance contract renewals and trademarks. These intangible assets are amortized on a straight line basis over the estimated periods of benefit, which are as follows:

Completed technology and patents	5 years
Contract backlog	14 months
Customer lists	7 years
Maintenance contract renewals	5 years
Trademarks	7 years

Accounting for long-lived assets

The Company periodically assesses the impairment of long-lived assets. An impairment review is performed whenever events or changes in circumstances indicate that the carrying value may not be recoverable.

Factors considered important which could trigger an impairment review include, but are not limited to, significant underperformance relative to expected historical or projected future operating results, significant changes in the manner of use of the acquired assets or the strategy for the overall business, significant negative industry or economic trends, a significant decline in the stock price for a sustained period and the Company' s market capitalization relative to net book value.

When management determines that the carrying value may not be recoverable based upon the existence of one or more of the above indicators of impairment, any impairment measured is based on a projected discounted cash flow method using a discount rate commensurate with the risk inherent in the Company' s current business model.

During 2003, the Company determined that certain long-lived assets and certain intangible long-lived assets were impaired and recorded losses accordingly under SFAS No. 144. No such impairment was recorded in 2002 and 2004. Future events could cause the Company to conclude that impairment indicators once again exist. Any resulting impairment loss could have a material adverse impact on the Company' s financial condition and results of operations.

Revenue Recognition

The Company generates revenue primarily from the sale of hardware products, including third-party products, through professional services, and through the sale of its software products. The Company sells products through direct sales channels and through distributors. Generally, product revenue is generated from the sale of video processing systems and components and the sale of broadband transport and service management products. Turnkey solution revenue is principally generated by the sale of complete end-to-end video processing systems that are designed, developed and produced according to a buyer' s specifications.

Product revenues

Product revenue is generated primarily from the sale of complete end-to-end video processing systems generally referred to as turnkey solutions. Turnkey solutions are multi-element arrangements, which consist of hardware products, software products, professional services and post contract support. Sales of turnkey solutions are classified as product revenue in the statement of operations.

Product revenue is also generated from the sale of video processing component products and the sale of broadband transport and service management products. The Company sells these products through its own direct sales channels and also through distributors.

The Company' s revenue recognition policies for turnkey solutions are in accordance with SOP 97-2, *Software Revenue Recognition*, as amended, which is the authoritative guidance for recognizing revenue on software transactions and transactions in which software is more than incidental to the arrangement. SOP 97-2 requires that revenue recognized from software arrangements be allocated to each element of the arrangement based on the relative fair values of the elements, such as hardware, software products, maintenance services, installation, training or other elements. Under SOP 97-2, the determination of fair value is based on objective evidence that is specific to the vendor. If such evidence of fair value for any undelivered element of the arrangement does not exist, all revenue from the arrangement is deferred until such time that evidence of fair value does exist or until all elements of the arrangement are delivered, subject to certain limited exceptions set forth in SOP 97-2, as amended. SOP 97-2 was amended in February 1998 by SOP 98-4, *Deferral of the Effective Date of a Provision of SOP 97-2* and was amended again in December 1998 by SOP 98-9, *Modification of SOP 97-2, Software Revenue Recognition, with Respect to Certain Transactions*. Those amendments deferred and then clarified, respectively, the specification of what was considered vendor specific objective evidence of fair value for the various elements in a multiple element arrangement.

In the case of software arrangements which require significant production, modification or customization of software, which encompasses all of the Company' s turnkey arrangements, SOP 97-2 refers to the guidance in SOP 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts*. The Company recognizes revenue for all turnkey arrangements in accordance with SOP 97-2 and SOP 81-1. Excluding the PCS element, for which the Company has established vendor specific objective evidence of fair value (as defined by SOP 97-2), revenue from turnkey solutions is generally recognized using the percentage-of-completion method, as stipulated by SOP 81-1. The percentage-of-completion method reflects the portion of the anticipated contract revenue that has been earned that is equal to the ratio of labor effort expended to date to the anticipated final labor effort, based on current estimates of total labor effort necessary to complete the project. Revenue from the PCS element of the arrangement is deferred at the point of sale and recognized over the term of the PCS period. Generally, the terms of the turnkey solution sales provide for billing of approximately 90% of the contract value of the arrangement prior to the time of delivery to the customer site, with an additional approximately 9% of the contract value billed upon substantial completion of the project and the balance upon customer acceptance. The contractual arrangements relative to turnkey solutions include customer acceptance provisions. However, such provisions are generally considered to be incidental to the arrangement in its entirety because customers are fully obligated with respect to approximately 99% of the contract value irrespective of whether acceptance occurs or not.

For direct sales of video processing systems component products not included as part of turnkey solutions and the direct sale of broadband transport and service management products, the Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, the fee is fixed or determinable, and collection is reasonably assured.

Significant management judgments and estimates must be made in connection with the measurement of revenue in a given period. The Company follows specific and detailed guidelines for determining the timing of revenue recognition. At the time of the transaction, the Company assesses a number of factors, including specific contract and purchase order terms, completion and timing of delivery to the common-carrier, past transaction history with the customer, the creditworthiness of the customer, evidence of sell-through to the end user, and current payment terms. Based on the results of the assessment, the Company may recognize revenue when the products are shipped or defer recognition of revenue until evidence of sell-through occurs and cash is received. In order to recognize revenue, the Company must also make a judgment regarding collectibility. Management' s judgment of collectibility is applied on a customer-by-customer basis pursuant to the Company' s credit review policy. The Company sells to customers for which there is a history of successful collection and to new customers for which no similar history may exist. New customers are subject to a credit review process, which evaluates the customers' financial position and ability to pay. New customers are typically assigned a credit limit based on a review of their financial position. Such credit limits are increased only after a successful collection history with the customer has been established. If it is determined from the outset of an arrangement that collectibility is not probable based upon the Company' s credit review process, no credit is extended and revenue is recognized on a cash-collected basis.

The Company also maintains accruals and allowances for all cooperative marketing and other programs, as necessary. Estimated sales returns and warranty costs are based on historical experience and are recorded at the time revenue is recognized, as necessary. The Company' s products generally carry a one year warranty from the date of purchase. To date, warranty costs have been insignificant to the

overall financial statements taken as a whole.

License and Royalty Revenue

License and royalty revenue consists of nonrefundable up-front license fees, some of which may offset initial royalty payments, and royalties received by the Company for products sold by its licensees. Currently, the majority of the Company' s license and royalty revenue is comprised of non-refundable license fees paid in advance. Such revenue is recognized ratably over the period during which post-contract customer support is expected to be provided or upon delivery and transfer of agreed upon technical specifications in contracts where essentially no further support obligations exist. Future license and royalty revenue is expected to consist primarily of royalties received by the Company for products sold by its licensees.

Should changes in conditions cause us to determine that the criteria for revenue recognition are not met for certain future transactions, revenue recognition for any reporting period could be adversely affected.

Accounting for stock based compensation

The Company accounts for stock-based employee compensation arrangements in accordance with the provisions of Accounting Principles Board ("APB") Opinion No. 25, "Accounting for Stock Issued to Employees," Financial Accounting Standards Board Interpretation No. 44 ("FIN 44") "Accounting for Certain Transactions Involving Stock Compensation-an Interpretation of APB 25," and complies with the disclosure provisions of SFAS No. 148, "Accounting for Stock-Based Compensation, Transition and Disclosure." Under APB No. 25, compensation expense is based on the difference, if any, on the date of the grant, between the fair value of the Company' s stock and the exercise price. The Company accounts for stock issued to non-employees in accordance with the provisions of SFAS No. 148 and the EITF Issue No. 96-18, "Accounting for Equity Instruments that are Issued to other than Employees for Acquiring, or in Conjunction with Selling Goods or Services."

The Company amortizes stock-based compensation using the straight-line method over the remaining vesting periods of the related options, which is generally four years. Pro forma information regarding net loss and earnings per share is required to be determined as if we had accounted for employee stock options under the fair value method of SFAS No. 123, as amended by SFAS No. 148.

The following table illustrates the effect on net loss and loss per share if the Company' s had applied the fair value recognition provisions of SFAS No. 123, as amended by SFAS No. 148, to stock-based employee compensation:

	Years Ended December 31,		
	2002	2003	2004
Net loss−as reported	$ (41,625)	$ (5,517)	$ (13,460)
Add:			
Unearned stock-based employee compensation expense included in reported net loss	17	–	–
Deduct			

Total stock-based employee compensation expense determined under a fair value based method for all grants, net of related tax effects	(14,053)	(3,646)	(2,338)
Net loss−pro forma	$ (55,661)	$ (9,163)	$ (15,798)
Basic and diluted net loss per share−as reported	$ (2.45)	$ (0.28)	$ (0.63)
Basic and diluted net loss per share−pro forma	$ (3.28)	$ (0.46)	$ (0.74)

The fair value of options and shares issued pursuant to the option plans and at the grant date were estimated using the Black-Scholes model. The Black-Scholes option-pricing model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option-pricing models require the input of highly subjective assumptions including the expected stock price volatility. The Company uses projected volatility rates, which are based upon historical volatility rates trended into future years. Because employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management' s opinion, the existing models do not necessarily provide a reliable single measure of the fair value of options.

The effects of applying pro forma disclosures of net loss and earnings per share are not likely to be representative of the pro forma effects on net loss/income and earnings per share in the future years, as the number of future shares to be issued under these plans is not known and the assumptions used to determine the fair value can vary significantly.

The fair value of each stock option grant has been estimated on the date of the grant using the Black-Scholes option pricing model. The Company has also estimated the fair value of the purchase rights issued from its employee stock purchase plan, using the Black-Scholes option pricing model. The Company first issued purchase rights from the 1998 Purchase Plan in fiscal 1999. The following table outlines the weighted average assumptions for both the stock options granted and the purchase rights issued:

	Stock Option Plans Year Ended December 31,			Employee Stock Purchase Plan Year Ended December 31,		
	2002	2003	2004	2002	2003	2004
Expected dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Risk-free interest rate	3.0%	2.5%	2.8%	3.5%	1.26%	1.16%
Expected volatility	95.2%	80.7%	88.0%	95.2%	80.7%	88.0%
Expected life (in years)	4.0	4.0	4.0	0.5	0.5	0.5

Generally, the Company grants options at a price equal to the fair market value of the Company' s stock on the date of the grant. The weighted-average estimated fair values of stock options granted during fiscal 2002, 2003 and 2004 as calculated using the Black-Scholes option pricing model were $1.06, $1.82 and $3.33 per share, respectively.

Advertising expenses

The Company accounts for advertising costs as expense in the period in which they are incurred. Advertising expense for the years ended December 31, 2002 and 2003 was zero, and $53 for the year ended December 31, 2004.

Research and development

Research and development expenditures are charged to expense as incurred.

Software Development Costs

Costs incurred in the research and development of new software products are expensed as incurred until technological feasibility has been established at which time such costs are capitalized, subject to a net realizable value evaluation. Technology feasibility is established upon the completion of an integrated working model. Costs incurred between completion of the working model and the point at which the product is ready for general release have not been significant. Accordingly, the Company has charged all costs to research and development expense in the period incurred.

Income taxes

Deferred income taxes result primarily from temporary differences between financial and tax reporting. Deferred tax assets and liabilities are determined based on the difference between the financial statement bases and the tax bases of assets and liabilities using enacted tax rates. A valuation allowance is established to reduce a deferred tax asset to the amount that is expected more likely than not to be realized.

Foreign currency translation

The functional currency for the Company' s foreign subsidiary is the relevant local currency. The translation from foreign currencies to U.S. dollars is performed for balance sheet accounts using current exchange rates in effect at the balance sheet date and for revenue and expense accounts using the weighted average exchange rate during the period. Adjustments resulting from such translation are reflected in other comprehensive loss as a separate component of stockholders' equity. Gains or losses resulting from foreign currency transactions are included in the results of operations and have been immaterial for all periods presented.

Net loss per share

Basic and diluted net loss per share is computed using the weighted average number of common shares outstanding. Options were

not included in the computation of diluted net loss per share because the effect would be antidilutive.

The calculation of net loss per share follows:

	Years Ended December 31,		
	2002	2003	2004
Net loss per share, basic and diluted:			
Net loss	$ (41,625)	$ (5,517)	$ (13,460)
Shares used in computing net loss per share, basic and diluted	16,957	19,996	21,392
Net loss per share, basic and diluted	$ (2.45)	$ (0.28)	$ (0.63)
Antidilutive securities, including only options, not included in net loss per share calculations	4,204	3,649	4,254

Other comprehensive (loss) income

Other comprehensive (loss) income includes unrealized gains and losses on other assets and foreign currency translation adjustments that have been previously excluded from net loss and reflected instead in stockholders' equity. The following table sets forth the components of other comprehensive (loss) income:

	Years Ended December 31,		
	2002	2003	2004
Unrealized gains (losses) on investments	$ (48)	$ 74	$ (23)
Foreign currency translation adjustment	(15)	(22)	(28)
Total	$ (63)	$ 52	$ (51)

Concentrations

The Company operates in one business segment, designing, developing and selling video content processing systems optimized for the provisioning of public broadcast digital TV services across telephone company and cable company facilities, digital video trunking systems for applications across TV broadcast, government and education facilities, and broadband data transmission systems for application over existing private campus or building facilities.

The market for these products is characterized by rapid technological developments, frequent new product introductions, changes in end-user requirements and constantly evolving industry standards. The Company' s future success depends on its ability to develop, introduce and market enhancements to its existing products, to introduce new products in a timely manner that meet customer requirements and to respond effectively to competitive pressures and technological advances. Further, the emergence of new industry standards, whether formally adopted by official standards committees or informally through widespread use of such standards by telephone companies or other service providers, could require the Company to redesign its products.

Currently, the Company relies on contract manufacturers and certain single source suppliers of materials for certain product components. As a result, should the Company' s current manufacturers or suppliers not produce and deliver inventory for the Company to sell on a timely basis, operating results could be adversely impacted.

From time to time, the Company maintains a substantial portion of its cash and cash equivalents in money market accounts with one financial institution. The Company invests its excess cash in debt instruments of the U.S. Treasury, governmental agencies and corporations with strong credit ratings. The Company has established guidelines relating to diversification and maturities in order to maintain the safety and liquidity of these assets. To date, the Company has not experienced any significant losses on its cash equivalents or short-term investments.

Recent accounting pronouncements

In December 2004, the FASB issued SFAS No. 123(R) (revised 2004), "Share-Based Payment", which amends FASB Statement No. 123 and will be effective for public companies for interim or annual periods beginning after June 15, 2005. The new standard will require the Company to expense employee stock options and other share-based payments. The FASB believes the use of a binomial lattice model for option valuation is capable of more fully reflecting certain characteristics of employee share options compared to the Black-Scholes options pricing model. The new standard may be adopted in one of three ways - the modified prospective transition method, a variation of the modified prospective transition method or the modified retrospective transition method. The Company is currently evaluating the method of adoption and the effect that the adoption of SFAS 123(R) will have on its financial position and results of operations.

In November 2004, the FASB issued SFAS No. 151, *Inventory Costs, an amendment of ARB No. 43, Chapter 4.* This statement amends the guidance in ARB No. 43, Chapter 4, *Inventory Pricing*, to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). Paragraph 5 of ARB No. 43, Chapter 4, previously stated that "...under some circumstances, items such as idle facility expense, excessive spoilage, double freight, and rehandling costs may be so abnormal as to require treatment as current period charges..." SFAS No. 151 requires that those items be recognized as current-period charges regardless of whether they meet the criterion of "so abnormal." In addition, this statement requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. The provisions of SFAS 151 shall be applied prospectively and are effective for inventory costs incurred during fiscal years beginning after June 15, 2005, with earlier application permitted for inventory costs incurred during fiscal years beginning after the date this Statement was issued. The Company' s adoption of SFAS No. 151 is not expected to have a material impact on the Company' s financial position and results of operations.

In December 2004, the FASB issued SFAS No. 153, *Exchanges of Nonmonetary Assets, an amendment of APB Opinion No. 29*. The guidance in APB Opinion No. 29, *Accounting for Nonmonetary Transactions*, is based on the principle that exchanges of nonmonetary assets should be measured based on the fair value of assets exchanged. The guidance in that Opinion, however, included certain exceptions to that principle. This Statement amends Opinion 29 to eliminate the exception for nonmonetary exchanges of similar productive assets that do not have commercial substance. A nonmonetary exchange has commercial substance if the future cash flows of the entity are expected to change significantly as a result of the exchange. SFAS No. 153 is effective for nonmonetary exchanges occurring in fiscal periods beginning after June 15, 2005. The Company' s adoption of SFAS No. 153 is not expected to have a material impact on the Company' s financial position and results of operations.

Reclassifications

Certain reclassifications have been made to prior year balances in order to conform to the current year presentation. Such reclassifications had no impact on net loss or net stockholders' equity.

NOTE 3–ACQUISITIONS:

VideoTele.com

On November 7, 2002, the Company acquired VideoTele.com, Inc. (VTC) from Tektronix, Inc. for approximately $7,155, consisting of an aggregate of 3,283 shares of the Company' s common stock valued at $3,612, acquisition related expenses consisting primarily of legal and other professional fees of $320, and a note payable to Tektronix in the amount of $3,223. The results of operations of VTC have been included in the consolidated statement of operations from November 7, 2002. As a result of this acquisition, the Company now offers video content processing systems that optimize the provisioning of digital TV services across telephone company networks.

The Company determined the fair value of the acquired intangibles, including in-process technology based on an appraisal using established valuation techniques. The in-process research and development percentage of completion was estimated to be 20%, 40% and 50% for the Astria, M2 and software product lines, respectively. The value of this in-process research and development was determined by estimating the costs to develop the purchased in-process research and development into a commercially viable product, estimating the resulting net cash flows from the sale of the product resulting from the completion of the in-process technology and discounting the net cash flows back to their present value.

The fair value of the net assets acquired of $14,624 exceeded the purchase price of $7,155, thereby resulting in negative goodwill of $7,469. All long-lived assets, including in-process research and development, were reduced on a pro rata basis by the amount of the negative goodwill. The net amount allocated to purchased in-process research and development was expensed upon acquisition because technological feasibility had not been established and no future alternative uses existed. The allocation of the purchase price was as

follows:

Net current assets	$	3,035

Property and equipment	1,006
Other assets	70
In-process research and development	562
Completed technology and patents	1,784
Contract backlog	247
Customer list	86
Maintenance contract renewals	50
Trademarks	315
	$ 7,155

The following unaudited pro forma consolidated information gives effect to the acquisition of VTC as if it had occurred on January 1, 2002, by consolidating the results of operations of VTC with the results of operations of the Company for the years ended December 31, 2002. These pro forma results exclude the nonrecurring write-off of in-process research and development of $562 related to the VTC acquisition for the year ended December 31, 2002.

	Year Ended December 31, 2002
Revenue	$ 21,895
Net loss	$ (46,904)
Net loss per share, basic and diluted	$ (2.38)

NOTE 4–BALANCE SHEET COMPONENTS:

	December 31, 2003	December 31, 2004
Inventories, net:		
Finished goods	$ 4,015	$ 5,038
Raw materials	391	184
Allowance for excess and obsolete inventory and abandoned product	(225)	(1,228)
	$ 4,181	$ 3,994
Property and equipment:		
Computers and software	$ 1,328	$ 1,811
Test equipment	2,277	3,169
Office equipment	41	56
	3,646	5,036
Less: accumulated depreciation	(1,924)	(3,162)
	$ 1,722	$ 1,874
Accrued liabilities:		
Professional services	$ 494	$ 872
Compensation	652	1,164
Other	370	288
	$ 1,516	$ 2,324

Intangibles and other assets:

	As of December 31, 2003		
	Gross Carrying Amount	Accumulated Amortization	Net Intangibles
Amortized intangible assets:			
Completed technology and patents	$ 8,125	$ (5,003)	$ 3,122
Contract backlog	247	(247)	–
Customer list	86	(14)	72
Maintenance contract renewals	50	(12)	38
Trademarks	315	(52)	263
	$ 8,823	$ (5,328)	3,495
Other non-current assets			190
			$ 3,685

	As of December 31, 2004		
	Gross Carrying Amount	Accumulated Amortization	Net Intangibles
Amortized intangible assets:			
Completed technology and patents	$ 7,922	$ (6,460)	$ 1,462
Contract backlog	247	(247)	–
Customer list	86	(27)	59
Maintenance contract renewals	50	(22)	28
Trademarks	315	(97)	218
	$ 8,620	$ (6,853)	1,767
Other non-current assets			168
			$ 1,935

The aggregate amortization expense for the years ended December 31, 2002, 2003 and 2004 was $1,304, $1,809 and 1,524, respectively.

Minimum future amortization expense for subsequent years are as follows:

2005	$ 875
2006	424
2007	363
2008	57
2009	48
	$ 1,767

NOTE 5–INDEBTEDNESS:

Line of Credit

On September 23, 2004, the Company entered into a revolving asset based credit facility ("credit facility"), with Silicon Valley Bank ("the Bank"). This facility has a term of two years and expires on September 23, 2006. Borrowings under the credit facility are formula based and limited to the lesser of $7.0 million or an amount based on a percentage of eligible accounts receivable and eligible inventories. The interest rate on outstanding borrowings is equal to the bank' s prime rate, 5.25% as of December 31, 2004, plus 0.5%. The rate may increase by 1.0% if the Company does not meet certain financial covenants. The credit facility is secured by all of the Company' s assets, and contains various covenants. Based on the maximum percentages of eligible accounts receivable and eligible inventory levels, available borrowings under this facility were $4,715 as of December 31, 2004. The Company had no outstanding borrowings under this credit facility at December 31, 2004.

Note Payable

As part of the Company' s acquisition of VTC from Tektronix, Inc. in November 2002, the Company issued a note payable to Tektronix, Inc. for $3,232, with repayment in sixty months, or November 2007. The interest rate on this note is 8% and is compounded annually. Through January 31, 2006, the accrued interest is added to the principal balance of the note. Thereafter, the Company will pay accrued interest on this note commencing on January 31, 2006 and on each April 30, July 31 and October 31 thereafter until the principal balance is paid in full. As of December 31, 2003 and 2004, this note payable balance, including accrued interest, was $3,533 and $3,816, respectively.

NOTE 6–RESTRUCTURING COSTS, IMPAIRMENT OF CERTAIN INTANGIBLE ASSETS AND PROVISION FOR INVENTORY:

Restructuring costs

During 2002, the Company recorded $9,147 in restructuring costs and related facility costs in connection with its August 2002 and November 2002 workforce reductions, which resulted in an aggregate workforce reduction of 53%.

In August 2002, the Company announced a restructuring program that included a workforce reduction, closure of its Bridgewater Township, New Jersey research and development facility and disposal of certain of its fixed assets located in New Jersey. As a result of this restructuring program, the Company recorded restructuring costs of $870, which included severance and outplacement expenses of $531 and costs to close the New Jersey facility of $339. As of December 31, 2002, the Company had paid all of the costs related to this restructuring program.

In November 2002, the Company announced a restructuring program that included a workforce reduction, termination of its Pleasanton, California headquarters facility lease and disposal of certain of its fixed assets. As a result of this restructuring program, the Company recorded restructuring costs of $8,277, which was comprised of severance and outplacement expenses of $635, costs to terminate the Pleasanton, California lease of $2,444, $2,271 for abandonment of leasehold improvements, $2,447 for abandonment of fixed assets and $480 to terminate various equipment leases. As of December 31, 2002, the Company had a remaining accrual of $473 comprised of costs to terminate various equipment leases and the severance payments, which was paid in the first quarter of 2003.

In August 2003, the Company implemented a restructuring program that included a workforce reduction and relocation. As a result of this restructuring program, the Company recorded restructuring costs of $292. The workforce reduction was approximately 11% of the Company' s employees, resulting in severance and fringe benefit expenses of approximately $192 along with relocation costs of $100. As of December 31, 2003, the Company had paid all the costs relating to this restructuring program.

Impairment of intangible assets

During the second quarter of 2003 and first quarter of 2004, the Company determined that certain of the technology acquired as part of the purchase of the ViaGate assets had become impaired. As a result, the Company recorded an impairment charge of $128 in 2003 and $202 in 2004. There was no such impairment charge in 2002.

Provision for inventory

The Company recorded a provision, within costs of goods sold, for inventory totaling $7,125 in 2002, $225 in 2003 and $1,542 in 2004. These provisions related to the net realizable value of raw materials and reserves for finished goods in excess of what the Company reasonably

expected to sell in the foreseeable future, based on the continued decline in the telecommunications market and current economic conditions. The Company sold $1,491 and $539 in 2003 and 2004, respectively of inventory that had been previously reserved for.

NOTE 7−INCOME TAXES:

The components of net deferred tax assets and liabilities as of December 31, 2003 and 2004 are as follows:

	December 31,	
	2003	2004
Deferred tax assets:		
Net operating loss carryforwards	$ 75,018	$ 88,678
Research and development credit	5,051	5,196
Deferred research and development costs	1,762	1,193
Deferred revenue	76	79
Accruals and reserves	16,179	15,981
Acquired intangibles	7,818	7,882
Other	1,755	1,943
Gross deferred tax assets	107,659	120,952
Less: valuation allowance	(107,659)	(120,952)
Net deferred tax assets	$ −	$ −

Due to the uncertainty surrounding the realization of the tax attributes in tax returns, the Company has placed a full valuation allowance against its otherwise recognizable net deferred tax assets.

At December 31, 2004, the Company has approximately $245,970 in federal and $99,050 in state net operating loss, or NOL, carryforwards to reduce future taxable income. Of these amounts, $28,053 and $12,058 represent federal and state tax deductions, respectively, from stock option compensation. The tax benefit from these deductions will be recorded as an adjustment to additional paid-in capital in the year in which the benefit is realized.

At December 31, 2004, the Company also has research and experimentation tax credit carryforwards of approximately $3,189 and $2,006 for federal and state income tax purposes, respectively. The NOL and credit carryforwards expire in 2007 to 2024.

The Company' s ability to use its federal and state net operating loss carryforwards and federal and state tax credit carryforwards to reduce future taxable income and future taxes, respectively, may be subject to restrictions attributable to equity transactions that may have resulted in a change of ownership as defined by Internal Revenue Code Section 382. In the event the Company has had such a change in ownership, utilization of these carryforwards could be severely restricted and could result in significant amounts of these carryforwards expiring prior to benefiting the Company. The Company is currently assessing whether such a change in ownership has occurred.

The Company' s effective tax rate of zero is a result of the tax benefit calculated at the statutory tax rate completely offset by the deferred tax asset valuation allowance.

NOTE 8−COMMITMENTS AND CONTINGENCIES:

Lease obligations

The Company leases office, manufacturing and warehouse space under noncancelable operating leases that expire in 2005 and 2007. In connection with the business combination in 2002, the Company assumed an operating lease that expires in October 2005. In December 2003, the Company entered into a lease agreement for a facility in Pleasanton, California that expires in June 2005.

Minimum future lease payments under operating leases at December 31, 2004 are as follows:

2005		731
2006		52
2007		27
	$	810

Rent expense for the years ended December 31, 2002, 2003 and 2004 was $2,467, $1,233, and $1,189 respectively.

Purchase commitments

The Company had noncancelable commitments to purchase finished goods inventory totaling $1,009 and $469 in aggregate at December 31, 2003 and 2004, respectively. These purchase commitments represent outstanding purchase orders submitted to the Company' s third party manufacturers for goods to be produced and delivered to the Company in 2004 and 2005.

Whalen v. Tut Systems, Inc. et al

On October 30, 2001, the Company and certain of its current and former officers and directors were named as defendants in *Whalen v. Tut Systems, Inc. et al.,* Case No. 01-CV-9563, a purported securities class action lawsuit filed in the United States District Court for the Southern District of New York. An amended complaint was filed on December 5, 2001. A consolidated amended complaint was filed on April 19, 2002. The consolidated amended complaint asserts that the prospectuses from the Company' s January 29, 1999 initial public offering and its March 23, 2000 secondary offering failed to disclose certain alleged actions by the underwriters for the offerings. The complaint alleges claims against the Company and certain of its current and former officers and directors under Section 11 of the Securities Act of 1933, as amended, and under Section 10(b) and Rule 10b-5 of the Securities Exchange Act of 1934, as amended, and alleges claims against certain of its current and former officers and directors under Sections 15 and 20(a) of the Securities Act. The complaint also names as defendants the underwriters for the Company' s initial public offering and secondary offering. Similar suits were filed in the Southern District of New York challenging over 300 other initial public offerings and secondary offerings conducted in 1999 and 2000. Therefore, for pretrial purposes, the *Whalen* action is being coordinated with the approximately 300 other suits before United States District Court Judge Shira Scheindlin of the Southern District of New York under the matter *In Re Initial Public Offering Securities Litigation.* The individual defendants in the *Whalen* action, namely, Nelson Caldwell, Salvatore D 'Auria and Matthew Taylor, were dismissed without prejudice by an October 9, 2002 Order of the Court, approving the parties' October 1, 2002 Stipulation of Dismissal. On February 19, 2003, the Court issued an Opinion and Order denying the Company' s motion to dismiss.

A stipulation of settlement for the claims against the issuer-defendants, including the Company, was submitted to the Court on June 14, 2004 in the *In Re Initial Public Offering Securities Litigation*. The settlement is subject to a number of conditions, most of which are outside of the Company' s control, including approval by the Court. The underwriters named as defendants in the *In Re Initial Public Offering Securities Litigation* (collectively, the "underwriter-defendants"), including the underwriters named in the *Whalen* suit, are not parties to the stipulation of settlement.

The stipulation of settlement provides that, in exchange for a release of claims against the settling issuer-defendants, the insurers of all of the settling issuer-defendants will provide a surety undertaking to guarantee plaintiffs a $1 billion recovery from the non-settling defendants, including the underwriter-defendants. The ultimate amount, if any, that may be paid on behalf of the Company will therefore depend on the final terms of the settlement, including the number of issuer-defendants that ultimately participate in the final settlement, and the amounts, if any, recovered by the plaintiffs from the underwriter-defendants and other non-settling defendants.

In the event that all or substantially all of the issuer-defendants participate in the final settlement, the amount that may be paid to the plaintiffs on behalf of the Company could range from zero to approximately $3.5 million, depending on plaintiffs' recovery from the underwriter-defendants and from other non-settling parties. If the plaintiffs recover at least $1 billion from the underwriter-defendants, no settlement payments would be made on behalf of the Company under the proposed terms of the settlement. If the plaintiffs recover less than $1 billion, the Company believes that its insurance will likely cover some or all of its share of any payments towards satisfying plaintiffs' $1 billion recovery deficit. Management estimates that its range of loss relative to this matter is zero to $3.5 million. Presently there is no more likely point estimate of loss within this range. As a consequence of the uncertainties described above regarding the amount the Company will ultimately be required to pay, if any, as of December 31, 2004, the Company has not accrued a liability for this matter.

***In re Tut Systems, Inc. Securities Litigation*, Civil Action No. C-01-2659-JCS (the "Securities Litigation Action").**

Beginning July 12, 2001, nine putative stockholder class action lawsuits were filed in the United States District Court for the Northern District of California against the Company and certain of its current and former officers and directors. The complaints were filed on behalf of a purported class of investors who purchased the Company' s stock during the period between July 20, 2000 and January 31, 2001, seeking unspecified damages. The complaints allege that the Company and certain of its current and former officers

and directors made false and misleading statements about the Company' s business during the putative class period. Specifically, the complaints allege violations of Section 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended. The complaints were consolidated under the name *In re Tut Systems, Inc. Securities Litigation*, Master File No. C-01-2659-CW (the "Securities Litigation Action"). Lead plaintiffs and lead counsel for plaintiffs were appointed. Plaintiffs filed a consolidated class action complaint on February 4, 2002. Defendants filed a Motion to Dismiss on March 29, 2002. On August 15, 2002, the Court granted in part and denied in part the Motion to Dismiss. On September 23, 2002, plaintiffs filed an amended complaint. Defendants filed a Motion to Dismiss the amended complaint, and on August 6, 2003 the Court granted in part that Motion. On September 24, 2003, defendants answered the remaining allegations of the amended complaint. Defendants reached a settlement of the Securities Litigation Action in December 2003. Subject to preliminary and final approval by the Court, the Company' s insurance carriers agreed to pay $10 million, on behalf of the Company, to settle the suit. The settlement includes a release of all defendants. The insurance carriers paid the settlement amount to plaintiffs' escrow agent in January 2004. The Court preliminarily approved the settlement on February 24, 2004 and finally approved the settlement on May 14, 2004. In the second quarter of 2004, the amounts were paid by the Company' s insurance carriers and the $10 million was removed from the insurance settlement receivable and the legal settlement liability. The settlement became final on June 15, 2004, the date when the appeals period ended.

Lefkowitz v. D' Auria, et al

On March 19, 2003, Chesky Lefkowitz, a stockholder of the Company, filed a derivative complaint entitled *Lefkowitz v. D' Auria, et al.*, No. RG03087467, in the Superior Court of the State of California, County of Alameda, against certain of the Company' s current and former officers and directors. The complaint alleges causes of action for breach of fiduciary duty, gross negligence, breach of contract, unjust enrichment, and improper insider stock trading based on the same factual allegations contained in the Securities Litigation Action. The complaint seeks unspecified damages against the individual defendants on behalf of the Company, equitable relief, and attorneys' fees. On May 21, 2003, the Company and the individual defendants filed separate demurrers to the complaint. The Company and the individual defendants reached a settlement of the derivative action in December 2003. The settlement involves the Company's adoption of certain corporate governance measures and payment of attorneys' fees and expenses to the derivative plaintiff's counsel in the amount of $722,000 and an incentive award to the derivative plaintiff in the amount of $3,000. The Company recorded a liability in its December 31, 2003 financial statements for the proposed amount of the settlement. In addition, because the insurance carrier involved in this suit agreed to pay the entire $725,000 settlement amount and, therefore, recovery from the insurance carrier was probable, a receivable was also recorded for the same amount. Accordingly, there was no impact to the statement of operations because the amounts of the settlement and the insurance recovery fully offset each other. The settlement was approved by the Court on January 12, 2004, and, shortly thereafter, the insurance carrier paid the settlement amount to the derivative plaintiff's counsel. Therefore, in the first quarter of 2004, the $725,000 was removed from the insurance settlement receivable and the legal settlement liability. The settlement includes a release of the Company and the individual defendants.

The Company is subject to other legal proceedings, claims and litigation arising in the ordinary course of business. The Company's management does not expect that the ultimate costs to resolve these matters will have a material adverse effect on the Company's consolidated financial position, results of operations, or cash flows.

NOTE 9–STOCKHOLDERS' EQUITY.

Preferred stock

The Company has 5,000 shares of undesignated preferred stock, $0.001 par value, authorized for issuance. The Board of Directors can issue, in one or more series, this preferred stock and fix the voting rights, liquidation preferences, dividend rights, repurchase rights, conversion rights, redemption rights and terms and certain other rights and preferences with stockholder action. There was no preferred stock issued and outstanding at December 31, 2003 or 2004.

Common stock

In October 2004, the Company completed the sale of 4,600 shares of its common stock at a price of $2.25 per share for gross proceeds of $10,350. Net proceeds from the offering were approximately $8,711.

NOTE 10–EQUITY BENEFIT PLANS

Stock option plans

In November 1993, the Company adopted the 1992 Stock Plan (the "1992 Plan"), under which the Company may grant both incentive stock options and nonstatutory stock options to employees, consultants and directors. Options issued under the 1992 Plan can have an exercise price of no less than 85% of the fair market value, as defined under the 1992 Plan, of the stock at the date of grant. The 1992 Plan, including amendments, allows for the issuance of a maximum of 178 shares of the Company's common stock. This number of

shares of common stock has been reserved for issuance under the 1992 Plan. The Company is no longer granting stock options from the 1992 Plan. As stock options are terminated or cancelled from the 1992 Plan, the stock options are being retired and are no longer available for future grant.

The Company's 1998 Stock Plan (the "1998 Plan") was adopted by the Board of Directors in July 1998 and was approved by the stockholders in September 1998 and has rights and privileges similar to the 1992 Plan. The 1998 Plan allows for the issuance of a maximum of 1,000 shares of the Company's common stock with annual increases starting in 2000, subject to certain limitations. In January 2000, the 1998 Plan was amended to increase the maximum number of shares that may be issued to 1,358. In January 2001, the 1998 Plan was amended to increase the maximum number of shares that may be issued by 375 to 1,733. In January 2002, the 1998 Plan was amended to increase the maximum number of shares by 375 to 2,108.

The Company' s 1999 Nonstatutory Stock Option Plan (the "1999 Plan") was adopted by the Board of Directors in December 1999. The 1999 Plan allows for the issuance of a maximum of 1,000 shares of the Company' s common stock. Additions to the Plan may be approved by the Board of Directors. The 1999 Plan has rights and privileges similar to the 1998 Plan. In April 2000, the 1999 Plan was amended to increase the maximum number of shares that may be issued to 1,425. In October 2000, the 1999 Plan was amended to increase the maximum number of shares that may be issued to 1,825. In October 2002, the 1999 Plan was amended to increase the maximum number of shares that may be issued to 2,625.

Generally, stock options are granted with vesting periods of four years and have an expiration date of ten years from the date of grant. However, in the event of a change in control, as defined in our Change in Control plans adopted June 2000, employees who are terminated as a direct result of the change in control will be entitled to certain separation benefits including acceleration of unvested options ranging from six months to full vesting and severance pay ranging from one to eighteen months. Benefits may be limited in certain circumstances due to certain tax code provisions.

Activity under the 1992, 1998 and 1999 Plans (the "Plans") are summarized as follows:

			Outstanding Options			
	Shares Available For Grant	**Options Exercised**	**Number of Shares**	**Price Per Share**	**Aggregate Price**	**Weighted Average Exercise Price**
Balance, January 1, 2002	648	1,121	2,904	0.11-68.25	21,911	7.54
Options authorized	1,175	–	–	–	–	–
Options granted	(2,371)	–	2,371	0.76-1.81	3,208	1.35
Options exercised	–	11	(11)	0.48-1.45	(12)	1.09
Options terminated	1,104	–	(1,060)	0.11-54.88	(4,799)	4.53
Balance, December 31, 2002	556	1,132	4,204	0.11-68.25	20,308	4.83
Options authorized	375					
Options granted	(604)		604	1.25-5.77	1,405	2.33
Options exercised		440	(440)	0.11-3.75	(831)	1.89
Options terminated	719		(719)	1.21-54.88	(1,364)	1.89
Balance, December 31, 2003	1,046	1,572	3,649	$ 0.11-68.25	$ 19,518	$ 5.35
Options authorized	375					
Options granted	(969)		969	1.95-6.16	5,003	5.19
Options exercised		226	(226)	0.36-3.75	(324)	1.43
Options terminated	138		(138)	1.21-41.75	(1,439)	10.35
Balance, December 31, 2004	590	1,798	4,254	$ 0.11-68.25	$ 22,758	$ 5.35

The Company uses the Black-Scholes option pricing model to value options granted to consultants. The total estimated fair value of these grants during the periods presented was not significant and was expensed over the applicable vesting periods. No options were granted to consultants during 2003 or 2004.

At December 31, 2002, 2003, and 2004 vested options to purchase 2,014, 2,432 and 3,126 shares of common stock, respectively were unexercised. The weighted average exercise price of these options was $8.29, $8.29, and $7.10 per share for 2002, 2003, and 2004 respectively.

The following table summarizes information about stock options outstanding at December 31, 2004:

Range of Exercise Prices	Options Outstanding: Number Outstanding	Options Outstanding: Weighted Average Remaining Contractual Life (years)	Options Outstanding: Weighted Average Exercise Price	Options Exercisable: Number Exercisable	Options Exercisable: Weighted Average Exercise Price
$0.52-1.09	151	6.79	$ 0.85	146	$ 0.86
1.21-1.21	491	7.85	1.21	438	1.21
1.25-1.43	441	7.90	1.40	313	1.41
1.45-1.47	355	7.49	1.46	288	1.46
1.49-1.49	500	6.48	1.49	495	1.49
1.55-2.15	516	7.67	2.00	398	2.00
2.19-4.47	473	6.85	3.48	356	3.56
4.60-5.01	434	9.17	4.98	120	4.98
5.07-5.88	436	9.09	5.85	117	5.87
6.16-68.25	457	5.16	36.33	455	36.49
	4,254			3,126	

Employee stock purchase plan

The Company' s 1998 Employee Stock Purchase Plan (the "1998 Purchase Plan") was adopted by the Board of Directors in July 1998 and was approved by the stockholders in September 1998. Under the 1998 Purchase Plan, an eligible employee may purchase shares of common stock from the Company through payroll deductions of up to 15% of his or her compensation, at a price per share equal to 85% of the lesser of the fair market value of the Company' s common stock as of the first or last trading day on or after May 1 and November 1 and ending on the last trading day of the period six (6) months later. In 1998, the Company reserved 250 shares of common stock for issuance under the 1998 Purchase Plan. In 2001, the Company allocated an additional 250 shares of common stock, increasing the number of shares reserved for issuance under the 1998 Purchase Plan to 500 of which 345 have been issued, leaving 155 for future issuances under the 1998 Purchase Plan as of December 31, 2004. The 1998 Purchase Plan is subject to annual increases, subject to certain limitations.

401(k) plan

In April 1995, the Company adopted the Tut Systems' Inc. 401(k) Plan (the "401(k) Plan") covering all eligible employees. Through December 31, 2001, contributions were limited to 15% of each employee' s annual compensation, and further limited by IRS annual contribution limitations. Effective January 1, 2002, contributions are allowed up to 100% of each employee' s annual compensation, but are still limited by IRS annual contribution limitations, depending on the age of the eligible employee. Contributions to the 401(k) Plan by the Company are discretionary. The Company did not make any contributions for the years ended December 31, 2002, 2003, and 2004.

NOTE 11–SEGMENT INFORMATION:

Revenue

The Company currently targets its sales and marketing efforts to both public and private service providers and users across two related markets. The Company currently operates in a single business segment as there is only one measurement of profitability for its operations. Revenue relating to the broadband transport and service management products was $8,245, $8,263 and $6,962 for the years ended December 31, 2002, 2003 and 2004, respectively. Revenue related to video processing systems was $1,126, $23,929 and $18,030 for the years ended December 31, 2002, 2003 and 2004, respectively. Revenues are attributed to the following countries based on the location of customers:

	Years Ended December 31,		
	2002	2003	2004
United States	$ 5,345	$ 26,263	$ 19,167
International:			
Canada	402	2,479	1,708
China	17	1,124	1,699
Ireland	405	558	1,275
Japan	1,340	393	5
All other countries	1,862	1,375	1,138
	$ 9,371	$ 32,192	$ 24,992

One customer, Ingram Micro, accounted for 11% of the Company' s revenue for the year ended December 31, 2002. No individual customer accounted for greater than 10% of the Company' s revenue for the years ended December 31, 2003 and 2004.

Products

The Company designs, develops, and sells video processing systems and broadband transport and service management products. Video processing systems include both digital TV headend systems and video systems. The digital TV headend system enables telephony-based service providers to transport broadcast quality digital video signals across their networks and our digital video transmission systems optimize the delivery of video signals across enterprise, government and education networks. The broadband transport and service management products enable the transmission of broadband data over existing hotels and private campus networks.

Long-lived Assets

The Company has long-lived assets, which consist of property and equipment, intangibles, and other assets. Long-lived assets are located in the following countries:

	December 31,	
	2003	2004
United States	$ 3,654	$ 3,023
United Kingdom	1,753	786
	$ 5,407	$ 3,809

NOTE 12–PRODUCT WARRANTY

The Company generally warrants its products for a specific period of time against material defects. The Company provides for the estimated future costs of warranty obligations in costs of goods sold when the related revenue is recognized. The accrued warranty costs represents the best estimate at the time of sale of the total costs that the Company expects to incur to repair or replace product parts, which fail while still under warranty. The amount of accrued estimated warranty costs are primarily based on historical experience as to product failure as well as current information on repair costs. On a quarterly basis, the Company reviews the accrued balances and updates the historical warranty cost trends. Warranty costs for the years ended December 31, 2002, 2003 and 2004 were immaterial to the overall financial statements.

NOTE 13 – SUBSEQUENT EVENT

On January 7, 2005, the Company entered into an Agreement and Plan of Merger with CoSine Communications, Inc. ("CoSine"). The proposed merger will be a stock-for-stock transaction valued at approximately $24.1 million. Upon closing, the Company will issue approximately 6.0 million shares of its common stock to the shareholders of CoSine. The transaction is expected to result in net cash to the Company of approximately $22.75 million, and is expected to close during the second quarter of 2005. The Company is acquiring CoSine primarily to provide additional financial resources. The Company will honor CoSine's existing customers' support agreements, but does not expect to offer its products for sale to new customers. The Company will not have any additional employees or facilities as a result of the transaction.

The Agreement and Plan of Merger is conditioned upon approval of the merger by the holders of a majority of the shares of CoSine common stock, and approval of the issuance of additional shares of common stock by the holders of a majority of the shares of the Company's common stock, as well as other customary closing conditions.

On February 11, 2005 the Company entered into an Agreement and Plan of Merger and Reorganization with Copper Mountain Networks, Inc. ("*Copper Mountain*"). The proposed merger will be a stock-for-stock transaction valued at approximately $10 million. Upon closing the Copper Mountain transaction, the Company will issue approximately 2.5 million shares of its common stock to the stockholders of Copper Mountain. The Copper Mountain transaction is conditioned upon the approval of the merger by a majority of the shares of Copper Mountain common stock, and other customary closing conditions.

SUPPLEMENTARY DATA

The following table presents certain unaudited consolidated quarterly financial information for each of the eight quarters ended December 31, 2004. In the opinion of management, this quarterly information has been prepared on the same basis as the consolidated financial statements and includes all adjustments necessary to present fairly the information for the periods presented. The results of operations for any quarter are not necessarily indicative of results for the full year or for any future period.

	Quarter Ended							
	Mar. 31, 2003	Jun. 30, 2003	Sep. 30, 2003	Dec. 31, 2003	Mar. 31, 2004	Jun. 30, 2004	Sep. 30, 2004	Dec. 31, 2004
	(in thousands, except per share data) (unaudited)							
Total revenues	$ 6,601	$ 7,865	$ 8,522	$ 9,204	$ 6,177	$ 5,123	$ 6,672	$ 7,020
Gross profit (loss)	3,342	3,850	4,771	4,583	1,048	1,676	2,570	2,718
Net loss	(2,231)	(2,025)	(742)	(519)	(4,450)	(3,635)	(2,743)	(2,632)
Net loss per share, basic and diluted	$ (0.11)	$ (0.10)	$ (0.04)	$ (0.03)	$ (0.22)	$ (0.18)	$ (0.13)	$ (0.11)
Shares used in computing net loss per share, basic and diluted	19,801	19,894	20,040	20,202	20,297	20,396	20,453	24,499

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

There has been no change in our independent registered public accounting firm during the past two fiscal years. There have been no disagreements with our independent registered public accounting firm on our accounting or financial reporting or auditing scope of procedure that would require our registered public accounting firm to make reference to such disagreement in their report on our consolidated financial statements and financial statement schedule, or otherwise require disclosure in this Annual Report on Form 10-K.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Fiscal Year 2003

Our Chief Executive Officer and Chief Financial Officer carried out an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of December 31, 2003. This evaluation included various steps that our Chief Executive Officer and Chief Financial Officer undertook in an effort to ensure that our disclosure controls and procedures were designed to ensure that information required to be disclosed in our SEC reports was recorded, processed, summarized and reported within the time periods specified by the SEC and accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely discussions regarding required disclosure. This evaluation also included consideration of our internal controls and procedures for the preparation of our financial statements.

In January 2004 in connection with the completion of its audit of our financial statements for the year ended December 31, 2003, PricewaterhouseCoopers LLP, the Company' s independent registered public accounting firm, advised management and the audit committee of the Board of Directors that it had identified deficiencies in our internal controls and processes relating to inventory management and reporting that it considered to be material weaknesses, as defined by Statement on Auditing Standards No. 60, "Communication of Internal Control Related Matters Noted in an Audit." The material weaknesses that PricewaterhouseCoopers identified related to inventory controls and the accounts payable process for the Company' s Videotele.com business, which the Company acquired in November 2002. Specifically:

1. Our internal controls were inadequate to properly record our inventory quantities in an accurate and timely manner; and

2. Our accounts payable process failed to adequately reconcile our accounts payable records with suppliers' records, considering what the suppliers had shipped to us prior to period end.

While these material weaknesses had an immaterial effect on our reported results, they nevertheless constituted deficiencies in our disclosure controls. In light of these material weaknesses and the requirements enacted by the Sarbanes-Oxley Act of 2002 and the related rules and regulations adopted by the SEC, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2003, our disclosure controls and procedures needed improvement and were not effective. Despite those deficiencies in our disclosure controls, management believed that there were no material inaccuracies, or omissions of material facts necessary to make the statements not misleading in light of the circumstances under which they were made in the Form 10-K for our fiscal year ended December 31, 2003.

At the time of our acquisition of the Videotele.com business in November 2002, we had in place disclosure controls and procedures and processes for our existing business (i.e., our pre-November 2002 business) that our CEO and CFO at the time believed to be sufficient to record, process, summarize and report information required to be reported within the time periods specified by the SEC. Likewise, we had in place internal controls that our CEO and CFO believed at the time of the VTC acquisition to be sufficient to "provide reasonable assurance regarding the reliability of financial reporting and preparation of financial statements for external purposes in accordance with generally accepted accounting principles."

Since December 31, 2002, we continued to review our disclosure controls and procedures and internal controls periodically in connection with our Form 10-Q filings. Throughout 2003, our CEO and CFO continued to believe that our disclosure controls and procedures and internal controls allowed us to provide all material and necessary disclosure in a timely manner, as required by the Exchange Act and the applicable rules thereunder.

In January 2004, during the audit of our financial statements for the year ended December 31, 2003, PricewaterhouseCoopers discovered the material weaknesses noted above and brought these weaknesses to our attention. Based on discussions with PricewaterhouseCoopers and the audit committee of our Board of Directors, we worked throughout our year-end 2003 accounting close and audit to identify the nature, scope and materiality of these weaknesses in our internal controls and their impact on our fiscal year 2003 financial statements and to determine the extent to which these internal control weaknesses might adversely affect our disclosure controls and procedures. Based on further detailed review of our internal controls as they relate to inventory and accounts payable during the fourth quarter of fiscal 2003, we determined that the accounts payable process had failed to record certain liabilities associated with VTC products that we purchased, principally from our contract manufacturer and certain other suppliers. We quantified this internal control weakness relating to accounts payable recording by reconciling our records to that of our contract manufacturer and reviewing our liabilities with other vendors. We quantified the inventory process control weakness by taking complete physical inventories at each VTC inventory location and reconciling the results to our records. Upon completion of our analysis and testing, we identified an additional charge of approximately $34,000 to cost of goods sold related to the internal control weaknesses identified above. We recorded this charge prior to issuing our financial statements for the year ended December 31, 2003. In addition to our review of the financial statements for the year ended December 31, 2003, we re-confirmed that our accounts payable recording and inventory controls were effective for the year ended December 31, 2002.

During our review of these internal controls weaknesses, we identified the cause of these internal control weaknesses to be the result of prior VTC accounting staff turnover that occurred during the first quarter of 2003. During this quarter, key accounting staff of VTC left the company without sufficient time to transition all of the internal controls and institutional knowledge to our remaining finance and accounting staff.

In addition to identifying the above internal control weaknesses relating to inventory and the accounts payable process, we also tested our other internal controls to determine whether there were other such material weaknesses aside from the inventory and accounts payable weaknesses mentioned above that affected our financial statements for the fiscal year ended December 31, 2003. In particular, we tested our other internal controls by reviewing processes, analytical reviews and substantive testing that included other third-party confirmations and by reviewing activity subsequent to year-end 2003. Based on these tests, we did not identify any other material weaknesses in internal controls. Therefore, our CEO and CFO believed at the time of the filing of the Form 10-K for our fiscal year ended December 31, 2003 on February 2, 2004 that they had reasonable grounds to conclude that the weaknesses in internal controls related solely to those items mentioned above and resulted in an immaterial charge of approximately $34,000.

Based on their review of our internal controls as described above, our CEO and CFO also assessed our disclosure controls and procedures for the fiscal year ended December 31, 2003. Our CEO and CFO believed at the time of the filing of the Form 10-K for our fiscal year ended December 31, 2003 that they had reasonable grounds to conclude that, other than the inventory and accounts payable weaknesses that PricewaterhouseCoopers had identified, there were no other material weaknesses in our disclosure controls and procedures and that the information required to be reported in the Form 10-K was recorded, processed, summarized and reported within the time periods specified by the applicable Exchange Act rules.

In order to ensure that we have eliminated the two weaknesses in our internal controls for purposes of future reporting, we undertook significant efforts to improve our processes and procedures as they relate to inventory reporting and accounts payable reconciliation. The audit committee has taken an active role in these efforts, including overseeing management' s implementation of

corrective measures. With respect to inventory management, we now perform physical inventory counts at least once at the end of each quarter. We have implemented improved inventory systems and accounting controls and have hired an additional full-time staff accountant to account for and control our inventory accounting, given our operations manager company-wide responsibility for inventory management, have expanded our inventory receiving process to include remote locations, as appropriate, and now reconcile inventory to each customer order and have reiterated to key operations and accounting personnel the importance of proper inventory management and control. Regarding accounts payable reconciliation, we now confirm our key accounts payable balances with our vendors and reconcile the confirmations to our accounting records on a quarterly basis.

Evaluation of Fiscal Year 2004

Evaluation of disclosure controls and procedures. Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, as of the end of the period covered by this report (the “Evaluation Date”). Based on this evaluation, our principal executive officer and principal financial officer concluded as of the Evaluation Date that our disclosure controls and procedures were effective such that the information relating to the Company, including our consolidated subsidiaries, required to be disclosed in our Securities and Exchange Commission

(“SEC”) reports (i) is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and (ii) is accumulated and communicated to the Company’ s management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in internal control over financial reporting. There were no changes in our internal control over financial reporting which occurred during the fourth quarter of fiscal year 2004 and which have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

Our Board of Directors is currently comprised of five directors who are divided into three classes with overlapping three-year terms. A director serves in office until his or her respective successor is duly elected and qualified or until his or her earlier death or resignation. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of an equal number of directors. There are no family relationships among any of of directors and executive officers

Name	Age	Position with the Company	Director Since
Class I Director			
Clifford H. Higgerson	65	Director	1993
Class II Directors			
Neal Douglas	46	Director	1997
George Middlemas	58	Director	1995
Class III Director nominees			
Salvatore D’ Auria	49	Chairman of the Board, President and Chief Executive Officer	1994
Roger H. Moore	63	Director	1997

Class I Director With Term Expiring In 2008

Clifford Higgerson has served as one of our directors since July 1993. Since July 1987, Mr. Higgerson has been a partner of Com Ventures, a venture capital firm specializing in the communications industry, and since September 1991, he has been a partner of Vanguard Venture Partners, a venture capital firm. He has also served as a Managing Partner and Director of Research for Hambrecht & Quist, and as a special limited partner and Director of the Communications Group for L.F. Rothschild, Unterberg, Towbin. Mr. Higgerson earned his B.S. in Electrical Engineering from the University of Illinois and an M.B.A. in Finance from the University of California at Berkeley.

Class II Directors With Terms Expiring In 2006

Neal Douglas has served as one of our directors since December 1997. From December 1999 to October 2003, he served as the Managing General Partner of Spectrum Equity Investors, L.P., a venture capital firm investing exclusively in the communications industry. Mr. Douglas was a co-founder of AT&T Ventures, the venture capital affiliate of AT&T Corporation, and has served as a General Partner since January 1993. From May 1989 to January 1993, Mr. Douglas was a partner of New Enterprise Associates, a venture capital firm. Prior to this, he was an investment professional with Crosspoint Venture Partners and was a member of the technical staff at Bell Laboratories.

Mr. Douglas holds a B.S. in Electrical Engineering from Cornell University, an M.S. in Electrical Engineering from Stanford University, and an M.B.A. from the University of California at Los Angeles.

George Middlemas has served as one of our directors since March 1995. Mr. Middlemas has been managing General Partner of Apex Venture Partners, a venture capital firm, since 1991. Prior to that time, Mr. Middlemas served as Vice President and Principal with Inco Venture Capital Management and as a Vice President and member of the investment committee of Citicorp Venture Capital. Mr. Middlemas also serves as a member of the Board of Directors of Pure Cycle Corporation, a water and water recycling technology company. Mr. Middlemas holds a B.A. in History and Political Science from The Pennsylvania State University, an M.B.A. from Harvard University, and an M.A. in Political Science from the University of Pittsburgh.

Class III Directors With Terms Expiring In 2007

Salvatore D' Auria has served as our President, Chief Executive Officer and one of our directors since August 1994. Since January 2000, Mr. D' Auria has served as Chairman of our Board of Directors. He served as our Chief Operating Officer from May 1994 to August 1994. From August 1993 to May 1994, Mr. D' Auria performed various consulting services for networking software companies. Mr. D' Auria joined Central Point Software in October 1989 as Director of Product Marketing and was appointed as Vice President of Marketing in April 1990, and held various Vice President positions until August 1993. From 1980 to 1989, Mr. D' Auria served in various marketing and management positions at Hewlett Packard. Mr. D' Auria holds a B.S. in Physics from Clarkson University.

Roger Moore has served as one of our directors since March 1997. From October 1998 to December 2001, Mr. Moore served as President and Chief Executive Officer of Illuminet Holdings, Inc., a provider of network, database and billing services to the communications industry. Mr. Moore retired effective December 31, 2001. Mr. Moore also served as a director of Illuminet Holdings from July 1998 to December 2001. From January 1996 to August 1998, Mr. Moore served as President and Chief Executive Officer of Illuminet. From September 1998 to October 1998, Mr. Moore served as President, Chief Executive Officer and a director of VINA Technologies, Inc., a telecommunications equipment company. Mr. Moore has served as a director of Western Digital Corporation since 2000 and as a director of Verisign, Inc. since February 2002. Mr. Moore holds a B.S. in General Science from Virginia Polytechnic Institute and State University.

There are no family relationships among any of the Company' s directors or executive officers.

Board of Directors and Committees

Our Board of Directors held a total of nine meetings during 2004. No director attended fewer than 75% of the meetings of our Board of Directors. No director attended fewer than 75% of the meetings of committees, if any, upon which such director served. Certain matters approved by our Board of Directors were approved by unanimous written consent. All directors, other than Mr. D' Auria, are independent for purposes of the Nasdaq listing standards.

The Audit Committee of our Board of Directors currently is composed of Neal Douglas, Clifford H. Higgerson and Roger Moore. Our Audit Committee is responsible for overseeing the services provided by the Company' s independent registered public accounting firm, and reviews our annual audit and meets with our independent auditors to review our internal accounting procedures and financial management practices. Our Audit Committee held a total of ten meetings during 2004. The Board of Directors has determined that Cliff Higgerson is an audit committee financial expert as defined under applicable SEC rules. Each of the members of the Audit Committee is independent for purposes of Nasdaq listing standards.

The Compensation Committee of our Board of Directors currently is composed of Neal Douglas and Roger Moore. Our Compensation Committee makes recommendations concerning salaries, stock options, incentives and other forms of compensation for our directors, officers and other employees, subject to ratification by our full Board of Directors. Our Compensation Committee is also empowered to administer our various stock plans. Our Compensation Committee held one meeting during 2004. Each of the members of the Compensation Committee is independent for purposes of Nasdaq listing standards.

The Governance and Nominating Committee of our Board of Directors currently is composed of Neal Douglas and Roger Moore. Our Governance and Nominating Committee reviews and makes recommendations to the Board of Directors regarding matters concerning corporate governance, reviews the composition and evaluates the performance of the Board of Directors and related committees, selects, or recommends director nominees for the Board of Directors and related committees, and evaluates director compensation. Our Governance and Nominating Committee held one meeting during 2004. Each of the members of the Governance and Nominating Committee is independent for purposes of the Nasdaq listing standards.

Code of Ethics

We have adopted a Code of Ethics for Principal Executive Officers, Principal Financial Officers and Principal Accounting Officers, which, in addition to our Audit Committee charter and Governance and Nominating Committee charter, is available on our website at *www.tutsystems.com*.

Director Nominations

The Governance and Nominating Committee will consider recommendations for candidates to the Board of Directors from stockholders holding no less than 1,000 shares of the Company' s common stock (as may be adjusted from time to time based on stock splits, stock combinations and the like) continuously for at least twelve months prior to the date of the submission of the recommendation. A stockholder that desires to recommend a candidate for election to the Board of Directors must direct the recommendation in written correspondence by letter to Tut Systems, Inc., attention Chief Financial Officer, at the Company' s offices at 6000 SW Meadows Rd., Suite 200, Lake Oswego, Oregon 97035. Such written letter must include the candidate' s name, home and business contact information, detailed biographical data, relevant qualifications, information regarding any relationships between the candidate and the Company within the last three years, evidence of the required ownership of Company stock by the recommending stockholder, a statement from the recommending stockholder in support of the candidate, personal references of the nominee and a written indication by the candidate of her/his willingness to serve, if elected. The Governance and Nominating Committee does not believe that there are specific, minimum qualifications that must be met by a candidate for the Board of Directors or that there are specific qualities or skills that are necessary for one or more of the members of the Board of Directors to possess. In order to identify and evaluate nominees for director, including nominees recommended by security holders, the Governance and Nominating Committee regularly reviews the current composition and size of the Board of Directors, reviews qualifications of nominees, evaluates the performance of the Board of Directors as a whole, evaluates the performance and qualifications of individual members of the Board of Directors eligible for re-election at the annual meeting of stockholders, considers the need of the Board of Directors and its respective committees, considers such factors as issues of character, judgment, independence, age, expertise, diversity of experience, length of service, other commitments and potential conflicts of interest and considers such other factors as the Governance and Nominating Committee may deem appropriate.

ITEM 11. EXECUTIVE COMPENSATION

Summary Compensation Table.

The following table sets forth the compensation earned by our Chief Executive Officer and our four other most highly compensated executive officers for services to us in all capacities during each of the years ended December 31, 2004, 2003, and 2002:

Summary Compensation Table

					Long-Term Compensation Awards	
	Annual Compensation				Securities Underlying	All Other
Name and Principal Position	Year	Salary	Bonus	Other(1)	Options	Compensation
Salvatore D' Auria	2004	$ 325,000	$ 100,000	$ 123,339(2)	200,000	$ –
President and Chief Executive Officer	2003	325,000	–	–	150,000	$ –

	2002	333,750	101,250	–	130,000	–
Randall Gausman(3)	2004	200,000	30,000	–	50,000	–
Vice President, Finance and Administration, Chief Financial Officer and Secretary	2003	137,617	–	–	170,000	–
Mark Carpenter(4)	2004	185,000	20,000	–	10,000	37,500(5)
Vice President of Partner Development	2003	185,000	–	–	–	37,500(5)
	2002	189,981	18,750	–	90,000	37,500(5)
Robert Noonan(6)	2004	231,507(7)	20,000	–	75,000	
Vice President, Global Sales	2003	201,514(7)	–	–	20,000	–
	2002	26,400(7)	–	–	150,000	–
Craig Bender	2004	160,000	20,000	–	50,000	–
Vice President of Marketing and	2003	141,243	10,000	–	50,000	–
Corporate Development	2002	138,624	6,344	–	45,000	–

(1) Other annual compensation in the form of perquisite and other personal benefits, securities or property has been omitted in those cases where the aggregate amount of such compensation is less than the lesser of $50,000 or 10% of the total of annual salary and bonus for the executive officer.

(2) Consists of relocation costs of $123,339 paid to Mr. D' Auria during 2004.

(3) Mr. Gausman joined our Company on April 30, 2003.

(4) Mr. Carpenter resigned on February 28, 2005.

(5) On April 28, 2000, we entered into a loan agreement and secured promissory note with Mr. Carpenter in the amount of $150,000 to be used toward the purchase of Mr. Carpenter' s principal residence. This loan bears no interest and is forgiven at a rate of 25% on April 28, 2001, the first year anniversary date, and 25% on each subsequent yearly anniversary date through April 28, 2004. This loan forgiveness is contingent upon Mr. Carpenter' s continued employment. The outstanding principal on the loan is due on April 28, 2004. Pursuant to the terms of this loan agreement, we forgave $37,500 of this loan on April 28, 2004, April 28, 2003, April 28, 2002 and April 28, 2001.

(6) Mr. Noonan joined our Company on November 7, 2002 with the acquisition of VideoTele.com.

(7) Consists of commissions of $71,507 paid to Mr. Noonan during 2004, commissions of $41,514 paid during 2003 and commissions of $2,092 paid during 2002.

Stock Option Information.

The following table sets forth certain information for the year ended December 31, 2004 with respect to each grant of stock options to our Chief Executive Officer and our four other most highly compensated executive officers:

Option Grants During the Year Ended December 31, 2004

	Individual Grants	Potential Realizable

Name	Number of Securities Underlying Options Granted	Percent of Total Options Granted to Employees in 2004(3)	Exercise Price Per Share(4)	Expiration Date	Value at Assumed Annual Rates of Stock Price Appreciation For Option Term(1) 5%	10%
Salvatore D' Auria	200,000(2)	20.7%	$ 5.88	2/5/2014	$ 739,580	$ 1,874,241
Randall Gausman	50,000(2)	5.2	5.88	2/5/2014	184,895	468,560
Mark Carpenter	10,000(2)	1.0	5.88	2/5/2014	36,979	93,712
Robert Noonan	75,000(2)	7.8	5.88	2/5/2014	277,342	702,840
Craig Bender	50,000(2)	5.2	5.88	2/5/2014	184,895	468,560

(1) In accordance with the rules of the Securities and Exchange Commission, shown are the gains or "options spreads" that would exist for the respective options granted. These gains are based on the assumed rates of annual compound stock price appreciation of 5% and 10% from the date the option was granted over the full option term. These assumed annual compound rates of stock price appreciation are mandated by the rules of the Securities and Exchange Commission and do not represent our estimate or projection of future prices of our common stock.

(2) The options vest as to $^{1}/48^{th}$ of the total number of shares subject to the option each month following the date of grant.

(3) In 2004 the Company granted employees options to purchase an aggregate of 964,000 shares of our common stock. This total does not include options granted to non-employees of the Company, such as directors and consultants.

(4) The exercise price per share of each option was equal to the fair value of our common stock based on the closing price per share of our common stock as quoted on the Nasdaq National Market on the trading day immediately prior to the date of grant.

Aggregate Option Exercises and Option Values.

The following table sets forth information with respect to our Chief Executive Officer and our four other most highly compensated executive officers concerning option exercises for the fiscal year ended December 31, 2004 and exercisable and unexercisable options held as of December 31, 2004:

Name	Number of Shares Acquired on Exercise	Value Realized	Number of Securities Underlying Unexercised options December 31, 2004 Exercisable	Unexercisable	Value of Unexercised in-the-money options December 31, 2004 (1) Exercisable	Unexercisable
Salvatore D' Auria	36,409	$ 64,515	1,043,179	203,821	$ 1,907,595	$ 151,305
Randall Gausman	–	–	118,333	111,667	203,657	142,043
Mark Carpenter	–	–	243,054	21,946	224,623	32,577
Robert Noonan	–	–	142,499	102,501	316,132	124,168
Craig Bender	–	–	105,306	76,044	158,109	48,085

(1) The fair market value of our common stock based on the closing price of our common stock as quoted on The Nasdaq National Market on December 31, 2004 was $4.02 per share.

EQUITY COMPENSATION PLAN SUMMARY

Plan	Number of securities to be issued upon exercise of outstanding options as of December 31, 2004		Weighted average exercise price of outstanding options	Numbers of securities remaining available for future issuance under equity compensation plans as of December 31, 2004
Equity compensation plans approved by stockholders(1)	2,512,651	$	5.95	572,078
Equity compensation plans not approved by stockholders(2)	1,741,178	$	6.71	391,150
Totals	4,253,829			963,228

(1) Includes the 1992 Stock Plan (outstanding options to purchase 94,196 shares with a weighted average exercise per share of $2.39) and the 1998 Stock Plan (options to purchase 2,418,455 shares with a weighted average exercise per share of $6.08).

(2) Includes the 1999 Nonstatutory Stock Option Plan (outstanding options to purchase 1,666,178 shares with a weighted average exercise per share of $4.70) and a non-qualified stock option grant (to purchase 75,000 shares at $51.25 per share). In December 1999, the Board of Directors adopted the 1999 Nonstatutory Stock Option Plan under which the Company currently may grant nonstatutory stock options and stock purchase rights to employees and consultants, but not to officers and directors of the Company.

Director Compensation

On April 21, 2005, our outside directors each received an option to purchase 15,000 shares of our common stock in lieu of cash fees for attending meetings of our Board of Directors or any committee of our Board of Directors in the fiscal year ended 2004. These options vest ratably over a twelve month period which began on May 19, 2004. Our outside directors are reimbursed for out-of-pocket expenses incurred in connection with their attendance at meetings of our Board of Directors or any committee of our Board of Directors. In the event a director is removed from the Board of Directors within twelve months of a change of control of the Company for reasons other than cause, all remaining unvested options held by that director become fully vested. Our directors also are eligible to receive additional discretionary option grants pursuant to our 1998 Stock Plan, and our employee directors are also eligible to receive additional discretionary option grants pursuant to our 1998 Employee Stock Purchase Plan.

Communications with the Board of Directors

The Company does not have formal procedures for stockholder communication with the Board of Directors. Any matter intended for the Board of Directors, or for any individual member or members of the Board of Directors, should be directed to the Company' s corporate secretary at 6000 SW Meadows Rd, Suite 200, Lake Oswego, Oregon 97035, with a request to forward the same to the intended recipient. In general, all stockholder communication delivered to the Company' s corporate secretary for forwarding to the Board of Directors or specified Board of Directors or a specified member thereof will be forwarded in accordance with the stockholder' s instructions. However, the corporate secretary reserves the right to not forward any abusive, threatening or otherwise inappropriate materials.

The Company encourages all incumbent directors and nominees for election as director to attend the Annual Meeting. None of our directors, other than Mr. D' Auria, attended the Annual Meeting in May 2004.

Compensation Committee Interlocks and Insider Participation

The members of our Compensation Committee of our Board of Directors are Messrs. Douglas and Moore. None of the members of our Compensation Committee is currently or has been, at any time since our formation as a company, one of our officers or employees. During 2004, none of our executive officers (i) served as a member of the compensation committee (or other board committee performing similar functions or, in the absence of any such committee, the board of directors) of another entity, one of whose executive officers served on our Compensation Committee, (ii) served as a director of another entity, one of whose executive officers served on our Compensation Committee, or (iii) served as a member of the compensation committee (or other board committee performing similar functions or, in the absence of any such committee, the board of directors) of another entity, one of whose executive officers served as one of our directors.

REPORT OF THE COMPENSATION COMMITTEE OF THE BOARD OF DIRECTORS

The following is the report of the Compensation Committee with respect to the Company's fiscal year ended December 31, 2004.

The Compensation Committee of the Board of Directors establishes the general compensation policies of the Company as well as the compensation plans and recommends to the Board of Directors specific compensation levels for executive officers and non employee directors. It also administers the Company's employee stock benefit plan for executive officers. The Compensation Committee is currently composed of independent, non-employee directors who, except as disclosed under "Compensation Committee Interlocks and Insider Participation," have no interlocking relationships as defined by the Securities and Exchange Commission. Each member of the Committee meets the independence requirements specified by the listing standards of National Association of Securities Dealers, Inc and Section 162(m) of the Internal Revenue Code of 1986, as amended (the "Tax Code"). The Chair reports the Compensation Committee's actions to the full Board following each committee meeting. The Compensation Committee held one meeting during 2004 and all members of the Compensation Committee attended of such meeting.

The Compensation Committee's guiding principle is to assure the Company's compensation and benefits policies attract and retain key employees necessary to support the Company's growth and success, both operationally and strategically. The Compensation Committee believes that the compensation of the executive officers, including that of the Chief Executive Officer (collectively the "Executive Officers"), should be influenced by the Company's performance. The Compensation Committee establishes the salaries and bonuses of all of the Executive Officers by considering (i) the Company's financial performance for the past year, (ii) the achievement of certain objectives related to the particular Executive Officer's area of responsibility, (iii) the salaries and bonuses of executive officers in similar positions of comparably sized companies and (iv) the relationship between revenue and executive officer compensation. The Compensation Committee believes that the Company's executive officer salaries and bonuses in 2004 were comparable in the industry for similarly sized businesses.

In addition to salary and bonus, the Compensation Committee, from time to time, makes recommendations to the Board of Directors regarding granting options to Executive Officers. The Compensation Committee thus views option grants as an important component of its long-term, performance based compensation philosophy. Since the value of an option bears a direct relationship to the Company's stock price, the Compensation Committee believes that options motivate Executive Officers to manage the Company in a manner, which will also benefit stockholders. As such, options are granted at the current market price. One of the principal factors considered in granting options to an Executive Officer is the Executive Officer's ability to influence the Company's long-term growth and profitability.

Salvatore D'Auria has served as President and Chief Executive Officer since his appointment by the Board of Directors in August 1994. In determining Mr. D'Auria's base salary, bonus and long-term performance based compensation for 2004, the Compensation Committee considered both the Company's performance and Mr. D'Auria's individual performance using the same criteria described previously for determining executive compensation, as well as other individual considerations such as leadership, ethics and corporate governance. In analyzing the Company's performance, the Compensation Committee noted the growing visibility the Company recognized from potential first tier U.S. telco customers as well as the increase in the number of major digital TV headend and remote headend winds during 2004. On February 4, 2004, Mr. D'Auria was awarded 200,000 stock options. His base salary for 2004 has been set at $325,000 per annum. The Compensation Committee believes that Mr. D'Auria's compensation is appropriate given the Company's performance in 2004.

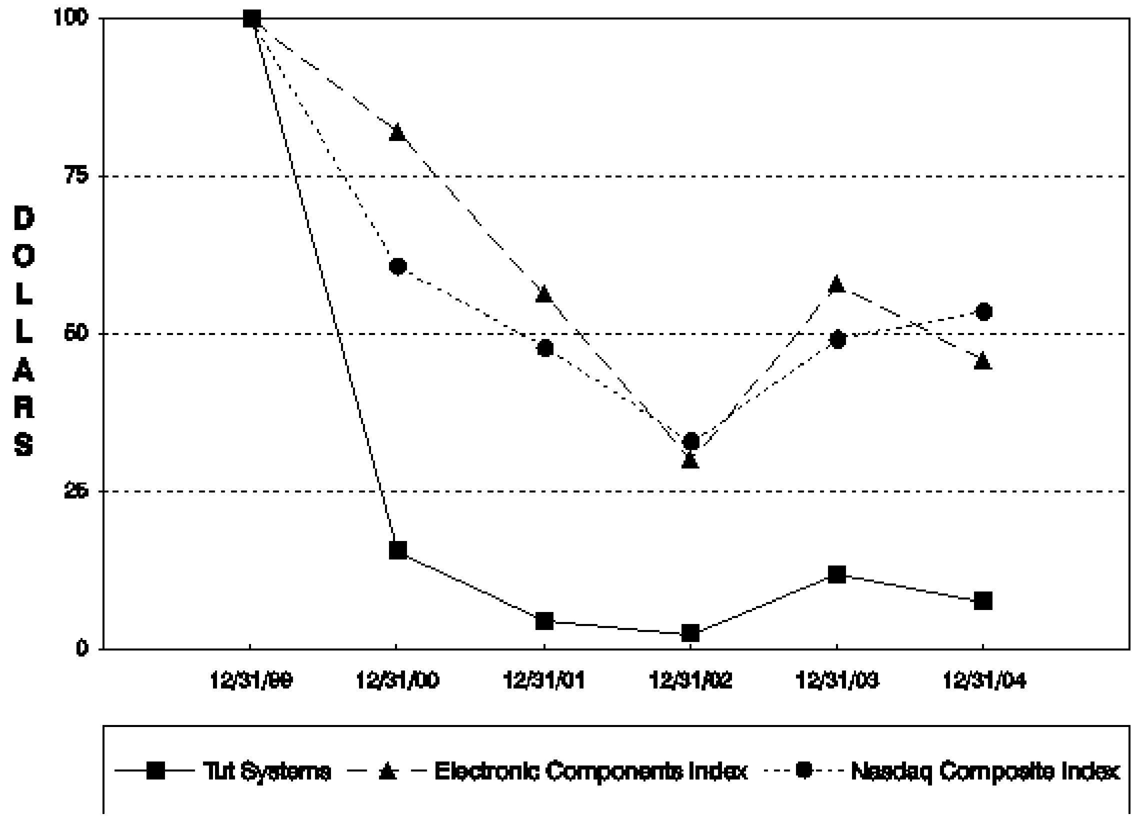
Submitted by the Compensation
Committee of the Board of Directors

Neal Douglas, Roger H. Moore

THE FOREGOING COMPENSATION COMMITTEE REPORT SHALL NOT BE DEEMED TO BE "SOLICITING MATERIAL" OR TO BE FILED WITH THE SEC, NOR SHALL SUCH INFORMATION BE INCORPORATED BY REFERENCE INTO ANY PAST OR FUTURE FILING UNDER THE SECURITIES ACT OR THE EXCHANGE ACT, EXCEPT TO THE EXTENT THE COMPANY SPECIFICALLY INCORPORATES IT BY REFERENCE INTO SUCH FILING.

PERFORMANCE GRAPH

The following graph compares the cumulative total return to stockholders on our common stock with the cumulative total return of the Nasdaq Stock Market Index-U.S. and the Electronics Component Index. The graph assumes that $100 was invested on December 31, 1999, in each of our common stock, the Nasdaq Stock Market Index-U.S. and the Electronics Component Index, including reinvestment of dividends. No dividends have been declared or paid on our common stock. Historic stock price performance is not necessarily indicative of future stock price performance.



Total Return Analysis	12/31/99	12/29/00	12/31/01	12/31/02	12/31/03	12/31/2004
Tut Systems	$ 100.00	$ 15.39	$ 4.33	$ 2.35	$ 12.01	$ 7.50
Electronic Components Index	$ 100.00	$ 82.18	$ 56.15	$ 30.06	$ 57.85	$ 45.76
Nasdaq Composite Index	$ 100.00	$ 60.71	$ 47.93	$ 32.82	$ 49.23	$ 53.46

THE INFORMATION CONTAINED IN THE STOCK PERFORMANCE GRAPH SHALL NOT BE DEEMED TO BE "SOLICITING MATERIAL" OR TO BE FILED WITH THE SEC, NOR SHALL SUCH INFORMATION BE INCORPORATED BY REFERENCE INTO ANY FUTURE FILING UNDER THE SECURITIES ACT OR THE EXCHANGE ACT, EXCEPT TO THE EXTENT THE COMPANY SPECIFICALLY INCORPORATES IT BY REFERENCE INTO SUCH FILING.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information regarding the beneficial ownership of Tut Systems common stock as of April 21, 2005.

Except as otherwise noted, the address of each person listed in the table is c/o Tut Systems, Inc., 6000 SW Meadows Drive, Suite 200, Lake Oswego, Oregon, 97035. Beneficial ownership is determined in accordance with SEC rules and includes voting and investment power with respect to shares. To our knowledge, except under applicable community property laws or as otherwise indicated, the persons named in the table have sole voting and sole investment control with respect to all shares beneficially owned. The applicable percentage of ownership for each stockholder is based on 25,194,894 shares of common stock outstanding as of April 21, 2005, together with all shares of common stock subject to options exercisable within 60 days following April 21, 2005 for that stockholder. Shares of common stock issuable upon exercise of options and other rights beneficially owned are deemed outstanding for the purpose of computing the percentage ownership of the person holding these options and other rights, but are not deemed outstanding for computing the percentage ownership of any other person.

	Common Shares Owned	Options Exercisable Within 60 Days	Shares Beneficially Owned(1)	
			Number	Percent
Kopp Investment Advisors, Inc.	6,985,988(2)	–	6,985,988(2)	27.7%
Tektronix, Inc.(3)	2,283,597	–	2,283,597	9.1%
Salvatore D' Auria	75,586	1,106,721	1,182,307	4.7%
Neal Douglas	–	57,000	57,000	*
Clifford Higgerson	29,761	57,000	86,761	*
George Middlemas	26,985	57,000	83,985	*
Roger Moore	1,000	59,000	60,000	*
Craig Bender	5,849	123,534	129,383	*
Randall K. Gausman	2,200	150,126	152,926	*
Robert Noonan	8,750	177,682	185,832	*
Charles Van Dusen	–	137,081	137,081	*
All executive officers and directors as a group (9) persons	150,131	1,925,144	2,075,275	8.2%

* Less than 1% of the shares of common stock outstanding.

(1) This table is based upon information supplied by executive officers, directors and beneficial stockholders. This table is based upon information supplied by officers, directors and principal stockholders and Schedules 13D and 13G filed with the SEC.

(2) The address of record for Kopp Investment Advisors, Inc. is 7701 France Avenue South, Suite 500, Edina, Minnesota 55435. Based on information contained in a statement on Schedule 13D, dated April 14, 2005, as filed with the Securities and Exchange Commission, Kopp Investment Advisors, Inc. (KIA) reported sole voting power over 4,586,938 shares, sole dispositive power over 2,100,000 shares and shared dispositive power over 2,981,988 shares. KIA is wholly owned by Kopp Holding Company (KHC), which is wholly owned by Mr. LeRoy C. Kopp. KHC reported beneficial ownership of 5,316,988 shares. Mr. Kopp reported beneficial ownership of 6,985,988 shares, of which he reported sole voting power over 1,904,000 shares and sole dispositive power over 1,904,000 shares. Kopp Emerging Growth Fund is a registered investment company and a client of KIA. Kopp Emerging Growth Fund reported beneficial ownership of 2,100,000 shares.

(3) Tektronix, Inc., an Oregon corporation, is a reporting company. The address of record for Tektronix, Inc. is 14200 SW Karl Braun Drive, Beaverton, Oregon 97077. The holdings of Tektronix, Inc. are based on information contained in a statement on Form 4 dated January 25, 2005, as filed with the Securities and Exchange Commission.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

On April 28, 2000, we entered into a loan agreement and secured promissory note with Mark Carpenter, our former Executive Vice President of Product Development and Marketing, in the amount of $150,000, which was used toward the purchase of Mr. Carpenter' s principal residence. This loan accrued no interest and was forgiven at a rate of 25%, or $37,500, on April 28, 2001, the first year anniversary date, and was forgiven as to 25%, or $37,500, on each subsequent yearly anniversary date through April 28, 2004, at which time the full amount of the loan was forgiven. The loan forgiveness was contingent upon Mr. Carpenter' s continued employment with Tut Systems. In addition, the loan would have been forgiven as a result of constructive termination of Mr. Carpenter within the first twelve months following a change of control of Tut Systems.

During 2003 and 2004, we granted 470,000 and 410,000 options, respectively, to certain of our executive officers and directors. We intend to grant options to our executive officers and directors in the future.

We have entered into indemnification agreements with our executive officers, directors and certain significant employees containing provisions that are in some respects broader than the specific indemnification provisions contained in the General Corporation Law of Delaware. These agreements provide, among other things, for indemnification of the executive officers, directors and certain significant employees in proceedings brought by third parties and in stockholder derivative suits. Each agreement also provides for advancement of expenses to the indemnified party.

In connection with our acquisition of VTC in November 2002, we issued to Tektronix, former parent of VTC, approximately 3.3 million shares of our common stock and a subordinated promissory note payable to Tektronix in an aggregate principal amount of $3.2 million at an annual interest rate of 8% and matures in November 2007. In connection with the acquisition of VTC, we and Tektronix entered into (i) a Standstill and Disposition Agreement relating to the registration, voting and disposition of the shares, as well as for reimbursement of certain expenses in connection with the registration of the shares; (ii) an arrangement relating to use of certain of our and Tektronix' s technology; and (iii) a transition services agreement regarding services to be provided by Tektronix to us.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table presents the aggregate fees billed for the indicated services performed by PricewaterhouseCoopers LLP during the 2004 and 2003 fiscal years.

	2003	2004
Audit Fees	$ 195,860	$ 258,395
Audit-Related Fees	18,358	13,200
Tax Fees	6,217	20,748
All Other Fees	2,000	28,150
Total	$ 222,435	$ 320,493

Audit Fees. Audit Fees relate to professional services rendered in connection with the audit of the Company' s annual financial statements, quarterly review of financial statements included in the Company' s 10-Q, and audit services provided in connection with other statutory and regulatory filings.

Audit-Related Fees. Audit-Related Fees include professional services reasonably related to the audit of the Company' s financial statements, including but not limited to consultation on accounting standards or transactions, due diligence related to acquisitions and investments and audits of employee benefit plans.

Tax Fees. Tax Fees include professional services related to tax compliance, tax advice and tax planning, including but not limited to the preparation of federal and state tax returns.

All Other Fees. All Other Fees include professional services related to consultation on our evaluation of the effectiveness of our internal controls.

The Audit Committee determined that the auditor' s provision of non-audit services in 2004 is compatible with and does not impair the auditor' s independence. The Audit Committee approved all of the services provided by PricewaterhouseCoopers LLP in 2004. Pursuant to the Audit Committee Charter, the Audit Committee must pre-approve, explicitly, audit and permissible non-audit services to be provided to the Company by the independent auditor, except where pre-approval of audit and permissible non-audit services is not required under applicable SEC Rules. The Audit Committee has delegated to the Chairman of the Audit Committee the authority to pre-approve audit and permissible non-audit services, provided such pre-approval decision is presented to the full Audit Committee at its scheduled meetings.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)

1. *Financial Statements*

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

2. *Financial Statements Schedules*

The following financial statement schedule is filed as part of this Annual Report on Form 10-K:

All other schedules have been omitted as they are not required, not applicable, or the required information is otherwise included.

3. *Exhibits*

The exhibits listed on the accompanying index to exhibits immediately following the certifications are filed as part of, or incorporated by reference into, this Annual Report on Form 10-K/A.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: May 2, 2005

TUT SYSTEMS, INC.

By: /s/ Salvatore D' Auria
Salvatore D' Auria
President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ Randall K. Gausman
Randall K. Gausman
Vice President, Finance and
Chief Financial Officer
(Principal Financial and Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Annual Report on Form 10-K/A has been signed by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Salvatore D' Auria Salvatore D' Auria	President, Chief Executive Officer and Chairman of the Board (Principal Executive Officer)	May 2, 2005
/s/ Randall K. Gausman Randall K. Gausman	Vice President, Finance and Administration, Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)	May 2, 2005
* Neal Douglas	Director	May 2, 2005
* Clifford H. Higgerson	Director	May 2, 2005
* George M. Middlemas	Director	May 2, 2005
* Roger H. Moore	Director	May 2, 2005
/s/ Randall K. Gausman Randall K. Gausman *Attorney-in-Fact		May 2, 2005

TUT SYSTEMS, INC.

SCHEDULE II: VALUATION AND QUALIFYING ACCOUNTS AND RESERVES

	Balance at Beginning of Period	Additions (reductions) to Costs and Expenses	Write-offs	Reclasses from Other Accounts	Balance at End of Period
Allowance for doubtful accounts:					
Year ended December 31, 2002	6,908	(2,277)(1)	(5,821)	1,200(4)	10
Year ended December 31, 2003	10	37	–	–	47
Year ended December 31, 2004	47	106	(14)	–	139
Allowance for doubtful notes receivable:					
Year ended December 31, 2002	3,820	89(2)	(3,909)(3)	–	–
Year ended December 31, 2003	–	–	–	–	–
Year ended December 31, 2004	–	–	–	–	–
Valuation allowance for deferred tax assets:					
Year ended December 31, 2002	86,627	18,428	–	–	105,055
Year ended December 31, 2003	105,055	2,604	–	–	107,659
Year ended December 31, 2004	107,659	13,293	–	–	120,952
Allowance for excess and obsolete inventory and abandoned product:					
Year ended December 31, 2002	53,332	7,125	(22,739)	–	37,718
Year ended December 31, 2003	37,718	(1,266)(5)	(36,227)	–	225
Year ended December 31, 2004	225	1,003(6)	–	–	1,228

(1) During 2002, the Company recovered $2,277 of bad debt.

(2) During 2002, the Company recorded a note receivable from ProVision, a former customer, which was fully reserved.

(3) During 2002, the Company wrote off in full, the notes receivable with two of the Company’ s former customers, CAIS and ProVision.

(4) During 2002, the Company settled a bankruptcy preference item totaling $1,500 for $300, the remaining accrual was recorded as bad debt recovery.

(5) During 2003, the Company sold $1,491 of inventory that had previously been reserved for and increased the allowance for excess and obsolete inventory and abandoned product by $225.

(6) During 2004, the Company sold $539 of inventory that had previously been reserved for and increased the allowance for excess and obsolete inventory and abandoned product by $1,542.

INDEX TO EXHIBITS

Exhibit Number	Description

1.1	Underwriting Agreement between the Company, Needham & Company, Inc. and Merriman Curhan Ford & Co., dated October 7, 2004 (10)
2.1	Agreement and Plan of Merger by and among Tut Systems, Inc., Tiger Acquisition Corporation, Tektronix, Inc. and VideoTele.com, Inc. dated as of October 28, 2002.(8)
3.1	Second Amended and Restated Certificate of Incorporation of the Company.(11)
3.2	Bylaws of the Company, as currently in effect.(1)
4.1	Specimen Common Stock Certificate.(1)
10.1*	1992 Stock Plan, as amended, and form of Stock Option Agreement thereunder.(1)
10.2*	1998 Stock Plan and forms of Stock Option Agreement and Stock Purchase Agreement thereunder.(1)
10.3*	1998 Employee Stock Purchase Plan, as amended.(2)
10.4*	1998 Stock Plan Inland Revenue Approved Rules for UK Employees.(3)
10.5	American Capital Marketing, Inc. 401(k) Plan.(1)
10.6	Form of Indemnification Agreement entered into between the Company and each director and officer.(1)
10.7	Agreement and General Release between the Company and And Yet, Inc. dated July 31, 1998.(1)
10.8	Home Phoneline Promoters Agreement by and between the Company and IBM Corporation, Hewlett-Packard Company, Compaq Computer Corporation, Advanced Micro Devices, Inc., Intel Corporation, Epigram, Inc., AT&T Wireless Services Inc., 3Com Corporation, Rockwell Semiconductor Systems, Inc. and Lucent Technologies Inc. dated June 1, 1998.(1)
10.9	Master Agreement between the Company and Compaq Computer Corporation dated April 21, 1998 including supplements thereto.(1)
10.10	Extension Agreement among the Company, And Yet, Inc. and Marty Graham dated December 21, 1998.(1)
10.11	Commercial Office Lease between Las Positas LLC and the Company, dated March 8, 2000.(4)
10.12*	Executive Retention and Change of Control Plan.(6)
10.13*	Non-Executive Retention and Change of Control Plan and Summary Plan Description.(6)
10.14*	Non-Qualified Stock Option Agreement issued to Mark Carpenter on March 3, 2000.(6)
10.15*	1999 Non-Statutory Stock Option Plan.(7)
10.16	Office Lease Agreement between Kruse Way Office Associates Limited Partnership and VideoTele.com dated April 28, 2000.(9)
10.17	Office Lease Agreement between The Richard Oppenheimer Living Trust, The Maurice Oppenheimer Living Trust, The Helene Oppenheimer Living Trust, and Tut Systems Inc. dated November 2002.(9)
10.18	Agreement for the sale and purchase of the entire share capital of Xstreamis plc, by and among the Company, the shareholders of Xstreamis plc and Philip Corbishley.(5)
10.19	Loan and Security Agreement (11)
11.1	Calculation of earnings per share (contained in Note 2 of Notes to Consolidated Financial Statements).
21.1	List of Subsidiaries of the Company.
23.1	Consent of Independent Registered Public Accounting Firm.
31.1	Certification of Chief Executive Officer Pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer Pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

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(1) Incorporated by reference to our Registration Statement on Form S-1 (File No. 333-60419) as declared effective by the Securities and Exchange Commission on January 28, 1999.

(2) Incorporated by reference to our Quarterly Report on Form 10-Q for the quarter ended March 31, 1999.

(3) Incorporated by reference to our Annual Report on Form 10-K for the year ended December 31, 1999.

(4) Incorporated by reference to our Registration Statement on Form S-1 (File No. 333-31446) as declared effective by the Securities and Exchange Commission on March 23, 2000.

(5) Incorporated by reference to our Current Report on Form 8-K dated May 26, 2000 as filed June 9, 2000.

(6) Incorporated by reference to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2000.

(7) Incorporated by reference to our Schedule TO (File No. 005-58093) filed May 11, 2001.

(8) Incorporated by reference to our Current Report on Form 8-K dated October 29, 2002.

(9) Incorporated by reference to our Annual Report on Form 10-K for the year ended December 31, 2002.

(10) Incorporated by reference to our Current Report on Form 8-K dated October 8, 2004.

(11) Incorporated by reference to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2004.

* Indicates management contracts or compensatory plans and arrangements.

Exhibit 21.1

List of Subsidiaries

Tut Systems, Inc. Subsidiaries

Tut Systems UK Ltd.
Tut Systems (Netherlands) Inc.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements of Form S-8 (Nos. 333-58348, 333-58352, 333-60846, 333-119100 and 333-122341) and Form S-3 (Nos. 333-105276 and 333-112418) of Tut Systems, Inc. of our report dated February 2, 2005, except as to the third paragraph of Note 13 as to which the date is February 11, 2005, relating to the financial statements and financial statement schedule, which appears in this Amendment No. 1 to Form 10-K.

/s/ PricewaterhouseCoopers LLP

Portland, Oregon

April 28, 2005

Exhibit 31.1

CERTIFICATIONS

I, Salvatore D' Auria, certify that:

1. I have reviewed this Form 10-K/A of Tut Systems, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant' s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Evaluated the effectiveness of the registrant' s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (c) Disclosed in this report any change in the registrant' s internal control over financial reporting that occurred during the registrant' s most recent fiscal quarter (the registrant' s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant' s internal control over financial reporting; and

5. The registrant' s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant' s auditors and the audit committee of the registrant' s board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant' s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant' s internal control over financial reporting.

Date: May 2, 2005

/s/ Salvatore D' Auria

By: Salvatore D' Auria
President, Chief Executive Officer and Chairman of the Board (Principal Executive Officer)

Exhibit 31.2

I, Randall K. Gausman, certify that:

1. I have reviewed this Form 10-K/A of Tut Systems, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant' s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Evaluated the effectiveness of the registrant' s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (c) Disclosed in this report any change in the registrant' s internal control over financial reporting that occurred during the registrant' s most recent fiscal quarter (the registrant' s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant' s internal control over financial reporting; and

5. The registrant' s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant' s auditors and the audit committee of the registrant' s board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant' s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant' s internal control over financial reporting.

Date: May 2, 2005

/s/ Randall K. Gausman

By: Randall K. Gausman
Vice President, Finance and Administration, Chief Financial Officer and Secretary
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Salvatore D' Auria, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Tut Systems Inc., on Form 10-K/A for the fiscal year ended December 31, 2004, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in such Annual Report on Form 10-K/A fairly presents in all material respects the financial condition and results of operations of Tut Systems, Inc.

	/s/ Salvatore D' Auria
By:	Salvatore D' Auria President, Chief Executive Officer and Chairman of the Board

Date: May 2, 2005

Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Randall K. Gausman, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Tut Systems Inc., on Form 10-K/A for the fiscal year ended December 31, 2004, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in such Annual Report on Form 10-K/A fairly presents in all material respects the financial condition and results of operations of Tut Systems, Inc.

/s/ Randall K. Gausman

By: Randall K. Gausman
Vice President, Finance and Administration,
Chief Financial Officer and Secretary

Date: May 2, 2005