DOT HILL SYSTEMS CORP
Form 10-K
March 16, 2005

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

For the Fiscal Year Ended December 31, 2004

or

o **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 1-13317

DOT HILL SYSTEMS CORP.

(Exact name of registrant as specified in its charter)

DELAWARE	**13-3460176**
(State of incorporation)	(IRS Employer Identification No.)
6305 El Camino Real **Carlsbad, CA** (Address of principal executive offices)	**92009** (zip code)

(760) 931-5500
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: None

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

Common stock, $0.001 par value

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 ý No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. Yes ý No o

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold as of June 30, 2004 was $412,074,813. Documents incorporated by reference: Portions of the registrant's definitive proxy statement for its 2004 annual meeting of stockholders are incorporated by reference into Part III of this Form 10-K.

The number of shares of the registrant's common stock outstanding as of March 7, 2005 was 43,793,613.

DOT HILL SYSTEMS CORP.
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FOR THE YEAR ENDED DECEMBER 31, 2004

Forward-Looking Statements

Certain statements contained in this report, including, but not limited to, statements regarding the development, growth and expansion of our business, our intent, belief or current expectations, primarily with respect to our future operating performance and the products we expect to offer and other statements contained herein regarding matters that are not historical facts, are "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, and are subject to the "safe harbor" created by those sections. Future filings with the Securities and Exchange Commission, or SEC, future press releases and future oral or written statements made by us or with our approval, which are not statements of historical fact, may also contain forward-looking statements. Because such statements include risks and uncertainties, many of which are beyond our control, actual results may differ materially from those expressed or implied by such forward-looking statements. Some of the factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements are set forth in the section entitled "Certain Risk Factors Related to the Company's Business," in the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere throughout this Annual Report on Form 10-K.

Readers are cautioned not to place undue reliance on these forward-looking statements. The forward-looking statements speak only as of the date on which they are made, and, except as required by applicable law, we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events.

PART I

Item 1. Business

We are a provider of storage systems for organizations requiring high reliability, high performance networked storage and data management solutions in an open systems architecture. Our storage solutions consist of integrated hardware and software products employing a modular system that allows end-users to add capacity as needed. Our broad range of products, from medium capacity stand-alone storage units to complete multi-terabyte storage area networks, provides end-users with a cost-effective means of addressing increasing storage demands without sacrificing performance. Our RIO Xtreme products provide high performance and large capacities for a broad variety of environments. Our SANnet® products have been distinguished by certification as Network Equipment Building System, or NEBS, Level 3 and are MIL-STD-810F compliant based on their ruggedness and reliability.

Our products and services are sold worldwide to end-users primarily through our channel partners, including original equipment manufacturers, or OEMs, systems integrators, or SIs, and distributors. In May 2002, we entered into a three-year OEM agreement with Sun Microsystems, or Sun, to provide our storage hardware and software products for private label sales by Sun, and that agreement was recently extended until May 2007. We have been shipping our products to Sun for resale to Sun's customers since October 2002. We continue to develop new products for resale by Sun and other channel partners and expect to begin shipping several new products later in 2005.

In February 2004, we acquired all the outstanding shares of Chaparral Network Storage, Inc., or Chaparral, a privately held storage system provider. We expect to integrate Chaparral's storage controller technology into our line of storage products. As a result of the acquisition, we have designated our Colorado facility as a research and development hub and continue to use Chaparral's team of engineers and facility support personnel.

As part of our focus on indirect sales channels, we have outsourced substantially all of our manufacturing operations to Solectron Corporation, or Solectron. Our agreement with Solectron allows us to reduce sales cycle times and manufacturing infrastructure, enhance working capital and improve margins by taking advantage of Solectron's manufacturing and procurement economies of scale.

We were formed in 1999 by the combination of Box Hill Systems Corp. and Artecon, Inc., or Artecon. We reincorporated in Delaware in 2001. Our website address is http://www.dothill.com. Information contained on our website does not constitute a part of this Annual Report on Form 10-K. Our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K and all amendments to those reports that we file with the SEC are currently available free of charge to the general public through our website. These reports are accessible on our website promptly after being filed with the SEC and are also accessible through the SEC's website which may be found at http://www.sec.gov. In addition, you may read and copy the materials we file with the SEC at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington, DC 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

Industry Background

Growth of Data Storage

The efficient generation, storage and retrieval of digital data and content has become increasingly strategic and mission-critical to organizations. The volume of this data continues to grow rapidly, driven by several factors including:

- the proliferation of different types of data, including graphics, video, text and audio;
- the emergence of Internet-based communication protocols which enable users to rapidly duplicate, change and re-communicate data;
- new regulations and corporate policies requiring additional storage, such as compliance with the Sarbanes-Oxley Act of 2002, requirements imposed on healthcare companies and evolving regulatory requirements for financial services companies;
- the implementation of enterprise-wide databases containing business management information;
- gains in network bandwidth and the technology for managing and classifying large volumes of data; and
- the development of the information lifecycle management, or ILM, and the expansion of the disk-to-disk backup market, due to new applications of technologies that offer improved alternatives in the trade-off between performance and cost of ownership.

According to Gartner, Inc., or Gartner, the total storage capacity of all worldwide external, controller-based disk storage systems shipped will grow by 64.6% on a compounded annual basis between 2003 and 2008, reaching 5.8 million terabytes, or TB, in 2008.

Traditionally, storage vendors have designed products for markets differentiated by capacity, performance, price and feature set. These storage markets are typically identified as:

- *Entry-level.* Entry-level storage products are designed for relatively low capacity, simple, stand-alone data storage needs for which price and simplicity are the main purchasing considerations. Vendors address this market primarily through an indirect sales channel approach employing retailers and VARs that assist information technology, or IT, managers in identifying, purchasing and installing the product.
- *Midrange.* Midrange or departmental/workgroup storage products are designed for higher capacity and performance than entry-level products, but still feature ease of use and manageability, and are attached to a local server tailored to the needs of the local users. In this

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market, storage providers primarily sell their products to local IT managers through VARs and regional or small SIs.

High-end. High-end or data center storage products are designed for use by larger organizations where data storage and management is critical. These organizations require large capacity, high performance, automation, extreme reliability, continuous availability, systems interoperability and global service and support. In this market, storage providers sell their products with a combination of a direct sales force and indirect channels, including OEMs, large SIs and managed services providers.

In addition to dramatic increases in the overall volume of data, the storage market has been influenced by the following major trends:

Migration to Network Computing. Computing processes and architectures have evolved from mainframe computing systems toward a centrally managed network computing environment characterized by multiple operating systems and server platforms that must share information. Organizations require large-scale data storage solutions offering:

- increased connectivity capabilities;
- greater capacity;
- higher performance;
- the ability to share data among different platforms;
- greater reliability; and
- greater protection.

Organizations have responded by implementing tailored networks, optimized for data storage functions, that facilitate data access and protection.

Increasing Focus on Total Cost of Ownership and Return on Investment. IT managers are increasingly focused on lowering the total cost of ownership and increasing their return on investment on each technology purchase. IT managers evaluate total cost of ownership and return on investment based upon several metrics, including initial purchase price, ease of provisioning, scalability, reliability and redundancy, ease of management, IT staff productivity, operating costs and after-sale service and support.

Storage Area Networks

Customers require storage systems that enable them to capture, protect, manage and archive data across a variety of storage platforms and applications without sacrificing performance. Historically, the Small Computer Systems Interface, or SCSI, was the primary method of connecting storage to servers. Then, the Fibre Channel protocol was developed, which enables storage devices to connect to servers over a networked architecture, allowing end-users to connect multiple storage devices with high bandwidth throughput over long distances and centrally manage their storage environment. Centrally managed network storage systems are designed to provide connectivity across multiple operating systems and devices and may be based on either open or proprietary technology standards. Gartner estimates that by 2008 network storage product sales will represent over 70.9% of the worldwide external disk storage market compared to approximately 61.3% of the market in 2003, growing at a 10.7% compound annual growth rate, or CAGR, from $7.8 billion in 2003 to $13.1 billion in 2008.

Storage area networks, or SANs, apply the benefits of a networked approach to data storage applications, allowing large blocks of data to move efficiently and reliably between multiple storage devices and servers without interrupting normal network traffic. SANs provide high scalability, connectivity and fault-tolerance, which permit IT managers to create and manage centralized pools of storage and backup devices with redundant data paths. With the addition of file-sharing software, SANs also allow multiple hosts to share consolidated data, dramatically reducing the need to duplicate, move and manage multiple files in a wide variety of data-intensive applications. SANs primarily employ Fibre Channel technology.

Demand for High Performance, Affordable Network Storage Solutions

Customers increasingly demand higher performing, affordable solutions to address expanding storage requirements, interoperability across disparate systems, the need for improved connectivity and rising data management costs. Customers are also demanding open standards architecture and modular systems that allow them to add capacity as needed. These demands have created significant opportunities for network storage system solutions that are affordable and provide high performance.

Reliability

Perhaps one of the most important requirements for many customers is that their stored data be available, and that the systems upon which they are stored be reliable. For example, Internet-related customers can lose significant revenue for every minute their sites are inoperable and users can't access data from the web site. Similarly, the operations of corporate customers can grind to a halt if precious data is lost or unavailable. For these reasons, a storage system's reliability is often the critical factor in making a choice among storage systems.

Our Solutions

We offer a broad line of networked data storage solutions composed of standards-based hardware and software for open systems environments. Many of the performance attributes demanded by high-end/data center end-users are incorporated into our products, at prices that are suitable for the entry-level or midrange markets. Our end-users consist of entry-level, midrange and high-end/data center users, requiring cost-effective, easily managed, high performance, reliable storage systems. Our product lines range from approximately 146 gigabyte, or GB, to complete 32 TB storage systems. These offerings allow our products to be integrated in a modular building block fashion or configured into a complete storage solution, increasing OEM flexibility in creating differentiated products. Modular products also allow our indirect channel partners to customize solutions, bundling our products with value-added hardware, software and services.

Our products and services are intended to provide users with the following benefits:

- *Low Total Cost of Ownership and High Return on Investment.* Our products combine reliability, flexibility, scalability and manageability into one of the smallest form factors in today's market. Our product set provides end-users with a low total cost of ownership due to our products' extreme reliability, the simplicity of our "plug-and-play" technology, decreased service and support costs and modular system approach that allow end-users to add capacity as needed. The modular nature of our products addresses our end-users' desire for a storage solution that does not require a large, upfront investment in a monolithic structure with unused capacity. In addition, we believe that our SANnet II storage systems are among the most space-efficient in the storage industry, maximizing our customers' limited space and significantly reducing their costs. By extending and leveraging our customers' installed storage system and architecture, we are able to provide solutions that offer both a lower total cost of ownership and a higher return on investment.

- *Modular Scalability.* Our products are designed using a single cohesive modular architecture that allows customers to size and configure storage systems to meet their specific requirements. This modular architecture also allows customers to easily expand and, in some cases, reconfigure a system as their needs change, permitting them to extend the useful life of and better utilize their existing systems.

Reliability. We believe that high reliability is essential to our customers due to the critical nature of the data being stored. We offer enterprise-class reliability in our product lines and integrate the latest in technological advances to meet expanding market opportunities. We design redundancy, 99.9998% reliability, high performance, and ruggedness into our SANnet II storage systems. Redundant components have the ability to be replaced while the system is online without interrupting network activity. All of our SANnet II disk array products currently offered are certified to operate under extreme climatic and other harsh operating conditions without degradation in reliability or performance, as attested to with the NEBS Level 3 and MIL-STD-810F certifications.

Open Systems, Multi-Platform Support. As an independent provider of storage products, we are well positioned to provide storage solutions on a variety of platforms and operating systems, including Linux, Unix and Windows. Our SANnet II line of systems supports multiple servers using different operating systems simultaneously. This multi-platform compatibility allows customers to standardize on a single storage system that can readily be reconfigured and redeployed at minimal cost as the customer's storage architecture changes.

Manageability. The ability to manage storage systems, particularly through software, is a key differentiator among storage vendors. SANscape, our storage management software, enables customers to more easily manage and configure their storage systems and respond to their changing system requirements. In addition, SANpath, our storage area networking software, further enhances performance and reliability.

Following the acquisition of Chaparral in February 2004, we began integrating the technology purchased into our existing products. We also, intend to continue to offer customers existing Chaparral products and to integrate Chaparral's storage controller technology into future products and product lines.

Our Strategy

Our objective is to focus on profitable growth and capture an increasing share of the open systems storage solution market.

Focus on Profitable Growth. We have focused our business strategy in several ways to enhance our margins and increase profits.

Utilize indirect sales channels. We have adopted an indirect sales model to access end-user markets primarily through our OEM, SI, distributor, and VAR partners. This allows us to benefit from our channel partners' extensive direct and indirect distribution networks, installed customer base, and greater sales, marketing, and global service and support infrastructures.

Outsource manufacturing and service operations. We outsource substantially all of our manufacturing operations, which allow us to reduce manufacturing infrastructure, enhance working capital, and improve margins. In addition, we encourage our channel partners to provide support and service directly to end-users.

Develop and Expand OEM Relationships. In May 2002, we entered into an OEM agreement with Sun under which Sun resells our SANnet II and SANscape® products to its customers under Sun's private label. Our agreement with Sun was expanded in January and March 2004 to extend the term by three years and include additional products under the agreement. In addition to Sun, we have other OEM partners, including Comverse Technology, Inc., or Comverse Technology, Motorola, Inc., or Motorola, and NEC Corp, or NEC, for our hardware products and Storage Technology Corporation, or

StorageTek, and Network Appliance, Inc., or NetApp, for our software products. We intend to continue seeking additional OEM relationships with other industry leaders to sell current and future products and expand the number of products offered to existing OEM partners to enable them to address new markets.

Broaden Non-OEM Channels to Diversify Revenues. We intend to continue expanding our non-OEM sales channels through SIs, distributors and VARs in order to decrease our revenue concentration with OEMs. During 2004 we expanded our relationship with Bell Microsystems, Inc. where Bell Microsystems will resell our complete line of storage products.

Grow and Extend Technology Leadership. We view our core competencies as the research, design and engineering of modular open storage systems. We believe that focused research and development on advanced, cost effective storage technologies is critical to our ongoing success. We intend to accelerate our expenditures on technology development and integration in order to offer more complete storage solutions and enhance our existing products to benefit our channel partners' efforts to increase sales. We introduced our SANnet II Serial Advanced Technology Attachment, or SATA, during the second quarter of 2004. We expect to introduce products integrating the Chaparral storage controller technology later this year.

Pursue Strategic Alliances, Partnerships and Acquisitions. We will continue to evaluate and selectively pursue strategic acquisitions, alliances and partnerships that are complementary to our business. We believe that growth of the network storage market will create additional opportunities to expand our business. In addition, we believe the most efficient pursuit of these opportunities will be through strategic alliances and relationships, which allow us to leverage our existing design and marketing infrastructure while capitalizing on products, technologies and channels that may be available through potential strategic partners.

Our Products

We design our family of open systems storage hardware and software products with the reliability, flexibility and performance necessary to meet IT managers' needs for easily scalable cost effective solutions. We currently offer storage systems in Fibre Channel, SCSI, and SATA configurations. Our software offerings consist of storage management applications, which can manage any one or all of our storage system configurations, and performance enhancing software that we sell bundled with our storage systems or license separately to OEM customers.

All of our SANnet II products are NEBS Level 3 certified and MIL-STD-810F compliant. NEBS guidelines were originally developed by Bellcore, now Telcordia, as ultra-high reliability standards for telecommunications equipment, including storage products. There are three levels of NEBS specifications. The most rugged and reliable equipment is rated carrier-class NEBS Level 3. The NEBS standards mandate a battery of tests designed to simulate the extreme conditions resulting from natural or man-made disasters and cover a range of product requirements for operational continuity. MIL-STD-810F is a military standard created by the U.S. Government. It involves a range of tests used to measure the reliability of equipment in extreme conditions, including physical impact, moisture, vibration and high and low temperatures. These standards address system ruggedness and reliability, which are important requirements for end-users.

Our primary products include the following:

Product Line	Description	General Availability	Capacity	Target Market	Features
Hardware					
SANnet II SCSI	2 unit high, 12 to 36 drives, Ultra160 SCSI DAS storage	4Q02	146 GB to 10 TB using 300 GB SCSI drives	Entry-level and Midrange	Compact 3.5 inch high enclosures, fully redundant RAID using SCSI connections, expandable storage capacity
SANnet II FC	2 unit high, 12 to 108 drives, 2 Gigabit Fibre Channel DAS and SAN storage	1Q03	146 GB to 32 TB using 300 GB FC drives	Entry-level and Midrange	Complete SAN solution in a single enclosure, scalable performance and capacity without interruptions
SANnet II Blade	1 unit high, drives, Ultra320 SCSI DAS	1Q04	146 GB to 1.2 TB using 300 GB SCSI drives	Entry-level	Highly rack-optimized design, connects to low-cost server SCSI ports
SANnet II SATA	2 unit high, 12 to 72 drives, 2 Gigabit Fibre Channel DAS and SAN storage	2Q04	800GB to 28 TB using 400 GB SATA drives	Entry-level and Midrange	Complete SAN solution in a single enclosure, scalable performance and capacity without interruptions
RIO Xtreme	5 unit high, 24 to 108 drives, 2 Gigabit Fibre Channel DAS and SAN storage	3Q04	1.75 TB to 32 TB using 300 GB FC drives	Midrange	Complete SAN solution, scalable performance and capacity without interruptions, optimized for high bandwidth applications
Software					
SANpath	Storage area networking software	1Q00	N/A	Entry-level and Midrange	Load balancing, multipathing, path fail over, path fail back and LUN masking
SANscape	Storage management software	1Q00	N/A	Entry-level and Midrange	Graphical and command line consoles with diagnostics, monitoring and reporting

See related discussion in Note 18 to our consolidated financial statements for the year ended December 31, 2004.

SANnet II Family of Storage Solutions. We began the introduction of our SANnet II family, during the fourth quarter of 2002. SANnet II provides enterprise class functionality to the entry-level, midrange and high-end storage markets at attractive prices. Through our SANnet II family of networked storage solutions, we offer compact, rugged RAID arrays that support SAN and direct attached storage, or DAS, configurations. The SANnet II products provide 99.9998% uptime and are tested to operate in extreme environmental conditions. In addition, our SANnet II products share a common modular architecture and unified management system that integrates our SANpath and SANscape management software.

SANnet II SATA. We launched our SANnet II SATA storage product in the second quarter of 2004. It is an entry-level storage product for IT managers requiring a compact near line storage solution.

SANnet II Blade. We launched our SANnet II Blade product during the first quarter of 2004. It is an entry-level ultra-compact storage solution for DAS architectures.

SANnet II FC. We launched our SANnet II FC storage product in the first quarter of 2003. It is a Fibre Channel-based online storage product for IT managers that require a SAN solution.

SANnet II SCSI. We launched our SANnet II SCSI product during the fourth quarter of 2002. It is an entry-level ultra-compact storage solution for DAS architectures.

RIO Xtreme Family of Storage Solutions. We introduced our newest generation of open systems storage products, our RIO Xtreme family, during the third quarter of 2004. Rio Xtreme provides high performance to the midrange and high-end storage markets at attractive prices. Through our RIO Xtreme family of networked storage solutions, we offer compact, fast arrays that support SAN and DAS configurations.

We acquired the controller technology used in RIO Xtreme in our acquisition of Chaparral.

RIO Xtreme. We launched our RIO Xtreme storage product in the third quarter of 2004. It is a mid-range storage product for applications requiring high bandwidth storage.

Software. We develop application software technologies and products that are complementary to our overall storage solutions. Our host-based software is delivered as two primary application suites: SANpath and SANscape. Our software supports widely used open systems platforms, including Linux, Unix, and Windows.

SANpath. SANpath is our storage area networking software that improves system performance and enables storage multipathing to ensure comprehensive reliability, availability and serviceability. Originally released during the first quarter of 2000, SANpath functions with SCSI or Fibre Channel host connections and storage hardware, including our SANnet II storage solutions deployed within either DAS or SAN architectures. All SANpath managed environments may be re-configured without interruptions to operating systems or applications. SANpath provides a number of features, such as: path failover, load balancing, dynamic volume management, the reassignment of storage volume without server restarts and secure storage volume assignment via access control lists.

SANscape. SANscape is our storage management software that facilitates the monitoring, configuration and maintenance of our SANnet II storage solutions using a Java-based graphical user interface and a variety of tools. Originally released during the first quarter of 2000, SANscape also creates an optional consolidated interface for the administration of SANpath. SANscape can be used to manage various storage solutions deployed throughout an organization. Its event tools monitor the storage solutions under management and report status changes to administrators by email, pager and other means.

Sales and Marketing

We market and distribute our products globally through our partners. Our channel partners consist of OEMs, SIs and VARs, which we use to cost-effectively pursue a wide range of potential end-users. We rely on multiple channels to reach end-user customers that range in size from small businesses to government agencies and large multinational corporations. We have established a channel partner program consisting of tiers that distinguishes and rewards our partners for their levels of commitment and performance. We maintain a sales and marketing organization operating out of our headquarters in Carlsbad, California, with regional offices in Germany, Japan, the Netherlands, Singapore and the United Kingdom as well as several smaller localized field sales offices throughout North America. Our products are sold under the Dot Hill brand name and under the names of our OEM customers. For the year ended December 31, 2002, 2003 and 2004 sales to one customer accounted for approximately 25.0%, 83.4%, and 86.3% of our net revenues, respectively. Generally, our customers have no minimum purchase requirements and have certain rights to extend, delay or cancel shipment of their orders without penalty.

OEMs

Our primary distribution channel is through OEMs. We have several OEM relationships and are actively developing new ones. Currently OEM partners include Comverse Technology, Motorola and Sun. OEMs generally resell our products under their own brand name and typically assume responsibility for marketing, sales, service and support. Our OEM relationships allow us to sell into geographic or vertical markets where each OEM has significant presence. For the years ended December 31, 2003 and 2004, OEM sales represented 85.9% and 89.6% of our net revenue, respectively. Sales to Sun accounted for 83.4% and 86.3% of our net revenue for the years ended December 31, 2003 and 2004, respectively.

Indirect Channels

Most of our non-OEM products are sold in conjunction with SIs, distributors, and VARs who work closely with our sales force to sell our products to end-users. Our indirect channel partners generally resell our products under the Dot Hill brand name and share responsibility with us for marketing, sales, service and support. We believe indirect channel sales represent an attractive growth opportunity and intend to expand the scope of our indirect channel sales efforts by continuing to actively pursue additional indirect channel partners, both domestically and internationally.

Marketing

We support our OEM and other indirect channels with a broad array of marketing programs designed to build our brand name, attract additional channel partners and generate end-user demand. Our product marketing team, located in Carlsbad, California, focuses on product strategy, product development roadmaps, the new production introduction process, product lifecycle management, demand assessment and competitive analysis. The product marketing team also ensures that product development activities, product launches, channel marketing program activities and ongoing demand and supply planning occur on a well-managed, timely basis in coordination with our development, manufacturing and sales groups, as well as our sales channel partners. The groups work closely with our sales and research and development groups to align our product development roadmap to meet key channel technology requirements.

Our Relationship with Sun

In May 2002, we entered into a three-year OEM agreement with an annual renewal to provide our SANnet II and SANscape products for private label sales by Sun. This agreement was recently extended until May of 2007. During October 2002, we began shipping to Sun the first product in our SANnet II family of systems, SANnet II SCSI, for resale to Sun's customers. We began shipping our SANnet II FC to Sun in March 2003, our SANnet II SATA to Sun in June 2004, and our SANnet II Blade to Sun in March 2004. We are developing new products targeted for sale by Sun and expect our relationship to continue to expand. There are no minimum purchase agreements or guarantees in our agreement with Sun, and the agreement does not obligate Sun to purchase its storage solutions exclusively from us.

As of December 31, 2004, Sun held the right to acquire from us a number of shares of common stock equal to up to 3.2% of our common stock outstanding. In May 2002, in connection with the original OEM agreement, we issued a warrant to Sun to purchase 1,239,527 shares of our common stock. In February 2003, we issued a warrant to Sun in connection with a private placement of our preferred stock. As of December 31, 2004, this warrant was exercisable for 154,742 shares of our common stock. Under the terms of the warrants, we are obligated to file a registration statement with respect to the resale of all of the shares of our common stock issuable upon exercise of the warrants.

We believe that our relationships with market leaders like Sun strengthen our credibility in the marketplace, validate our technology and enable us to sell our products to a much broader customer base. In addition to expanding and enhancing our relationships with current OEM customers and other types of channel partners, we intend to add additional OEM customers as a part of our overall strategy.

Because of our relationship with Sun, we are subject to seasonality related to Sun's historical sales pattern. Generally, sales for the second quarter of our fiscal year reflect the positive impact attributed to Sun historically strong sales in the last quarter of its fiscal year. Conversely, sales for the third quarter of our fiscal year typically reflect the impact of decreased sales to Sun for the first quarter of its fiscal year.

Customer Service and Support

We recognize that providing comprehensive, proactive and responsive support is essential to establishing new customer accounts and securing repeat business. We provide comprehensive, 24 hours a day, seven days a week, 365 days a year, global customer service and support, either directly or through third party service providers, aimed at simplifying installation, reducing field failures, minimizing system downtime and streamlining administration. Through direct and third party service providers, we maintain a global network of professional engineers and technicians who provide telephonic technical support in various languages from strategically located global response centers on a 24 hour, seven day basis. In addition, we provide four hour on site service response on a global basis. We also offer all of our customers access to SANsolve, our web-hosted interactive support knowledge base that gives our customers the ability to find answers to technical questions as well as initiate and track all support issues.

We have also taken steps to better align our service and support structure with our indirect sales model. We have:

- Encouraged our channel partners to provide support and service directly to end-users. For example, Sun, our primary channel partner, provides all but the fifth and final level of support and service to its end-users; we provide that final level of support and service;

- Focused on providing the higher levels of support for a fee and the establishment of authorized service providers; and

- Engaged Anacomp, Inc., or Anacomp, to be the exclusive provider of on site maintenance, warranty and non-warranty services for customers who purchase new maintenance agreements for our prior generation SANnet product family and other legacy products. Anacomp also manages our non-warranty customers and is the exclusive distributor of spare parts for our legacy products. In addition, Anacomp provides first and second level technical support for all of our product lines.

We plan to continue to maintain our current service offerings, including onsite support contracts. These services will be performed either directly by us, or through the increased use of third party service providers.

Research and Development

Our research and development team is focused on developing innovative storage and networking products, storage management software for the open systems market, and the integration of our recently-acquired storage controller technology into Dot Hill designed storage systems. We have a history of industry firsts, including the first successfully commercialized hot-swappable SCSI disk array and RAID storage system for the Unix environment, and the first NEBS Level 3 certified and MIL STD-810F tested line of storage systems. We believe that our success depends on our ability to continuously develop products that meet changing customer needs and to anticipate and proactively respond to highly evolving technology in a timely and cost-effective manner. We also generally design and develop our products to have a modular architecture that can be scaled to meet customer needs and modified to respond to technological developments in the open systems computing environment across product lines.

Our areas of expertise include Linux, Unix and Windows driver and system software design, SAN storage resource management software design, data storage system design and integration, controller and router design and technology and high-speed data interface design. We are currently focusing development efforts on our next-generation family of storage systems and on our software products. Projects include the launch of additional members of the SANnet II family of systems, improvements to our storage software offerings and next generation high-speed solutions that will take advantage of the latest transports and technologies.

Our research and development activities are directed by individuals with significant expertise and industry experience. Our total research and development expenses were $10.0 million, $11.9 million and $18.0 million for the years ended December 31, 2002, 2003 and 2004, respectively.

Manufacturing and Suppliers

Since 2002, we have outsourced substantially all of the manufacturing operations for our SANnet I and SANnet II systems and RAID controllers to third party manufacturing companies. By outsourcing manufacturing we have been able to reduce expenses related to our internal manufacturing operations and focus on our research and development activities. Under our OEM agreement with Sun, Sun has the right to require that we use a third party to manufacture our products. This external manufacturer must meet Sun's engineering, qualification and logistics requirements.

Intellectual Property

Our success depends significantly upon our proprietary technology. We have received registered trademark protection for the marks SANnet®, SANpath®, SANscape®, Stratis®, Dot Hill®, Dot Hill Systems® and the Dot Hill logo. We have attempted to protect our intellectual property rights primarily through copyrights, trade secrets, employee and third party nondisclosure agreements and other measures. We have registered trademarks and will continue to evaluate the registration of additional trademarks as appropriate. We claim common law protection for, and may seek to register, other trademarks. In addition, we generally enter into confidentiality agreements with our employees and with key vendors and suppliers.

As of December 31, 2004, we had been awarded a total of 12 U.S. patents, three of which were awarded in 2004. Four patents generally cover RAID controller and SAN technology, which we believe could provide us with material competitive advantage. In addition, as of December 31, 2004, we had one Allowed U.S. patent, and 23 Filed U.S. patent applications. If we are unable to protect our intellectual property or infringe intellectual property of a third party, our operating results could be harmed.

Competition

The storage market is intensely competitive and is characterized by rapidly changing technology. We compete primarily against independent storage system suppliers, including EMC Corp., Hitachi Data Systems Corp., Engenio Information Technologies, Inc., a subsidiary of LSI Logic Corp., or Engenio, Adaptec, Inc., Xyratex Ltd., and Network Appliance, Inc. We also compete with traditional suppliers of computer systems, including Dell Inc., Hewlett-Packard Company and International Business Machines Corp., or IBM,, which market storage systems as well as other computer products.

Many of our existing and potential competitors have longer operating histories, greater name recognition and substantially greater financial, technical, sales, marketing and other resources. As a result, they may have more advanced technology, larger distribution channels, stronger brand names, better customer service and access to more customers than we do. Other large companies with significant resources could become direct competitors, either through acquiring a competitor or through internal efforts. Additionally, a number of new, privately held companies are currently attempting to enter the storage market, some of which may become significant competitors in the future.

We believe the principal competitive factors in the storage systems market are:

- Product performance, features, scalability and reliability;
- Price;
- Product breadth;
- Timeliness of new product introductions; and
- Interoperability and ease of management.

We believe that we compete favorably in each of these categories. To remain competitive, we believe we must invest significant resources in developing new products, enhancing our current products, and maintaining high quality standards and customer satisfaction.

Employees

As of December 31, 2004, we had 253 full-time employees, of whom 68 were engaged in sales and marketing, 109 in research and development, 44 in manufacturing, 24 in general management and administration and 8 in customer service and support. We have not had a work stoppage among our employees and none of our employees are represented under collective bargaining agreements. We consider our relations with our employees to be good.

Executive Officers of the Registrant at December 31, 2004

Name	Age	Position	Officer since
James L. Lambert	51	Chief Executive Officer, and Vice Chairman	August 1984*
Dana W. Kammersgard	49	President	August 1984*
Preston S. Romm	51	Chief Financial Officer, Vice President, Finance, Treasurer and Secretary	November 1999

* Note: In 1999, Artecon, Inc. and Box Hill Systems Corp. merged to form Dot Hill Systems Corp. Artecon was founded in 1984 by James Lambert and Dana Kammersgard. Both Mr. Lambert and Mr. Kammersgard were officers of Artecon from its inception until the merger, and have been officers of Dot Hill since the merger.

All officers are elected by the board of directors and serve at the pleasure of the board of directors as provided in our bylaws.

James L. Lambert has served as Vice Chairman and Chief Executive Officer since August 2004. From August 2000 to August 2004 Mr. Lambert served as Director and the President, Chief Operating Officer and sole Chief Executive Officer. Since August 1999, he has also served as President, Chief Operating Officer and Co-Chief Executive Officer. A founder of Artecon, Mr. Lambert served as President, Chief Executive Officer and director of Artecon from its inception in 1984 until the merger of Box Hill Systsems Corp. and Artecon in August 1999. Mr. Lambert currently serves as a director of the Nordic Group of Companies, a group of privately held companies. He is also a member of World Presidents Organization. Mr. Lambert holds a B.S. and an M.S. in Civil and Environmental Engineering from University of Wisconsin, Madison. Mr. Lambert is William R. Sauey's son-in-law.

Dana W. Kammersgard has served as our President since August 2004. From August 1999 to August 2004, Mr. Kammersgard served as our Chief Technical Officer. Mr. Kammersgard was a founder of Artecon and served as a director from its inception in 1984 until August 1999. At Artecon, Mr. Kammersgard served in various positions since 1984, including Secretary and Senior Vice President of Engineering from March 1998 until August 1999 and as Vice President of Sales and Marketing from March 1997 until March 1998. Prior to co-founding Artecon, Mr. Kammersgard was the director of software development at CALMA, a division of General Electric Company. Mr. Kammersgard holds a B.A. in Chemistry from the University of California, San Diego.

Preston S. Romm has served as our Chief Financial Officer, Vice President, Finance and Treasurer since November 1999. Mr. Romm has also served as our Secretary since April 2001. From January 1997 to November 1999, Mr. Romm was Vice President of Finance, Chief Financial Officer and Secretary of Verteq, Inc., a privately-held semiconductor equipment manufacturer. From November 1994 to January 1997, Mr. Romm was Vice President of Finance and Chief Financial Officer of STM Wireless, Inc., a wireless data and voice equipment manufacturer. From July 1990 to November 1994, Mr. Romm was Vice President and Controller of MTI Technology Corporation, a provider of data storage systems. Since March 2004, Mr. Romm has served as a director of Netlist, Inc., a developer of high-density memory subsystems that use proprietary printed circuit board designs. Mr. Romm holds a B.S. in Accounting from the University of Maryland and a M.B.A. from American University.

Certain Risk Factors Related to the Company's Business

Our business, results of operations and financial condition may be materially and adversely affected due to any of the following risks. The risks described below are not the only ones we face. Additional risks we are not presently aware of or that we currently believe are immaterial may also impair our business operations. The trading price of our common stock could decline due to any of these risks. In assessing these risks, you should also refer to the other information contained or incorporated by reference in this Form 10-K, including our financial statements and related notes.

Under our OEM agreement with Sun, Sun is not required to make minimum purchases or purchase exclusively from us, and we cannot assure you that our relationship with Sun will not be terminated or will generate significant sales.

Our business is highly dependent on our relationship with Sun. Sales to Sun accounted for 83.4% and 86.3% of our net revenue for the years ended December 31, 2003 and December 31, 2004, respectively. Our OEM agreement with Sun had an initial term of three years and was extended in January 2004 for an additional two years through May 2007. However, there are no minimum purchase requirements or guarantees in our agreement with Sun, the agreement does not obligate Sun to purchase its storage solutions exclusively from us and Sun may cancel purchase orders submitted under the agreement at any time. Sun may terminate the entire contract prior to the contract expiration date upon the occurrence of certain events that are not remedied within a specified cure period. The decision by Sun not to renew its contract with us, to terminate the contract, to cease making purchases or to cancel purchase orders would cause our revenues to decline substantially. We cannot be certain if, when or to what extent Sun might terminate its contract with us, cancel purchase orders, cease making purchases or elect not to renew the contract upon the expiration of the initial term. We expect to receive a substantial majority of our projected net revenue for the year ended December 31, 2005 from sales of our products to Sun. We cannot assure you that we will achieve these expected sales levels. If we do not achieve the sales levels we expect to receive from Sun, our business and result of operations will be significantly harmed.

Any decline in Sun's sales could harm our business.

A substantial majority of our revenues are generated by sales to Sun, which sells our products as separate units or bundled with its servers. If Sun's storage-related sales decline, our revenues will also decline and our business could be materially harmed. In addition, Sun's quarterly operating results typically fluctuate downward in the first quarter of their fiscal year when compared with the immediately preceding fourth quarter. If these fluctuations cause Sun to decrease purchases of our storage products, our results in the first quarter of Sun's fiscal year, which is our third quarter, could be harmed. During October 2004, Engenio announced that it had broadened its OEM agreement with Sun. Under terms of the expanded agreement, Engenio will provide Sun with new modular storage technology and will co-develop future Sun storage products. While we do not currently believe that Engenio's relationship with Sun will impact our sales or our relationship with Sun, we cannot predict the impact that the Sun and Engenio relationship, if any, will have on our future sales to Sun.

We are dependent on sales to a relatively small number of customers.

Because we intend to expand sales to channel partners, we expect to experience continued concentration in our customer base. As a result, if our relationship with any of our customers were disrupted, we would lose a significant portion of our anticipated net revenue. We cannot guarantee that our relationship with Sun or other channel partners will expand or not otherwise be disrupted. Factors that could influence our relationship with significant channel partners, including Sun, include:

- our ability to maintain our products at prices that are competitive with those of other storage system suppliers;
- our ability to maintain quality standards for our products sufficient to meet the expectations of our channel partners; and
- our ability to produce, ship and deliver a sufficient quantity of our products in a timely manner to meet the needs of our channel partners.

None of our contracts with our existing channel partners, including Sun, contain any minimum purchasing commitments. Further, we do not expect that future contracts with channel partners, if any, will include any minimum purchasing commitments. Changes in the timing or volume of purchases by our major customers could result in lower revenue. In addition, our existing contracts do not require our channel partners to purchase our products exclusively or on a preferential basis over the products of any of our competitors. Consequently, our channel partners may sell the products of our competitors.

The loss of one or more suppliers could slow or interrupt the production and sales of our products.

Solectron, our third party manufacturer, relies on third parties to supply key components of our storage products. Many of these components are available only from limited sources in the quantities and quality we require. Solectron purchases the majority of our redundant arrays of independent disks, or RAID, controllers from Infortrend Technology, Inc., or Infortrend. Solectron may not be able to purchase the type or quantity of components from third party suppliers as needed in the future.

From time to time there is significant market demand for disk drives, RAID controllers and other components, and we may experience component shortages, selective supply allocations and increased prices of such components. In such event, we may be required to purchase our components from alternative suppliers. Even if alternative sources of supply for critical components such as disk drives and controllers become available, incorporating substitute components into our products could delay our ability to deliver our products in a timely manner. For example, we estimate that replacing Infortrend's RAID controllers with those of another supplier would involve several months of hardware and software modification, which could significantly harm our ability to meet our customers' orders for our products, damage our customer relationships and result in a loss of sales.

Manufacturing disruptions could harm our business.

We rely on Solectron to manufacture substantially all of our products. If our agreement with Solectron is terminated or if Solectron does not perform its obligations under our agreement, it could take several months to establish alternative manufacturing for our products and we may not be able to fulfill our customers' orders in a timely manner. Under our OEM agreement with Sun, Sun has the right to require that we use a third party to manufacture our products. Such an external manufacturer must meet Sun's engineering, qualification and logistics requirements. If our agreement with Solectron terminates, we may be unable to find another external manufacturer that meets Sun's requirements.

With our increased use of third-party manufacturers, our ability to control the timing of shipments has continued and will continue to decrease. Delayed shipment could result in the deferral or cancellation of purchases of our products. Any significant deferral or cancellation of these sales would harm our results of operations in any particular quarter. Net revenue for a period may be lower than predicted if large orders forecasted for that period are delayed or are not realized, which result in cash flow problems or a decline in our stock price.

Any shortage of disk drives could increase our costs or harm our ability to manufacture and deliver our storage products to our customers in a timely manner.

Demand for disk drives recently surpassed supply, forcing drive manufacturers, including those who supply the disk drives integrated into many of our storage products, to manage allocation of their inventory. If this shortage is prolonged, we may be forced to pay higher prices for disk drives or may be unable to purchase sufficient quantities of disk drives to meet our customers' demand for our storage products in a timely manner or at all.

We experienced losses in 2002 and 2001 and may experience losses in the future.

In 2004 and 2003, we recorded net income of $11.6 million and $12.1 million respectively; however, for the years ended December 31, 2002 and 2001, we incurred net losses of $34.3 million and $43.4 million respectively. We cannot assure you that we will be profitable in any future period. We have expended, and will continue to be required to expend, substantial funds to pursue engineering, research and development projects, enhance marketing efforts and otherwise operate our business. Our future capital requirements will depend on, and could increase substantially as a result of, many factors, including:

- our plans to maintain and enhance our engineering, research, development and product testing programs;
- the success of our manufacturing strategy;
- the success of our sales and marketing efforts;
- the extent and terms of any development, marketing or other arrangements;

changes in economic, regulatory or competitive conditions; and

costs of filing, prosecuting, defending and enforcing intellectual property rights.

Our available cash, cash equivalents and short-term investments as of December 31, 2004 totaled $126.2 million. We presently expect cash, cash equivalents, short-term investments and cash generated from operations to be sufficient to meet our operating and capital requirements through at least the next twelve months. However, unanticipated events, such as Sun's failure to meet its product purchase forecast or extraordinary expenses or operating expenses in excess of our projections, may require us to raise additional funds. We may not be able to raise additional funds on commercially reasonable terms or at all. Any sales of our debt or equity securities in the future may have a substantial dilutive effect on our existing stockholders. If we are able to borrow funds, we may be required to grant liens on our assets to the provider of any source of financing or enter into operating; debt service or working capital covenants with any provider of financing that could hinder our ability to operate our business in accordance with our plans. As a result, our ability to borrow money on a secured basis may be impaired, and we may not be able to issue secured debt on commercially reasonable terms or at all.

Our quarterly operating results have fluctuated significantly in the past and are not a good indicator of future performance.

Our quarterly operating results have fluctuated significantly in the past as shown in the following table and are not a good indicator of future performance.

Quarter	**Net Revenue**	**Net Income (Loss)**
	(in millions)	
First Quarter 2001	$ 18.6	$ (28.7)
Second Quarter 2001	14.9	(5.7)
Third Quarter 2001	12.3	(3.3)
Fourth Quarter 2001	10.5	(5.7)
First Quarter 2002	10.9	(6.2)
Second Quarter 2002	11.2	(8.9)
Third Quarter 2002	8.6	(7.3)
Fourth Quarter 2002	16.3	(11.9)
First Quarter 2003	30.5	(1.5)
Second Quarter 2003	48.4	2.6
Third Quarter 2003	51.0	4.3
Fourth Quarter 2003	57.5	6.7
First Quarter 2004	47.9	(2.6)
Second Quarter 2004	69.0	6.7
Third Quarter 2004	57.0	3.5
Fourth Quarter 2004	65.5	4.0

In addition, the announcement of financial results that fall short of the results anticipated by the public markets could have an immediate and significant negative effect on the trading price of our common stock in any given period.

We may have difficulty predicting future operating results due to both internal and external factors affecting our business and operations, which could cause our stock price to decline.

Our operating results may vary significantly in the future depending on a number of factors, many of which are out of our control, including:

the size, timing, cancellation or rescheduling of significant orders;

the cost of litigation and settlements involving intellectual property and other issues;

- product configuration, mix and quality issues;
- market acceptance of our new products and product enhancements and new product announcements or introductions by our competitors;
- manufacturing costs;
- deferrals of customer orders in anticipation of new products or product enhancements;
- changes in pricing by us or our competitors;
- our ability to develop, introduce and market new products and product enhancements on a timely basis;
- hardware component costs and availability, particularly with respect to hardware components obtained from Infortrend, a sole-source provider;
- our success in creating brand awareness and in expanding our sales and marketing programs;
- the level of competition;
- potential reductions in inventories held by channel partners;
- slowing sales of the products of our channel partners;
- technological changes in the open systems storage market;
- levels of expenditures on research, engineering and product development;
- changes in our business strategies;
- personnel changes; and
- general economic trends and other factors.

If our customers delay or cancel orders or return products, our results of operations could be harmed.

We generally do not enter into long-term purchase contracts with customers, and customers usually have the right to extend or delay shipment of their orders, return products and cancel orders. As a result, sales in any period are generally dependent on orders booked and shipped in that period. Delays in shipment orders, product returns and order cancellations in excess of the levels we expect would harm our results of operations.

Our sales cycle varies substantially and future net revenue in any period may be lower than our historical revenues or forecasts.

Our sales are difficult to forecast because the open systems storage market is rapidly evolving and our sales cycle varies substantially from customer to customer. Customer orders for our products can range in value from a few thousand dollars to over a million dollars. The length of time between initial contact with a potential customer and the sale of our product may last from three to 24 months. This is particularly true during times of economic slowdown, for sales to channel partners and for the sale and installation of complex solutions. We have shifted our business strategy to focus primarily on channel partners, with whom sales cycles are generally lengthier, more costly and less certain than direct sales to end-users.

Additional factors that may extend our sales cycle, particularly orders for new products, include:

- the amount of time needed for technical evaluations by customers;
- customers' budget constraints and changes to customers' budgets during the course of the sales cycle;

customers' internal review and testing procedures; and

our engineering work necessary to integrate a storage solution with a customer's system.

Our net revenue is difficult for us to predict since it is directly affected by the timing of large orders. Due to the unpredictable timing of customer orders, we may ship products representing a significant portion of our net sales for a quarter during the last month of that quarter. In addition, our expense levels are based, in part, on our expectations as to future sales. As a result, if sales levels are below expectations, our operating results may be disproportionately affected. We cannot assure you that we will experience sales growth in future periods.

The market for our products is subject to substantial pricing pressure that may decrease our margins.

Pricing pressures exist in the data storage market and have harmed and may in the future continue to harm our net revenue and earnings. These pricing pressures are due, in part, to continuing decreases in component prices, such as those of disks and RAID controllers. Decreases in component prices are customarily passed on to customers by storage companies through a continuing decrease in price of storage hardware systems. In addition, because we expect to continue to make most of our sales to a small number of customers, we are subject to continued pricing pressures from our customers, particularly our OEM customers. Pricing pressures are also due, in part, to the current difficult economic conditions, which have led many companies in our industry to pursue a strategy of decreasing prices in order to win sales, the narrowing of functional differences among competitors, which forces companies to compete on price as opposed to features of products, and the introduction of new technologies, which leaves older technology more vulnerable to pricing pressures. To the extent we are unable to offset those pressures with commensurate cost reductions from our suppliers or by providing new products and features, our margins will be harmed.

Our success depends significantly upon our ability to protect our intellectual property and to avoid infringing the intellectual property of third parties, which could result in costly, time-consuming litigation or even the inability to offer certain products.

We rely primarily on patents, copyrights, trademarks, trade secrets, nondisclosure agreements and common law to protect our intellectual property. For example, we have registered trademarks for SANnet, SANpath, SANscape, Stratis, Dot Hill and the Dot Hill logo. Despite our efforts to protect our intellectual property, unauthorized parties may attempt to copy aspects of our products or obtain and use information that we regard as proprietary. In addition, the laws of foreign countries may not adequately protect our intellectual property rights. Our efforts to protect our intellectual property from third party discovery and infringement may be insufficient and third parties may independently develop technologies similar to ours, duplicate our products or design around our patents.

On October 17, 2003, Crossroads Systems, or Crossroads, filed a lawsuit against us in the United States District Court in Austin, Texas alleging that our products infringe two United States patents assigned to Crossroads, Patent Numbers 5,941,972 and 6,425,035. We were served with the lawsuit on October 27, 2003. In March 2004, Chaparral was added as a party to the lawsuit. The patents involve storage routers and methods for providing virtual local storage. Patent Number 5,941,972 involves the interface of SCSI storage devices and the Fibre Channel protocol and Patent Number 6,425,035 involves the interface of any one-transport medium and a second transport medium. We believe that we have meritorious defenses to Crossroads' claims and intend to vigorously defend against them. We expect to incur significant legal expenses in connection with this litigation. These defense costs, and other expenses related to this litigation, will be expensed as incurred and will negatively affect our future operating results. Further, parties may assert additional infringement claims against us in the future, which would similarly require us to incur substantial legal fees and expenses, and distract management from the operations of our business.

We expect that providers of storage products will increasingly be subject to infringement claims as the number of products and competitors increases. In addition to the formal claims brought against us by Crossroads, we receive, from time to time, letters from third parties suggesting that we may require a license from such third parties to manufacture or sell our products. We evaluate all such communications to assess whether to seek a license from the patent owner. We may require licenses that could have a material impact on our business. We may not be able to obtain the necessary license from a third party on commercially reasonable terms, or at all.

Consequently, we could be prohibited from marketing products that incorporate the protected technology or incur substantial costs to redesign our products in a manner to avoid infringement of third party intellectual property rights.

The market for storage systems is intensely competitive and our results of operations, pricing and business could be harmed if we fail to maintain or expand our market position.

The storage market is intensely competitive and is characterized by rapidly changing technology. We compete primarily against independent storage system suppliers, including EMC Corp., Hitachi Data Systems Corp., Engenio, Adaptec, Inc., Xyratex Ltd, and Network Appliance Inc. We also compete with traditional suppliers of computer systems, including Dell Inc., Hewlett-Packard Company and IBM, which market storage systems as well as other computer products.

Many of our existing and potential competitors have longer operating histories, greater name recognition and substantially greater financial, technical, sales, marketing and other resources than us. As a result, they may have more advanced technology, larger distribution channels, stronger brand names, better customer service and access to more customers than we do. Other large companies with significant resources could become direct competitors, either through acquiring a competitor or through internal efforts. Additionally, a number of new, privately held companies are currently attempting to enter the storage market, some of which may become significant competitors in the future. Any of these existing or potential competitors may be able to respond more quickly to new or emerging technologies and changes in customer requirements, devote greater resources to the development, promotion and sale of products or deliver competitive products at lower prices than us.

We could also lose current or future business to any of our suppliers or manufacturers, some of which directly and indirectly compete with us. Currently, we leverage our supply and manufacturing relationships to provide a significant share of our products. Our suppliers and manufacturers are very familiar with the specific attributes of our products and may be able to provide our customers with similar products.

We also expect that competition will increase as a result of industry consolidation and the creation of companies with new, innovative product offerings. Current and potential competitors have established or may establish cooperative relationships among themselves or with third parties to increase the ability of their products to address the needs of our prospective customers. Accordingly, it is possible that new competitors or alliances among competitors may emerge and rapidly acquire significant market share. Increased competition is likely to result in price reductions, reduced operating margins and potential loss of market share, any of which could harm our business. We believe that the principal competitive factors affecting the storage systems market include:

- Product performance, features, scalability and reliability;
- Price;
- Product breadth;
- Timeliness of new product introductions; and
- Interoperability and ease of management.

We cannot assure you that we will be able to successfully incorporate these factors into our products and compete against current or future competitors or that competitive pressures we face will not harm our business. If we are unable to develop and market products to compete with the products of competitors, our business will be materially and adversely affected. In addition, if major channel partners who are also competitors cease purchasing our products in order to concentrate on sales of their own products, our business will be harmed.

The open systems storage market is rapidly changing and we may be unable to keep pace with or properly prepare for the effects of those changes.

The open systems data storage market in which we operate is characterized by rapid technological change, frequent new product introductions, evolving industry standards and consolidation among our competitors, suppliers and customers. Customer preferences in this market are difficult to predict and changes in those preferences and the introduction of new products by our competitors or us could render our existing products obsolete. Our success will depend upon our ability to address the increasingly sophisticated needs of customers, to enhance existing products, and to develop and introduce on a timely basis, new competitive products, including new software and hardware, and enhancements to existing software and hardware that keep pace with technological developments and emerging industry standards. If we cannot successfully identify, manage, develop, manufacture or market product enhancements or new products, our business will be harmed. In addition, consolidation among our competitors, suppliers and customers may harm our business by increasing the resources of our competitors, reducing the number of suppliers available to us for our product components and increasing competition for customers by reducing customer-purchasing decisions.

A significant percentage of our expenses are fixed, and if we fail to generate revenues in associated periods, our operating results will be harmed.

Although we have taken a number of steps to reduce operating costs, we may have to take further measures to reduce expenses if we experience operating losses or do not achieve a stable net income. A number of factors could preclude us from successfully bringing costs and expenses in line with our net revenue, such as the fact that our expense levels are based in part on our expectations as to future sales, and that a significant percentage of our expenses are fixed, which limits our ability to reduce expenses quickly in response to any shortfalls in net revenue. As a result, if net revenue does not meet our projections, operating results may be negatively affected. We may experience shortfalls in net revenue for various reasons, including:

- significant pricing pressures that occur because of declines in selling prices over the life of a product or because of increased competition;
- sudden shortages of raw materials or fabrication, test or assembly capacity constraints that lead our suppliers and manufacturers to allocate available supplies or capacity to other customers, which, in turn, may harm our ability to meet our sales obligations; and
- the reduction, rescheduling or cancellation of customer orders.

In addition, we typically plan our production and inventory levels based on internal forecasts of customer demand, which is highly unpredictable and can fluctuate substantially. From time to time, in response to anticipated long lead times to obtain inventory and materials from our outside suppliers, we may order materials in advance of anticipated customer demand. This advance ordering has continued and may result in excess inventory levels or unanticipated inventory write-downs due to expected orders that fail to materialize.

Our business and operating results may suffer if we encounter significant product defects.

Our products may contain undetected errors or failures when first introduced or as we release new versions. During 2004, we have introduced a number of new products. We may discover errors in our products after shipment, resulting in a loss of or delay in market acceptance, which could harm our business. Our standard warranty provides that if the system does not function to published specifications, we will repair or replace the defective component or system without charge. Significant warranty costs, particularly those that exceed reserves, could adversely impact our business. In addition, defects in our products could result in our customers claiming damages against us for property damage or consequential damage and could also result in our loss of customers and goodwill. Any such claim could distract management's attention from operating our business and, if successful, result in damage claims against us that might not be covered by our insurance.

Our success depends on our ability to attract and retain key personnel.

Our performance depends in significant part on our ability to attract and retain talented senior management and other key personnel. Our key personnel include James Lambert, our Vice Chairman and Chief Executive Officer, Dana Kammersgard, our President, and Preston Romm, our Chief Financial Officer. If any one of these individuals were to terminate his employment with us, we would be required to locate and hire a suitable replacement. Competition for attracting talented employees in the technology industry is intense. We may be unable to identify suitable replacements for any employees that we lose. In addition, even if we are successful in locating suitable replacements, the time and cost involved in recruiting, hiring, training and integrating new employees, particularly key employees responsible for significant portions of our operations, could harm our business by delaying our production schedule, our research and development efforts, our ability to execute on our business strategy and our client development and marketing efforts.

Many of our customer relationships are based on personal relationships between the customer and our sales representatives. If these representatives terminate their employment with us, we may be forced to expend substantial resources to attempt to retain the customers that the sales representatives serviced. Ultimately, if we were unsuccessful in retaining these customers, our net revenue would decline.

We have made several reductions in our workforce. Although the reductions were designed to reduce our operating costs, the reductions have increased the responsibilities of our remaining employees. As a result, we face risks associated with transferring the duties of our former employees to our remaining employees. In addition to the expense involved in retraining employees, there is a risk that our current work force will be unable to effectively manage all of the duties of our former employees, which could adversely impact our research and development efforts, our general accounting and operating activities, our sales efforts and our production capabilities.

Our executive officers and directors and their affiliates own a significant percentage of our outstanding shares, which could prevent us from being acquired and adversely affect our stock price.

As of December 31, 2004, our executive officers, directors and their affiliates beneficially owned approximately 6.8% of our outstanding shares of common stock. These individual stockholders may be able to influence matters requiring approval by our stockholders, including the election of a majority of our directors. The voting power of these stockholders under certain circumstances could have the effect of delaying or preventing a change in control of us. This concentration of ownership may also make it more difficult or expensive for us to obtain financing. Further, any substantial sale of shares by these individuals could depress the market price of our common stock and impair our ability to raise capital in the future through the sale of our equity securities.

Protective provisions in our charter and bylaws and the existence of our stockholder rights plan could prevent a takeover which could harm our stockholders.

Our certificate of incorporation and bylaws contain a number of provisions that could impede a takeover or prevent us from being acquired, including, but not limited to, a classified board of directors, the elimination of our stockholders' ability to take action by written consent and limitations on the ability of our stockholders to remove a director from office without cause. Our board of directors may issue additional shares of common stock or establish one or more classes or series of preferred stock with such designations, relative voting rights, dividend rates, liquidation and other rights, preferences and limitations as determined by our board of directors without stockholder approval. In addition, we adopted a stockholder rights plan in May 2003 that is designed to impede takeover transactions that are not supported by our board of directors. Each of these charter and bylaw provisions and the stockholder rights plan gives our board of directors, acting without stockholder approval, the ability to prevent, or render more difficult or costly, the completion of a takeover transaction that our stockholders might view as being in their best interests.

The exercise of outstanding warrants may result in dilution to our stockholders.

Dilution of the per share value of our common stock could result from the exercise of outstanding warrants. As of December 31, 2004 there were outstanding warrants to purchase 1,966,849 shares of our common stock. The warrants have exercise prices ranging from $2.97 to $4.50 per share and expire at various dates through March 14, 2008. When the exercise price of the warrants is less than the trading price of our common stock, exercise of the warrants would have a dilutive effect on our stockholders. The possibility of the issuance of shares of our common stock upon exercise of the warrants could cause the trading price of our common stock to decline.

Any failure by us to manage the integration of Chaparral into our operations could harm our financial results, business and prospects.

In February 2004, we completed the acquisition of Chaparral. The related integration issues are complex, time-consuming and expensive and, without proper planning and implementation, could significantly disrupt our business. The challenges involved in integration include:

- combining product offerings or entering into new markets in which we are not experienced and preventing customers and distributors from deferring purchasing decisions or switching to other suppliers, which could result in our incurring additional obligations in order to address customer uncertainty;

- demonstrating to customers and distributors that the transaction will not result in adverse changes in client service standards or business focus and coordinating sales, marketing and distribution efforts;

- consolidating and rationalizing corporate IT infrastructure, including implementing information management and system processes that enable increased customer satisfaction, improved productivity, lower costs, accurate financial reporting, more direct sales and improved inventory management;

- minimizing the diversion of management attention from ongoing business concerns;

- persuading employees that business cultures are compatible, maintaining employee morale and retaining key employees, integrating employees into Dot Hill, and correctly estimating employee benefit costs; and coordinating and combining administrative, manufacturing, research and development and other operations, subsidiaries, facilities and relationships with third parties in accordance with local laws and other obligations while maintaining adequate standards, controls and procedures.

Managing the acquisition of Chaparral may divert our attention from other business operations. This transaction also has resulted and in the future may result in significant costs and expenses and charges to earnings, including those related to severance pay, employee benefit costs, asset impairment charges, charges from the elimination of duplicative facilities and contracts, in-process research and development charges, inventory adjustments, legal, accounting and financial advisory fees, and required payments to executive officers and key employees under retention plans. Moreover, we have incurred and will incur additional depreciation and amortization expense over the useful lives of certain assets acquired in connection with transactions, and, to the extent the value of goodwill or intangible assets with indefinite lives acquired in connection with a transaction becomes impaired, we may be required to incur additional material charges relating to the impairment of those assets. As a result, the Chaparral transaction may contribute to financial results that differ from the investment community's expectations in a given quarter.

Our stock price may be highly volatile and could decline substantially and unexpectedly.

The trading price of our shares of common stock has been affected by the factors disclosed in this section as well as prevailing economic and financial trends and conditions in the public securities markets. Share prices of companies in technology-related industries, such as ours, tend to exhibit a high degree of volatility. The announcement of financial results that fall short of the results anticipated by the public markets could have an immediate and significant negative effect on the trading price of our shares in any given period. Such shortfalls may result from events that are beyond our immediate control, can be unpredictable and, since a significant proportion of our sales during each fiscal quarter tend to occur in the latter stages of the quarter, may not be discernible until the end of a financial reporting period. These factors may contribute to the volatility of the trading value of our shares regardless of our long-term prospects. The trading price of our shares may also be affected by developments, including reported financial results and fluctuations in trading prices of the shares of other publicly-held companies, in our industry generally and our business segment in particular, which may not have any direct relationship with our business or prospects.

In the past, securities class action litigation has often been brought against a company following periods of volatility in the market price of its securities. We could be the target of similar litigation in the future. Securities litigation could result in the expenditure of substantial funds, divert management's attention and resources, harm our reputation in the industry and the securities markets and reduce our profitability.

Future sales of our common stock may hurt our market price.

A substantial number of shares of our common stock may become available for resale. If our stockholders sell substantial amounts of our common stock in the public market, the market price of our common stock could decline. These sales might also make it more difficult for us to sell equity securities in the future at times and prices that we deem appropriate. In addition, we are obligated to file a registration statement with respect to the resale of up to 1,394,269 shares of our common stock issuable upon exercise of warrants held by Sun.

Geopolitical military conditions, including terrorist attacks and other acts of war, may materially and adversely affect the markets on which our common stock trades, the markets in which we operate, our operations and our profitability.

Terrorist attacks and other acts of war, and any response to them, may lead to armed hostilities and such developments would likely cause instability in financial markets. Armed hostilities and terrorism may directly impact our facilities, personnel and operations that are located in the United States and internationally, as well as those of our channel partners, suppliers, third party manufacturer and customers. Furthermore, severe terrorist attacks or acts of war may result in temporary halts of commercial activity in the affected regions, and may result in reduced demand for our products. These developments could have a material adverse effect on our business and the trading price of our common stock.

Compliance with Sarbanes-Oxley Act of 2002.

We are exposed to significant costs and risks associated with complying with increasingly stringent and complex regulation of corporate governance and disclosure standards. Changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, new SEC regulations and Nasdaq Stock Market rules require growing expenditure of management time and external resources. In particular, Section 404 of the Sarbanes-Oxley Act of 2002 requires management's annual review and evaluation of our internal controls, and attestations of the effectiveness of our internal controls by our independent auditors. This process has required us to hire additional personnel and outside advisory services and has resulted in significant accounting and legal expenses. We expect to continue to incur significant expense in future periods to comply with regulations pertaining to corporate governance as described above.

If we fail to maintain effective internal control over financial reporting, we may be required to make additional public disclosures related to our internal control deficiencies and our management may not be able to conclude that our internal control over financial reporting is effective for the year ended December 31, 2005.

We have documented and tested our internal control systems and procedures for the year ended December 31, 2004. Based on our evaluation we have identified internal control deficiencies that constitute material weaknesses relating to our financial closing process, inventory processing and processing related to fixed assets. Accordingly, management has concluded that our internal control over financial reporting was not effective as of December 31, 2004. If we encounter problems or delays in the implementation of improvements and corrective measures, we may be required to make further disclosures about internal control deficiencies and/or material weaknesses and investor perceptions of our company may be adversely affected, which could cause a decline in the market price of our stock.

Item 2. Properties

Our headquarters and principal research and marketing facilities occupy approximately 67,200 square feet in Carlsbad, California, under a renewable lease that expires in December 2005. In addition, we lease a sales office in Boston, Massachusetts, and six international offices in five countries: Germany, Japan, the Netherlands, Singapore and the United Kingdom. With the acquisition of Chaparral, we added a research and development facility that occupies approximately 26,930 square feet in Longmont, Colorado, under a lease that expires in July 2007. We also have a lease for a facility in Corona, California for 7,160 square feet. Solectron manufactures substantially all of our products. We believe that with our existing facilities and Solectron's manufacturing capabilities, we have the capacity to meet any potential increases to our forecasted production requirements and therefore believe our facilities are adequate to meet our needs in the foreseeable future.

Item 3. Legal Proceedings

Crossroads Systems On October 17, 2003, Crossroads Systems, or Crossroads, filed a lawsuit against us in the United States District Court in Austin, Texas, alleging that our products infringe two United States patents assigned to Crossroads, Patent Numbers 5,941,972 and 6,425,035. We were served with the lawsuit on October 27, 2003. Chaparral was added as a party to the lawsuit in March 2004. The patents involve storage routers and methods for providing virtual local storage. Patent Number 5,941,972 involves the interface of SCSI storage devices and the Fibre Channel protocol and Patent Number 6,425,035 involves the interface of any one-transport medium and a second transport medium. We believe that we have meritorious defenses to Crossroads' claims and are in the process of vigorously defending against them. However, we expect to incur significant legal expenses in connection with this litigation. These defense costs, and other expenses related to this litigation, will be expensed as incurred and will negatively affect our operating results.

Chaparral Shareholder Lawsuit In August 2004, a class action lawsuit was filed against, among others, Chaparral and a number of former officers and directors of Chaparral in the United States District Court for the Central District of California. The lawsuit, among other things, alleges violations of federal securities laws and purports to seek damages on behalf of a class of shareholders who purchased Chaparral securities during a defined period prior to our acquisition of Chaparral. We believe that the claims against Chaparral and its former officers and directors are without merit and are in the process of vigorously defending against them.

In addition to the action discussed above, we are subject to various legal proceedings and claims, asserted or unasserted, which arise in the ordinary course of business. The outcome of the claims against us cannot be predicted with certainty. We believe that such litigation and claims will not have a material adverse effect on our financial condition or operating results.

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

None.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock traded on the New York Stock Exchange beginning on September 16, 1997 under the symbol "BXH". In August 1999, Box Hill Systems merged with Artecon and we changed our name to Dot Hill Systems Corp. and our trading symbol changed to "HIL". We moved to the American Stock Exchange on December 12, 2002, where we continued to trade our common stock under the symbol "HIL". On July 28, 2003, our common stock was included for quotation on the Nasdaq National Market where our common stock is currently traded under the symbol "HILL".

The following table sets forth for the periods indicated the per share range of the high and low closing sales prices or closing bid prices, of our common stock as reported on the New York Stock Exchange, the American Stock Exchange or the Nasdaq National Market, as applicable.

	Low	High
Year Ended December 31, 2003		
First Quarter	$ 3.10	$ 6.12
Second Quarter	6.01	14.00
Third Quarter	13.52	18.95
Fourth Quarter	12.66	17.37
Year Ended December 31, 2004		
First Quarter	$ 10.04	$ 17.14
Second Quarter	7.24	11.36
Third Quarter	7.18	10.98
Fourth Quarter	6.25	8.89

On March 7, 2005 the last reported sale price for our common stock on the Nasdaq National Market was $6.31 per share. As of March 7, 2005, there were 43,793,613 shares of our common stock outstanding held by approximately 5,928 holders of record. We have never paid any cash dividends on our common stock, and currently intend to retain future earnings, if any, to the extent possible to fund the development and growth of our business. We do not anticipate paying any cash dividends on our common stock in the foreseeable future.

The information required to be disclosed by item 201(d) of Regulation S-K "*Securities Authorized for Issuance Under Equity Compensation Plans"* is included under Item 12 of Part III of this Annual Report on Form 10-K.

Item 6. Selected Financial Data

In August 1999, Box Hill Systems merged with Artecon and we changed our name to Dot Hill Systems Corp. Our accompanying financial statements have been retroactively restated to reflect the Merger of Box Hill and Artecon, which was accounted for as a pooling of interests. We derived the selected consolidated financial data presented below from our consolidated financial statements. You should read the selected consolidated financial data together with our consolidated financial statements and related notes thereto and with "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Annual Report on Form 10-K.

Statement of operations data for the years ended December 31, 2002, 2003 and 2004, and the balance sheet data as of December 31, 2003 and 2004 have been derived from our audited consolidated financial statements which are included elsewhere in this Annual Report on Form 10-K. Statement of operations data for the years ended December 31, 2000 and 2001 and balance sheet data as of

December 31, 2000, 2001 and 2002 have been derived from our audited consolidated financial statements not included herein.

	Year Ended December 31,				
	2000	2001	2002	2003	2004(1)
	(in thousands, except per share data)				
Statement of Operations Data:					
Net revenue	$ 121,197	$ 56,277	$ 46,936	$ 187,448	$ 239,376
Cost of goods sold	77,730	44,818	45,444	142,550	179,875
Gross profit	43,467	11,459	1,492	44,898	59,501
Operating expenses:					
Sales and marketing	31,747	23,717	22,513	14,086	16,839
Research and development	8,798	6,673	10,043	11,950	17,993
General and administrative	6,891	4,533	5,150	7,418	9,992
In-process research and development(1)					4,700
Merger and restructuring expenses(2)		4,905	1,550		(434)
Operating income (loss)	(3,969)	(28,369)	(37,764)	11,444	10,411
Net income (loss)	$ (948)	$ (43,391)	$ (34,303)	$ 12,131	$ 11,597
Net income (loss) attributable to common stockholders	$ (948)	$ (43,391)	$ (34,759)	$ 11,990	$ 11,597
Net income (loss) per share:					
Basic	$ (0.04)	$ (1.76)	$ (1.39)	$ 0.35	$ 0.27
Diluted	$ (0.04)	$ (1.76)	$ (1.39)	$ 0.31	$ 0.25
Weighted average shares outstanding:					
Basic	24,253	24,703	24,953	33,856	43,460
Diluted	24,253	24,703	24,953	38,164	46,395

	As of December 31,				
	2000	2001	2002	2003	2004
	(in thousands)				
Balance Sheet Data:					
Cash, cash equivalents, and short-term investments	$ 33,653	$ 16,457	$ 10,082	$ 191,545	$ 126,186
Working capital	54,454	25,832	2,224	177,650	123,384
Total assets	102,879	46,191	32,228	218,443	246,567
Total long-term debt	186	330	275	247	

	As of December 31,				
Total stockholders' equity	73,770	30,611	5,785	184,133	196,827

(1) The results of operations of Chaparral Network Storage, Inc. have been included in our results prospectively from February 23, 2004.

(2) See discussion of our restructuring activities in Note 5 to our 2004 consolidated financial statements.

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

Cautionary Statement for Forward-Looking Information

Certain statements contained in this report, including, statements regarding the development, growth and expansion of our business, our intent, belief or current expectations, primarily with respect to our future operating performance and the products we expect to offer, and other statements regarding matters that are not historical facts, are "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, and are subject to the "safe harbor" created by these sections. Because such forward-looking statements include risks and uncertainties, many of which are beyond our control, actual results may differ materially from those expressed or implied by such forward-looking statements. Some of the factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements can be found under the caption "Certain Risk Factors Related to the Company's Business" and elsewhere in this annual report on Form 10-K. Readers are cautioned not to place undue reliance on forward-looking statements. The forward-looking statements speak only as of the date on which they are made, and we undertake no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they are made.

The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and notes thereto included elsewhere in this Annual report on Form 10-K.

Certain of the financial statement line items for the year ended December 31, 2004 discussed in our comparison of the results of operations for the year ended December 31, 2004 to the year ended December 31, 2003 presented below reflect the reclassification of certain operating expenses from sales and marketing and research and development to cost of goods sold as presented in our amended Form 10-Q's for the quarters ended March 31, 2004, June 30, 2004 and September 30, 2004.

Overview

We are a provider of storage systems for organizations requiring high reliability, high performance networked storage and data management solutions in an open systems architecture. Our storage solutions consist of integrated hardware and software products employing a modular system that allows end-users to add capacity as needed. Our broad range of products, from medium capacity stand-alone storage units to complete turn-key, multi-terabyte storage area networks, provides end-users with a cost-effective means of addressing increasing storage demands without sacrificing performance.

Our products and services are sold worldwide to end-users primarily through our channel partners, including original equipment manufacturers, or OEMs, systems integrators, or SIs, and value added resellers, or VARs. In May 2002, we entered into a three-year OEM agreement with Sun to provide our storage hardware and software products for private label sales by Sun. We have been shipping our products to Sun for resale to Sun's customers since October 2002. We have continued to develop new products primarily for resale by Sun, such as our SANnet II FC, which began shipping to Sun in March 2003 and our SANnet II SATA product which began shipping in June 2004. We are discussing with Sun the extent and timing of additional new product shipments. In January 2004, our existing three-year OEM partner agreement with Sun, first announced in May 2002, was extended. The agreement will now continue through May 22, 2007, a two-year extension to the original agreement subject to the terms of the agreement including early termination provisions. We intend to continue expanding our non-OEM sales channels through SIs and VARs in order to decrease our revenue concentration with OEMs.

As part of our focus on indirect sales channels, we have outsourced substantially all of our manufacturing operations to Solectron, a leading electronics manufacturing services company. Our agreement with Solectron allows us to reduce sales cycle times and manufacturing infrastructure, enhance working capital and improve margins by taking advantage of Solectron's manufacturing and procurement economies of scale.

We derive revenue primarily from sales of our SANnet II family of products. In prior periods, we derived a significant portion of our revenue from sales of our legacy products and SANnet I family of products. Except for one OEM customer to whom we continue to sell our SANnet I products, we have transitioned all customers to our SANnet II products.

We derive a portion of our revenue from services associated with the maintenance service we provide for our installed products. In May 2003, we entered into a services agreement with Anacomp, Inc. to provide all maintenance, warranty and non-warranty services for our SANnet I and certain legacy products.

Cost of goods sold includes costs of materials, subcontractor costs, salary and related benefits for the production and service departments, depreciation and amortization of equipment used in the production and service departments, production facility rent and allocation of overhead.

Sales and marketing expenses consist primarily of salaries and commissions, advertising and promotional costs and travel expenses. Research and development expenses consist primarily of project-related expenses and salaries for employees directly engaged in research and development. General and administrative expenses consist primarily of compensation to officers and employees performing administrative functions and expenditures for administrative facilities. Restructuring expenses consist primarily of employee severance, lease termination costs and other office closure expenses related to the consolidation of excess facilities.

Other income is comprised primarily of interest income earned on our cash, cash equivalents, short-term investments and other miscellaneous income and expense items. Our interest expense primarily relates to a $6.0 million note payable that we assumed in connection with our acquisition of Chaparral. During August 2004, we made a payment of approximately $7.2 million representing both principle and interest to the holder of the $6 million promissory note assumed in connection with our acquisition of Chaparral in February 2004. There are no further amounts due.

In August 1999, Box Hill Systems Corp. merged with Artecon, Inc. and we changed our name to Dot Hill Systems Corp. We reincorporated in Delaware in 2001. Our headquarters is located in Carlsbad, California, and we maintain international offices in Germany, Japan, the Netherlands, Singapore and the United Kingdom.

On February 23, 2004, we completed the acquisition of Chaparral Network Storage, Inc., a privately held developer of specialized storage appliances as well as high-performance, mid-range RAID controllers and data routers. The total transaction cost of approximately $67.6 million consisted of a payment of approximately $62 million in cash, the assumption of approximately $4.1 million related to obligations due certain employee covered by change in control agreements, approximately $0.8 million of direct transaction costs and approximately $0.7 million of accrued integration costs. The acquisition of Chaparral is expected to enable us increase the amount of proprietary technology within our storage systems, broaden our product line and diversify our customer base.

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 accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and use judgment that may impact the reported amounts of assets, liabilities, revenues, expenses and related disclosure of contingent assets and liabilities. As a part of our on-going internal processes, we evaluate our estimates, including those related to inventory write-downs, warranty cost accruals, revenue recognition, bad debt allowances, long-lived assets valuation, goodwill and intangible assets valuation, income taxes, including deferred income tax asset valuation, litigation and contingencies. We base these estimates upon both historical information and other assumptions that we believe are valid and reasonable under the circumstances. These assumptions form the basis for making judgments and determining the carrying values of assets and liabilities that are not apparent from other sources. Actual results could vary from those estimates under different assumptions and conditions.

We believe that the policies set forth below may involve a higher degree of judgment and complexity in their application than our other accounting policies and represent the critical accounting policies used in the preparation of our financial statements.

Revenue Recognition

We recognize revenue for non-software product sales upon transfer of title to the customer. Reductions to revenue for estimated sales returns are also recorded at that time. These estimates are based on historical sales returns, changes in customer demand and other factors. If actual future returns and allowances differ from past experience, additional allowances may be required. Certain of our sales arrangements include multiple elements. Generally, these arrangements include delivery of the product, installation, training and product maintenance. Maintenance related to product sales entitles the customer to basic product support and significantly greater response time in resolving warranty related issues. We allocate revenue to each element of the arrangement based on its relative fair value. For maintenance contracts this is typically the price charged when such contracts are sold separately or renewed. Because professional services related to installation and training can be provided by other third party organizations, we allocate revenue related to professional services based on rates that are consistent with other like companies providing similar services, i.e., the market rate for such services. Revenue from product maintenance contracts is deferred and recognized ratably over the contract term, generally twelve months. Revenue from installation, training and consulting is recognized as the services are performed.

For software sales, we apply Statement of Position No. 97-2, *Software Revenue Recognition,* whereby revenue is recognized from software licenses at the time the product is delivered, provided there are no significant obligations related to the sale, the resulting receivable is deemed collectible and there is vendor-specific objective evidence supporting the value of the separate contract elements. For arrangements with multiple elements, we allocate revenue to each element using the residual method based on vendor specific objective evidence of the undelivered items. A portion of the arrangement fee equal to the fair value of the undelivered elements, typically software maintenance contracts, is deferred and recognized ratably over the contract term, generally twelve months. Vendor specific objective evidence is based on the price charged when the element is sold separately. A typical arrangement includes a software-licensing fee and maintenance agreement.

Valuation of Inventories

Inventories are comprised of purchased parts and assemblies, which include direct labor and overhead. We record inventories at the lower of cost or market value, with cost generally determined on a first-in, first-out basis. We perform periodic valuation assessments based on projected sales forecasts and analyzing upcoming changes in future configurations of our products and record inventory write-downs for excess and obsolete inventory. Although we strive to ensure the accuracy of our forecasts, we periodically are faced with uncertainties. The outcomes of these uncertainties are not within our control, and may not be known for prolonged periods of time. Any significant unanticipated changes in demand or technological developments could have a significant impact on the value of our inventories and commitments, and consequently, on our operating results. If actual market conditions become less favorable than those forecasted, additional inventory write-downs might be required, adversely affecting operating results.

Valuation of Goodwill

We review goodwill for impairment annually and whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable in accordance with SFAS No. 142. The provisions of SFAS No. 142 require that a two-step impairment test be performed on goodwill. In the first step, we compare the fair value of each reporting unit to its carrying value. Our reporting units are consistent with the reportable segments identified in the notes to our consolidated financial statements. We determine the fair value of our reporting units using the income approach. Under the income approach, we calculate the fair value of a reporting unit based on the present value of estimated future cash flows. If the fair value of the reporting unit exceeds the carrying value of the net assets assigned to that unit, goodwill is not impaired and we are not required to perform further testing. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of the reporting unit, then we must perform the second step in order to determine the implied fair value of the reporting unit's goodwill and compare it to the carrying value of the reporting unit's goodwill. If the carrying value of a reporting unit's goodwill exceeds its implied fair value, then we must record an impairment loss equal to the difference.

The income approach is dependent on a number of factors including estimates of future market growth and trends, forecasted revenue and costs, expected periods the assets will be utilized, appropriate discount rates and other variables. We base our fair value estimates on assumptions we believe to be reasonable, but which are unpredictable and inherently uncertain. Actual future results may differ from those estimates.

Deferred Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. We maintain a valuation allowance against the deferred tax asset due to uncertainty regarding the future realization based on historical taxable income, projected future taxable income and the expected timing of the reversals of existing temporary differences. If we operate at a loss or are unable to generate sufficient future taxable income, we could be required to proportionally increase the valuation allowance against our deferred tax assets, which would result in a substantial increase to our effective tax rate and could result in a material adverse impact on our operating results. Conversely, if we continue to generate profits and ultimately determine that it is more likely than not that all of the remaining deferred tax assets will be utilized to offset future taxable income, the valuation allowance of a portion thereof could be eliminated.

At December 31, 2004, our net deferred tax asset is approximately $50.9 million (including approximately $16.4 million net deferred tax asset acquired in the Chaparral transaction), and we have provided for a valuation allowance against the entire net deferred tax asset. An elimination of the valuation allowance as of December 31, 2004 would have resulted in a decrease to goodwill to the extent of our acquired net deferred tax asset, an increase to equity for net operating losses arising from stock option deductions, with the remaining deferred tax asset decreasing income tax expense, resulting in a one-time, non-cash increase in earnings.

We are continually assessing the valuation allowance related to our deferred tax assets. We will continue weighing various factors throughout the year to assess the need for any valuation allowance. Recoverability of the deferred tax assets is dependent on continued profitability from operations. Should our level of profitability continue as expected, we would likely remove the entire valuation allowance in 2005. Although we would experience a substantial temporary decrease to our effective tax rate in the period in which we remove the valuation allowance, our effective tax rate in subsequent periods is likely to more closely resemble the applicable federal and state statutory tax rates.

Results of Operations

The following table sets forth certain items from our statements of operations as a percentage of net revenue for the periods indicated:

	Year Ended December 31		
	2002	2003	2004
Net revenue	100.0%	100.0%	100.0%
Cost of goods sold	96.8	76.0	75.1
Gross profit	3.2	24.0	24.9
Operating expenses:			
Sales and marketing	48.0	7.5	7.0
Research and development	21.4	6.4	7.5
General and administrative	11.0	4.0	4.2
In process research and development			2.0
Restructuring expenses	3.3		(0.2)
Operating income (loss)	(80.5)	6.1	4.4
Net income (loss)	(73.1)%	6.5%	4.8%

Year Ended December 31, 2004 Compared to Year Ended December 31, 2003

Net Revenue

Net revenue increased $52.0 million, or 27.7%, to $239.4 million for the year ended December 31, 2004 compared to $187.4 million for the year ended December 31, 2003. The increase in net revenue was primarily attributable to increased orders for our product from our channel partner, Sun, which accounted for 86.3% or $206.6 million of our net revenue for the year ended December 31, 2004. Total fibre channel units shipped were 10,994 for the year ended December 31, 2004 compared to 8,064 fibre channel units shipped for the year ended December 31, 2003. 14,200 SCSI units were shipped during the year ended December 31, 2004 compared to 11,382 SCSI units for the year ended December 31, 2003. In March 2004, we announced that our existing OEM partner agreement with Sun was expanded to include new advanced technology storage products to be designed and engineered by us to Sun's specifications. Our SATA product began shipping in the second quarter of 2004 while our Blade product began shipping in the first quarter of 2004. We recorded revenue of approximately $15.7 million related to such products during the year ended December 31, 2004. Non-Sun revenue was $32.8 million for the year ended December 31, 2004 compared to $31.2 million for the year ended December 31, 2003.

Cost of Goods Sold

Cost of goods sold increased $37.3 million, or 26.2%, to $179.9 million for the year ended December 31, 2004 compared to $142.6 million for the year ended December 31, 2003. As a percentage of net revenue, cost of goods sold decreased to 75.1% for the year ended December 31, 2004 from 76.0% for the year ended December 31, 2003. The increase in the dollar amount of cost of goods sold was attributable to greater volume of product sales during the year ended December 31, 2004 compared to the year ended December 31, 2003 including the incremental cost of goods sold attributable to the introduction of our SATA and Blade products. Additionally, cost of goods sold increased approximately $1.9 million due to the impact of amortization expense related to intangible assets acquired in connection with the acquisition of Chaparral. The decrease in cost of goods sold, as a percentage of our net revenue was primarily attributable to cost reductions related to production materials achieved during the year ended December 31, 2004. Such cost reductions resulted mainly from the decreasing price of component parts due to competitive market factors; predetermined contractual cost reductions and the transition from soft to hard tooling as compared to the year ended December 31, 2003.

Gross Profit

Gross profit increased $14.6 million, or 32.5%, to $59.5 million for the year ended December 31, 2004 compared to $44.9 million for the year ended December 31, 2003. As a percentage of net revenue, gross profit increased to 24.9% for the year ended December 31, 2004 from 24.0% for the year ended December 31, 2003. The increase in the dollar amount of gross profit was attributable to greater volume of product sales during the year ended December 31, 2004 compared to the year ended December 31, 2003. The increase in gross profit as a percentage of our net revenue for the year ended December 31, 2004 compared to the year ended December 31, 2003 primarily reflect cost reductions achieved during 2004. Such cost reductions resulted mainly from the decreasing price of component parts due to competitive market factors; predetermined contractual cost reductions and the transition from soft to hard tooling. These cost reductions were partially offset by the introduction in June 2004 of our SATA and Blade products that presently have significantly lower gross profit margins than either our fibre channel or SCSI products. Gross profit for the year ended December 31, 2004 was also negatively impacted by $1.9 million of amortization expense related to intangible assets acquired in connection with the acquisition of Chaparral in February 2004. We are currently transitioning the high labor content of our SATA product to locales in Asia and are working to complete the hard tooling of the chassis. We expect to receive the benefits of these cost reduction efforts by the end of the second quarter of 2005. We believe our future gross profit margin will also be positively impacted by the integration of the technology we acquired from Chaparral. We anticipate our gross profit margin will begin to reflect such improvement in the second half of 2005.

Sales and Marketing Expenses

Sales and marketing expenses increased $2.7 million, or 19.1%, to $16.8 million for the year ended December 31, 2004 compared to $14.1 million for the year ended December 31, 2003. As a percentage of net revenue, sales and marketing expenses decreased to 7.0% for the year ended December 31, 2004 from 7.5% for the year ended December 31, 2003. The increase in the dollar amount of sales and marketing related expenses is primarily attributable to increased salaries and related expenses of approximately $1.2 million, an increase in travel and lodging expense of $0.9 million, $0.2 million related to small equipment and fixtures and $0.2 million related to tradeshows. The increase in sales and marketing expenses also reflects $0.6 million from the amortization of the customer relationship intangible asset acquired in connection with the acquisition of Chaparral. These increases were partially off-set by a decrease in professional services of approximately $0.6 million compared to the prior year. There are other increases in sales and marketing expenses relating to a variety of activities none of which are significant on an individual basis. The decrease in sales and marketing expenses as a percentage of net revenue primarily reflects the impact of increased 2004 revenue. We will continue our efforts to grow our non-OEM commercial sales during 2005. Accordingly, we expect sales and marketing expenses for the year ending December 31, 2005 will exceed spending levels incurred during 2004.

Research and Development Expenses

Research and development expenses increased $6.0 million, or 50.0%, to $18.0 million for the year ended December 31, 2004 from $12.0 million for the year ended December 31, 2003. As a percentage of net revenue, research and development expenses increased to 7.5% for the year ended December 31, 2004 from 6.4% for the year ended December 31, 2003. The dollar increase in research and development expenses primarily reflects an increase in salary and related expenses of approximately $3.8 million attributable to an increase in the number of our full-time direct engineering team members compared to the year ended December 31, 2003. During the year ended December 31, 2004, we averaged approximately 101 full-time direct engineering employees compared to an average of approximately 55 full-time direct engineering employees for the year ended December 31, 2003. The increase includes the addition of approximately 20 engineering employees to our corporate headquarters in Carlsbad, California resulting in an increase in salary and related expenses of approximately $0.9 million compared to the year ended December 31, 2003. The establishment of our Longmont Technology Center in connection with the acquisition of Chaparral resulted in the addition of approximately 30 new direct engineering employees. Salary and related expenses for such employees was $2.9 million for the year ended December 31, 2004. There were no comparable expenses for the year ended December 31, 2003. The remaining increase in research and development expenses not directly related to headcount primarily reflect additional costs of $1.2 million attributable to our Longmont facility and its related activities for which there is no comparable expense for the year ended December 31, 2003. Project related expenses at our Carlsbad location exceeded the prior year by approximately $0.2 million primarily related to our new SATA and Blade products and the integration of the technology acquired from Chaparral into new and existing products. The percentage increase in research and development expenses reflects all of the items discussed above, partially offset by the increase in revenue for the year ended December 31, 2004 and the reclassification of costs discussed above. We expect that 2005 research and development expense will exceed amounts incurred during 2004 due to our planned efforts to complete the integration of the technology acquired from Chaparral into our existing products and research and development activities related to other future product offerings.

General and Administrative Expenses

General and administrative expenses increased $2.6 million, or 35.1%, to $10.0 million for the year ended December 31, 2004 compared to $7.4 million for the year ended December 31, 2003. As a percentage of net revenue, general and administrative expenses were 4.2% for the year ended December 31, 2004 compared to 4.0% for the year ended December 31, 2003. The increase in the dollar amount of general and administrative expense during the year ended December 31, 2004 reflects an increase of $2.1 million of legal and professional services expenses compared to the year ended December 31, 2003. The increase in legal expenses primarily reflects the legal matters described elsewhere in this document while the increase in professional services reflect the cost of our compliance with the Sarbanes-Oxley Act of 2002. We also incurred an increase of $0.4 million in bad debt expense compared to the year ended December 31, 2003. The remaining increase in general and administrative expenses relates to an increase in a variety of general and administrative expenses none of which are significant on an individual basis. The percentage increase in general and administrative expenses reflect all of the items discussed above, partially offset by the increase in revenue for the year ended December 31, 2004. We expect general and administrative expenses to increase in 2005 compared to 2004 due to the continuing cost of complying with various corporate governance regulations and the cost of corrective actions we intend to take as a result of such regulations.

Restructuring expenses

In June 2004, we negotiated an exit from our lease of the 10th floor of our former New York City office thereby eliminating our related rent exposure. Accordingly, during the year ended December 31, 2004, we recorded a reduction of approximately $0.5 million to our restructuring reserve previously established in connection with the closure of our New York City office. Additionally, we have evaluated certain factors pertaining to our remaining sublease tenant; accordingly, during the year ended December 31, 2004, we recorded an additional restructuring accrual of approximately $0.1 million. We are not aware of any further unresolved issues or additional liabilities that may result in a significant adjustment to restructuring expenses accrued as of December 31, 2004.

In-Process Research and Development Charges

Projects that qualify as in-process research and development represent those that have not yet reached technological feasibility and for which no future alternative uses exist. Technological feasibility is defined as being equivalent to a beta-phase working prototype in which there is no remaining risk relating to the development. For the year ended December 31, 2004 we recorded an IPR&D charge of $4.7 million, in connection with the acquisition of Chaparral.

Other Income

Other income increased by $0.7 million, or 87.5%, to $1.5 million for the year ended December 31, 2004 from $0.8 million for the year ended December 31, 2003. The increase is primarily attributable to an increase in interest income. Although we had significantly more cash at December 31, 2003 compared to December 31, 2004, the proceeds from our secondary offering of our common stock were received in late September 2003. Such proceeds therefore did not earn significant interest income during the year ended December 31, 2003. The increase in interest income was partially off-set by approximately $0.3 million in interest expense primarily related to the a $6 million note payable assumed in connection with our acquisition of Chaparral in February 2004. The note payable and all related accrued interest was paid off in August 2004. There are no amounts outstanding related to $6 million note payable at December 31, 2004.

Income Taxes

Our effective income tax rate for the year ended December 31, 2004 and 2003 of 2.3% and 0.7% is primarily attributable to federal and state minimum tax liabilities as well as local and foreign taxes. Our effective income tax rate for both the year ended December 31, 2004 and 2003 was significantly reduced through the use of net operating loss carryforwards for which a valuation allowance had previously been recorded.

As of December 31, 2004, a valuation allowance of $50.9 million has been provided based upon our assessment of the future realizability of our deferred income tax assets, as it is currently considered more likely than not that sufficient taxable income will not be generated to realize these temporary differences.

Additionally, at December 31, 2004, approximately $4.6 million of the valuation allowance is attributable to the potential tax benefit of stock option transactions that will be credited directly to common stock, if realized.

As of December 31, 2004, we have federal and state net operating loss carryforwards of approximately $119.1 million and $79.9 million, which begin to expire in 2009 and 2005, respectively. In addition, we have federal tax credit carryforwards of approximately $3.1 million, of which $0.4 million can be carried forward indefinitely to offset future taxable income, and the remaining $2.7 million will begin to expire in the tax year 2008. We also have state tax credit carryforwards of $2.9 million, of which $2.7 million can be carried forward indefinitely to offset future taxable income, and the remaining $0.2 million will begin to expire in 2006.

As a result of the Company's equity transactions, an ownership change, within the meaning of Internal Revenue Code Section 382, occurred on September 18, 2003. As a result, annual use of the Company's federal net operating loss and credit carry forwards is limited to (i) the aggregate fair market value of Artecon immediately before the ownership change multiplied by (ii) the long-term tax-exempt rate (within the meaning of Section 382 (f) of the Internal Revenue Code) in effect at that time. The annual limitation is cumulative and, therefore, if not fully utilized in a year, can be utilized in future years in addition to the Section 382 limitation for those years.

We have not provided for any residual U.S. income taxes on the earnings from our foreign subsidiaries because such earnings are intended to be indefinitely reinvested. Such residual U.S. income taxes, if any, would be insignificant.

Year Ended December 31, 2003 Compared to Year Ended December 31, 2002

Net Revenue

Net revenue increased $140.5 million, or 299.4%, to $187.4 million for the year ended December 31, 2003 from $46.9 million for the year ended December 31, 2002. The increase in net revenue was attributable to increased orders for our products from our channel partner, Sun, which accounted for 83.4% of our net revenue for the year ended December 31, 2003.

Cost of Goods Sold

Cost of goods sold increased $97.1 million, or 213.7%, to $142.5 million for the year ended December 31, 2003 from $45.4 million for the year ended December 31, 2002. As a percentage of net revenue, cost of goods sold decreased to 76.0% for the year ended December 31, 2003 from 96.8% for the year ended December 31, 2002. The increase in the dollar amount of cost of goods sold was attributable to greater volume of product sales during the year ended December 31, 2003. The decrease in cost of goods sold as a percentage of our net revenue was primarily attributable to a more efficient absorption of fixed production costs and to a lesser extent a decrease in inventory write-downs of $6.6 million.

Gross Profit

Gross profit increased $43.4 million, or 2,909.2%, to $44.9 million for the year ended December 31, 2003 from $1.5 million for the year ended December 31, 2002. As a percentage of net revenue, gross profit increased to 24.0% for the year ended December 31, 2003 from 3.2% for the year ended December 31, 2002. The increase in the dollar amount of gross profit was attributable to greater volume of product sales during the year ended December 31, 2003. The increase in gross profit as a percentage of our net revenue was primarily attributable to a more efficient absorption of fixed production costs and to a lesser extent a decrease in inventory write-downs of $6.6 million.

Sales and Marketing Expenses

Sales and marketing expenses decreased $8.4 million, or 37.4%, to $14.1 million for the year ended December 31, 2003 from $22.5 million for the year ended December 31, 2002. As a percentage of net revenue, sales and marketing expenses decreased to 7.5% for the year ended December 31, 2003 from 48.0% for the year ended December 31, 2002. The decrease in the dollar amount of sales and marketing expenses was attributable to a reduction in our sales and marketing headcount of 24 employees between December 31, 2002 and December 31, 2003. The reduction was made in conjunction with our shift toward an indirect sales model, implementation of fixed cost reduction measures, such as closure of excess and unused facilities, and the refocus of our marketing resources on a smaller population of potential customers.

Research and Development Expenses

Research and development expenses increased $1.9 million, or 19.0%, to $11.9 million for the year ended December 31, 2003 from $10.0 million for the year ended December 31, 2002. As a percentage of net revenue, research and development expenses decreased to 6.4% for the year ended December 31, 2003 from 21.4% for the year ended December 31, 2002. The increase in the dollar amount of research and development expenses was primarily attributable to an increase in salary and related expenses of $2.1 million attributable to an increase in the number of our full-time direct engineering team members, an increase of regulatory testing costs of $0.3, an increase of allocable fixed costs of $0.5 million, offset by a reduction of prototype costs related to the development of our SANnet II product line of $1.5 million. We expect to continue to invest in research and development and plan to add more members to our research and development team during 2004.

General and Administrative Expenses

General and administrative expenses increased $2.2 million, or 44.0%, to $7.4 million for the year ended December 31, 2003 from $5.2 million for the year ended December 31, 2002. As a percentage of net revenue, general and administrative expenses decreased to 4.0% for the year ended December 31, 2003 from 11.0% for the year ended December 31, 2002. The increase in the dollar amount of general and administrative expense was attributable to increased bonus expense of $1.8 million, and increased legal expenses of $0.4 million.

Restructuring Expenses

In March 2001, we announced plans to reduce our full-time workforce by up to 30% and reduce other expenses in response to delays in customer orders, lower than expected revenues and slowing global market conditions. The cost reduction actions were designed to reduce our breakeven point in light of an economic downturn. The cost reductions resulted in a charge for employee severance, lease termination costs and other office closure expenses related to the consolidation of excess facilities. We recorded restructuring expenses in the first quarter of 2001 of approximately $2.9 million.

In June 2001, we announced plans to further reduce our full-time workforce by up to 17% and reduce other expenses in response to a continuing economic downturn and overall decrease in revenue. As a result of these additional restructuring actions, we recorded additional restructuring expenses during the second quarter of 2001 of approximately $1.5 million.

Employee termination costs consist primarily of severance payments for 180 employees. Impairment of property and equipment consists of the write-down of certain fixed assets associated with facility closures. The facility closures and related costs consist of lease termination costs for five sales offices and closure of our New York City office.

During the fourth quarter of 2001, we increased our March 2001 Restructuring accrual by approximately $0.2 million and our June 2001 Restructuring accrual by approximately $0.3 million due to the continuing deterioration of various real estate markets and the inability to sublet excess space in our Carlsbad and New York City facilities.

During the fourth quarter of 2002, we again increased our March 2001 Restructuring accrual by approximately $0.7 million and our June 2001 Restructuring accrual by approximately $0.9 million to reflect additional deterioration of real estate markets in Carlsbad and New York City, as well as the effects of lease buyouts negotiated on several other facilities and a sublease arrangement reached on another facility.

The following is a summary of restructuring activity recorded during the years ended December 31, 2002 and 2003:

March 2001 Restructuring

	Accrued Restructuring Expenses at January 1, 2002	Additional Restructuring Expenses in 2002	Amounts Utilized in 2002	Accrued Restructuring Expenses at December 31, 2002	Amounts Utilized In 2003	Accrued Restructuring Expenses at December 31, 2003
	(in thousands)					
Employee termination costs	$ 2	$	$ (2)	$	$	$
Facility closures and related costs	394	693	(426)	661	(260)	401
Total	$ 396	$ 693	$ (428)	$ 661	$ (260)	$ 401

June 2001 Restructuring

Accrued Restructuring Expenses at January 1, 2002	Additional Restructuring Expenses in 2002