TUNDRA SEMICONDUCTOR CORPORATION

ANNUAL INFORMATION FORM

For the Year Ended
April 30, 2003

July 24, 2003

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ANNUAL INFORMATION FORM

ITEM 1 – INCORPORATION AND CORPORATE STRUCTURE

Tundra Semiconductor Corporation ("Tundra" or the "Company") was incorporated under the *Canada Business Corporations Act* pursuant to Articles of Incorporation dated December 12, 1995. Tundra was formed from Newbridge Microsystems, a division of Newbridge Networks Corporation, now Alcatel Canada Inc., and began operations as an independent company in December 1995. On December 18, 1995, Tundra amended its articles to remove its private company restrictions. On December 8, 1998, Tundra further amended its articles to delete the authorized but unissued preference shares of the Company. The principal and head office of the Company is located at 603 March Road, Ottawa, Ontario K2K 2M5, telephone: (613)592-0714, telecopier: (613)592-1320. The Company has six material wholly-owned subsidiaries. Tundra Semiconductor, Inc. was incorporated under the laws of Delaware, U.S.A. and operates in the State of California. Tundra Semiconductor International Ltd. was incorporated on November 9, 1999 under the laws of Barbados. Tundra Semiconductor (UK) Ltd. was incorporated on March 1, 2000 under the laws of England and Wales. Quadic Systems, Inc., a company acquired in September 2000 by Tundra, was incorporated under the laws of the State of Maine. Tundra Semiconductor Ltd., was incorporated on January 5, 2001 under the laws of the Province of Ontario and Tundra Ontario Ltd., was incorporated on February 22, 2001 under the laws of the British Virgin Islands.

ITEM 2 - GENERAL DEVELOPMENT OF THE BUSINESS

Company Overview

Tundra Semiconductor Corporation (TSX:TUN) designs, develops, and markets standards-based System Interconnect for use by the world's leading communications and storage system companies. Tundra supports RapidIO™, VME, PCI and PCI-X standards. Tundra System Interconnect is a vital technology that enables customers to connect critical system components while compressing development cycles and maximizing performance. Applications include wireless infrastructure, storage networking, network access, military technology, and industrial automation. Tundra headquarters are located in Ottawa, Ontario, Canada. The Company also has a design centre in South Portland, Maine and a European sales office in Maidenhead, U.K. Tundra sells its products worldwide through a network of direct sales personnel, independent distributors and manufacturers' representatives. Tundra employs about 172 employees worldwide.

As indicated above, the Company began operations in December 1995 as an independent company. At the time of the creation of the Company, a number of products from Newbridge Microsystems provided initial revenues, including the SCV64™ and Universe ™ products. The Company also had several new products in development at that time. The Company introduced the QSpan™ in 1996, the Universe II in 1997 and the QSpan II in 1998. The Company unveiled three additional products in 1999, the Universe IIB , the Powerspan™, and the PowerPro™. In 2001, Tundra announced the Tsi400™ and the Tsi500™.

On February 8, 1999, the Company completed its initial public offering on the Toronto Stock Exchange ("TSX") and currently trades under the symbol TUN.

On March 31, 2003 Tundra strengthened its position in the storage interconnect market by acquiring the Tsi310 ™ PCI-X Bus Bridge business from IBM for total cash consideration of US$10 million. US$5 million was paid to IBM upon closing of the transaction and the remainder of the consideration is to be paid during the year ending April 30, 2004. Tundra acquired both tangible and intangible assets relating to the business, including prepaid transition support services, customer backlog, customer relationships, intellectual property and goodwill. The acquisition was an important step in the Company's plans to accelerate growth and further penetrate the System Interconnect market. Available since 2000 from IBM,

the device is the industry's first PCI-X to PCI-X Bus Bridge. The Tundra Tsi310 is designed into numerous customer applications that are now in production and that are currently ramping to volume production.

ITEM 3 – DESCRIPTION OF THE BUSINESS

Industry Background

There is a wide range of systems level products that can be characterized as embedded systems and that incorporate the Company's semiconductor products. These products include data communications switches and routers, optical telecom products, cellular base stations, Internet access products, office automation equipment, storage networking, medical and defence applications. The embedded system, built around a processor and a range of other subsystems, provides the intelligence and control functions of each of the products. The central processing unit ("CPU") subsystems provide the overall intelligence for controlling the system. The core of the CPU subsystem consists of a microprocessor or digital signal processor ("DSP"), which performs the primary computing functions. A processor bus or data highway connects the microprocessor or DSP to memory and input/output elements. There are many different processors that may be used as determined by the particular needs of the application. Each type of processor will have a distinct processor bus through which data is routed within the subsystem, under the control of the operating system software.

The CPU subsystem in turn communicates through additional buses or data highways to the system's peripheral subsystems that may include graphics processing, data networking and switching, co-processor functions, memory subsystems and specialized functions of the end product. System designers select or design a bus architecture that optimizes the flow of data along these buses. Historically, designers developed proprietary bus architectures to optimize system and product performance for their particular application. However, since the mid-1980's, system designs have increasingly used standard or 'open' bus architectures for System Interconnect. Two standard bus architectures, versa module eurocard ("VME") and, more recently, peripheral component interconnect ("PCI") buses, have significant market share.

The VME open bus standard is a widely used backplane bus and is found in a broad range of high performance, high-reliability applications in an array of environments. The VME bus allows the development of systems that can be distributed over a large number of printed circuit cards that are linked via the backplane bus. Industries with applications that use the VME bus include defence, industrial automation and telecommunications.

The PCI bus originated in the personal computer ("PC") industry in the early-1990s where it was designed to relieve the input/output bottleneck in the new graphics-oriented personal computer interfaces. Although it originated in the PC market, PCI has won broad acceptance in embedded systems applications and has emerged as the *de facto* local bus standard. Typical applications include data communications, telecommunications and wireless. A backplane version of PCI known as Compact PCI is used in similar, but less demanding, applications to VME backplanes, where the sophistication of a full VME solution is not cost effective. Typical applications for Compact PCI include low-end servers and routers.

More recently, a higher bandwidth variant of the PCI standard, PCI-X has been endorsed by a number of companies, particularly in the storage market. PCI-X is a high-speed mode of operation for PCI, a chip level interface used to connect two or more I/O devices. PCI-X is compatible with PCI, ensuring evolution from legacy systems and option cards. The standard overcomes the I/O bottleneck that limits processing speed between a CPU and its peripherals. Through a more efficient protocol, PCI-X can support more than one Gbyte/second of sustainable I/O bandwidth at 64-bits and 133MHz.

As part of the Company's ongoing commitment to provide next-generation System Interconnect to the leading communications and storage vendors, Tundra has been a key player in bringing silicon to the PCI-X market with the acquisition of Tsi310 product line from IBM.

Tundra uses the term 'System Interconnect' to refer to the technology used to connect all of the components and sub-systems in almost any embedded system. This concept applies to the interfacing of functional elements (CPU, memory, I/O complexes, etc.) within a single-board system and to the interfacing of multiple boards in a larger system. System Interconnect is a vital enabling technology for the networked world. Communications networks rely on advanced System Interconnect to fulfill ever-expanding demands. Tundra System Interconnect provides the latest interface and throughput features to enable communications infrastructure and storage vendors to design and build more powerful, faster equipment in shorter timeframes.

Due to the diversity in bus types, System Interconnect chips are required to transfer data between buses of different types. Examples of common System Interconnect chips include bridging Motorola microprocessors to PCI, PCI to VME, and VME to microprocessor buses. These chips manage the complexity of interfacing dissimilar bus types within the performance and functionality goals of diverse system applications.

Historically, some communications infrastructure vendors have used industry standard processors and memory but have internally developed specialized semiconductor devices or application specific integrated circuits ("ASICs") for their subsystem and bus-bridging needs. The development of such ASICs is, however, becoming extremely complex, requiring significant engineering resources, expertise, breadth of technology and financial commitment. Increased embedded system complexity means high levels of functional integration must be programmed onto a single ASIC or chip, increasing the technical risks inherent in and the time required for the development of such chips. The rapid evolution of processor technology in both speed and bus width, requiring more frequent re-design and upgrading of the ASICs further compounds these issues.

These technological challenges, coupled with intense product competition in the communications infrastructure market, are creating a need for communications infrastructure vendors to outsource specialized semiconductor System Interconnect devices that can deliver critical system performance, reduce time-to-market cycles, lower product development costs and reduce application support costs. Outsourcing allows communications infrastructure vendors to focus their development efforts on those areas of the systems applications that provide unique competitive advantages. The ability of Tundra to provide System Interconnect that satisfies many diverse applications results in system cost advantages that could not be achieved by an embedded system manufacturer for a single application.

Recent Industry Developments

There has been ongoing development of a higher bandwidth System Interconnect technology that supports the RapidIO Interconnect Architecture, a new industry standard. The RapidIO Interconnect Architecture, designed to be compatible with the most popular integrated communications processors, host processors, and networking digital signal processors, is a high-performance, packet-switched, interconnect technology. It addresses the high-performance embedded industry's need for reliability, increased bandwidth, and faster bus speeds in an intra-system interconnect. The RapidIO interconnect is intended to allow chip-to-chip and board-to-board communications at performance levels scaling to ten Gigabits per second and beyond.

The RapidIO Interconnect Architecture is a result of a collaborative design effort between Motorola and long-time customer Mercury Computer Systems, Inc. This interconnect architecture is being offered as an open standard through membership to the RapidIO Trade Association. As a first step to commercializing

this technology, Tundra has joined companies such as Cisco, Lucent, Nortel, Alcatel, Ericsson and Motorola as a founding member the RapidIO Trade Association. To date, more than 50 companies have joined the growing RapidIO community.

The RapidIO Trade Association is a non-profit corporation controlled by its members. The RapidIO Trade Association directs the future development and drives the adoption of the new interconnect technology called the RapidIO architecture. For networking products, Tundra believes that the RapidIO architecture will provide increased bandwidth, lower costs, and a faster time-to-market than other more computer-centric bus standards. Supported by communications equipment vendors such as Motorola, IBM, Nortel Networks, Cisco Systems, and Lucent Technologies, RapidIO Interconnect is believed to be an ideal high-performance solution for networking, communications and embedded markets.

Other industry developments in higher bandwidth System Interconnect technology have been focused around the extension of the PCI bus. A serial format of PCI has been developed by the PCI Special Interest Group (PCI SIG), PCI's governing body; this extension to the PCI interconnect has been called PCI Express. PCI Express initially supports fast bus speeds and backwards compatible support in PC interconnect. Also, further developments in the parallel PCI bus have been developed for the server and storage markets with PCI-X, a pin compatible extension to PCI. PCI-X has been widely endorsed by the leading server and storage manufacturers and also approved by the PCI SIG.

Tundra Product Families

RapidIO System Interconnect

Tundra is at the forefront of the development and deployment of the RapidIO standard. As part of an on-going commitment to provide next-generation System Interconnect, Tundra RapidIO System Interconnect products include new, high-bandwidth RapidIO switch fabrics that specifically address the needs of high performance embedded systems.

The suite of RapidIO products includes the Tundra Tsi500, a four-port parallel, 40 Gbit/s RapidIO switch. Each 8-bit RapidIO interface supports an extensive set of performance monitoring features that enables the design of high performance RapidIO systems using standard compliant products such as the Tundra Tsi400 and the newest generation of Motorola PowerQUICC III (MPC8540/8560).

The Tundra Tsi400, a two-port bus bridge that provides seamless PCI or PCI-X connectivity to a RapidIO infrastructure. The device's 8-bit parallel RapidIO interface is compatible with other parallel RapidIO devices, including Motorola PowerQUICC III (MPC8540/8560), the Tundra Tsi500 RapidIO switch, and other RapidIO ASICs and FPGAs from leading suppliers of those products.

These RapidIO System Interconnect devices began sampling to customers in fiscal 2003.

PCI-X

PCI-X is a performance enhancement for PCI, a chip level interface used to connect two or more I/O devices. PCI-X is compatible with PCI, ensuring an evolutionary path to legacy systems.

A higher bandwidth variant of the PCI standard, PCI-X has been endorsed by a number of companies. This standard overcomes the I/O bottleneck that limits processing speed between a CPU and its peripherals.

The Tundra Tsi310, recently acquired from IBM, was the market's first new generation PCI-to-PCI bridge. This transparent bridge targets embedded applications and supports 133MHz PCI-X, the latest PCI technology used by leading suppliers to the storage and storage networking markets.

PowerPC/PCI System Interconnect

This suite of products includes the Tundra PowerSpan II, a proven, multi-port PCI bus switch for PowerPC and the Motorola PowerQUICC II processors; Wintegra WinPath processors; the Tundra PowerPro, a flexible, high-performance PowerPC memory controller for PowerPC; and the Tundra QSpan II, a Motorola PowerQUICC- to-PCI bus bridge.

The PCI suite of products accounted for 32.2% and 29.5% of revenues respectively in each of fiscal 2003 and 2002.

VME System Interconnect

Tundra dominates in VME System Interconnect market. Tundra VME System Interconnect products enhance the performance of traditional VME-based applications for military communications, industrial automation and medical imaging. Products include: Tundra SCV64, a high-performance VME64 bus-bridge; and the Tundra Universe II, the industry leading VME-to-PCI bus-bridge. The Company's VME family of products continued to provide the majority of the Company's revenues, accounting for 64.9% and 62.2% of revenues respectively in each of fiscal 2003 and 2002.

Tundra Design Support Tools

Tundra provides complete product offerings that include a suite of Tundra Design Support Tools. The Company's comprehensive suite of tools helps developers rapidly design with Tundra System Interconnect devices with less risk and cost than previous methods. Tundra Design Support Tools include comprehensive documentation, third party support software and hardware, reference designs and easy access to technical resources.

Legacy Products

While Tundra continues to sell a range of DES-based data security components and 8000-series peripheral chips, the Company informed customers on April 9, 2003 that the last date they can place orders is April 9, 2004 and the last shipment date will be April 9, 2005.

Sales of the Company's legacy products represented 2.9% and 8.3% of revenues respectively in each of fiscal 2003 and 2002.

Tundra Product Development Cycle

The communications systems market is characterized by a long product development cycle that spans a period of two to five years. The identification of the risks in each stage of the product development cycle and the implementation of business practices to address each stage is critical to the Company's success. The Company tracks the progress of each stage in the cycle to ensure appropriate resources are dedicated at each stage and to monitor the Company's success rate at each stage. Once Tundra product has been designed-in to the customer's products, competitors have infrequent opportunity to supplant the Company's products with competitive solutions. However, the duration of the development cycle is a significant source of business risk to market participants such as Tundra. Over such a period of time projects can be cancelled, run into significant cost overruns and time delays, or be overtaken by technological change.

Chip Development (1-2 years)

This phase begins with the definition of the chip specification by Tundra and concludes, if successful, with the design-win - the delivery of prototype chips to embedded system manufacturers. The

specification is developed in consultation with key customers and technology partners, typically over a period of one year. Once a specification is in place, the chip design and verification commences, a process that can be one year or more in duration, including the time required to fabricate the prototype chips. During this time, the Company is active in identifying additional customers whose systems' needs are addressed by the specified chip under development. The Company's engineers work closely with the customer's research and development team to ensure the Tundra chip successfully addresses the requirements of the customer's system.

Customer Product Development (0-1 year)

Once the customer has received delivery of a Tundra prototype, the customer's engineers undertake a design cycle, which is typically up to one year in duration for their own system product and associated software. During this time the Company provides applications engineering support to the customer to facilitate the design. Once the system product is designed, the customer has effectively committed to using the Tundra product.

Customer Product Ramp (1-2 years)

When the embedded system prototypes of customers are available and have been tested, the embedded system product is taken to market. The Tundra customer, the embedded system manufacturer, first provides its product to its own customers for evaluation. Once these customers have completed their evaluations and accepted the embedded system product, the embedded system manufacturers begin product manufacturing. As volume orders are received for the embedded system product, the embedded system manufacturer ramps to volume manufacturing. This process can take an additional one to two years.

Volume Production (2-5 years)

Only with volume production of the embedded system does Tundra achieve volume revenue from the customer for its chip products. Due to system complexity, the long system development cycle and the lifetime of the system product, once the customer's embedded system product is in production, the resulting volume shipments of Tundra chips for incorporation into the product can span two to five years, if not longer. The long development cycle presents a barrier to entry for Tundra competitors until the customer chooses to re-design the system.

The Company monitors each of these stages very closely. Although achieving design-wins in the development cycle is critical to the success of the Company, there is no assurance that a design-win by the Company will result in volume production of the Company’s product. Design-wins reflect only an expression of interest by potential customers and are not supported by binding commitments of any kind. A design-win may not result in purchase orders for the Company’s product for a number of reasons, including product development delays, pricing issues, availability of competing products, inability to deliver products in volume, technological obsolescence, changing market needs and preferences, changing standards and customer product lines and the general business health of the customer.

The description of the development cycle above sets forth how design-wins are achieved immediately following the development and prototyping of a new System Interconnect product. However, design-wins continue to occur throughout the early life cycle of a chip. When the chip is in volume production, as long as its functionality remains competitive against other new product introductions, customers will continue to use these chips in new system designs. In fact, once a design-win has occurred, because of the customer's familiarity with designing the chip into their system, the customer is likely to use the chip in other system designs. As a result multiple design-wins can arise from an individual customer.

Tundra Markets

The major markets for the Company's products are as follows:

Communications/ Networking

Communications represents a growth sector for embedded systems, driven by increasing bandwidth needs in packet and cell-based products such as routers and ATM switches, Internet access products, TDM equipment, and optical switches. Tundra products continue to focus on connectivity to Host Processors across the Control Plane backplanes and NPUs on line cards that are needed in scalable and flexible multiservice switching architectures based on Ethernet and SONET, with connectivity to both TDM and packet-based protocols. Future systems developed around switch fabric architectures provide for opportunity in designs based on RapidIO Technology, Parallel RapidIO for Host processor interconnects and Serial RapidIO for backplane and DSP interconnects.

Storage

The server/storage market represents a key growth market for the Company in highly available storage systems. Target applications include servers (32 and 64 bit), host bus adaptors (HBA) and storage sub-systems as networked storage is expected to grow significantly over the next several years. The Company's launch of the Tsi310 has provided a strong product offering in this market through which to leverage future storage System Interconnect offerings.

Wireless Infrastructure

The wireless infrastructure market represents a market for the Company in cellular basestation electronics applications. RapidIO technology and processor/ DSP interconnect represent new opportunities in this growth market. The Company's leadership in RapidIO has provided customers with new solutions to develop the needed bandwidth and connectivity for next generation architectures. The Tsi400 and Tsi500 enable new fabric based architectures which increase reliability and deliver the required high bandwidth to these applications. Serial RapidIO fabrics are expected to be deployed in the system backplane and in DSP signal processing arrays.

VME (Defence & Industrial Automation)

Embedded systems applications in the defence industry have continued to incorporate VME technology because of the rugged performance characteristics and extended operating environment capabilities of VME products. The emphasis in this industry has been and continues to be towards deployment of more interchangeable systems with standard open bus architectures. A complete embedded system can employ a combination of single-board computers and card level products developed by an aerospace manufacturer around Tundra VME bridging products. These factors have led to a steady demand in VME opportunities with VME product sales to aerospace manufacturing companies and through sales to manufacturers of rugged single board computers.

A diverse range of customers continues to exist for Tundra VME products in embedded systems designed for industrial automation applications such as photocopiers, flight simulators, industrial test equipment and medical imaging.

Partnerships

Fundamental to the success of Tundra are its partnerships with leading processor manufacturers, including Motorola, IBM, Texas Instruments and Intel. Tundra devotes considerable resources to working with its partners to identify their requirements for System Interconnect products. This highlights Tundra's commitment to be a significant part of its customers' success. As a result of these alliances, Tundra devices greatly influence the design of end customers' system architecture. Customers change their designs to incorporate Tundra products. Tundra also maintains a close relationship with its wafer suppliers and package assembly houses, Taiwan Semiconductor Manufacturing Corporation ("TSMC"), IBM and ASE to enable the Company to closely monitor its product delivery cycles. Although Tundra does not have long term agreements with its suppliers, the Company believes that its relationships with its wafer and other subcontractors are solid. However, as process technology evolves, the Company's suppliers may discontinue production and the Company may be required to seek alternative sources of supply.

Tundra continues to invest in its strategic alliance with Motorola, whereby the Company and Motorola cooperate in the design of complete and partial PowerPC and RapidIO related core logic technology. Tundra and Motorola intend to incorporate the technology into Tundra System Interconnect products and Motorola's communications processors, including the PowerPC family of host processors, the PowerQUICC family of integrated processors, and the C-Port family of network processors. The cooperative strategy is intended to enable communications infrastructure vendors in the wireless, wireline, and data communications industries to bring networking products to market faster, at less cost, and with much higher performance.

The Company also entered into a funding arrangement with Motorola in fiscal 2001. The Company or Motorola may, by agreement, periodically provide funding or other resources to the other to accelerate the production of particular PowerPC and RapidIO core logic products. Pursuant to this arrangement, Motorola has already committed to provide to the Company certain funding to accelerate the productization of PowerPC and RapidIO core logic products to the marketplace. Motorola will also provide, in exchange for licence fees, a perpetual, nonexclusive, non-transferrable licence of certain technology to the Company, to be used in the development of PowerPC and RapidIO products.

During fiscal 2003, the Company entered into a collaborative agreement with Intel to develop System Interconnect for Intel® XScale™ Technology-Based Storage Applications. The collaboration brings together Tundra's expertise in high-performance System Interconnect with Intel's XScale technology which combines high performance with programming flexibility. The Company believes that supporting the Intel XScale microarchitecture is key to the evolution of system interconnect offerings for the storage market.

In August 2002, Tundra entered into a contractual agreement with Motorola Computer Group to market, manufacture, sell and support the PCI-X/VMEbus bridge in the general embedded market.

Tundra also announced a cooperative effort with Wintegra™ Inc. to promote business for PowerSpan™ II System Interconnect and WinPath Access Packet Processor. The collaboration is expected to facilitate product integration, allowing designers to reduce overall component count and increase system performance while delivering and managing faster data traffic.

Subsequent to April 30, 2003, the Company signed a development agreement for RapidIO next generation System Interconnect technology with Texas Instruments (TI) worth in excess of one million dollars.

Customers

The Tundra design philosophy is one in which a number of strategic customers are invited to participate in the definition, design, test and early silicon supply phases of product development. Close working relationships with such customers and clear product roadmaps ensure that Tundra can anticipate and meet the future directions and needs of communications and storage systems designers and manufacturers.

Tundra's semiconductor products are used by the world's leading communications infrastructure vendors, including Cisco, Motorola, Nortel, Lucent, IBM, Xerox, Hewlett-Packard, Siemens, Alcatel, and Samsung.

Business Strategy

The Tundra goals are to maintain and continue to grow its position as a leading supplier of System Interconnect to communications and storage companies. In the longer term, the Company intends to continue to increase the functionality of its products to allow for higher levels of integration onto a single chip. To achieve its goals, the Company will continue to develop silicon products that enable communication and storage infrastructure vendors to improve their time to market with high performance, reliable and cost competitive systems. The principal elements of the Tundra strategy are to:

Focus on high growth opportunities in the communications and storage vendor market. Tundra will continue to expand its product offering in the fastest growing applications areas, by adding features and functionality to its System Interconnect products. The Company will continue to focus on key market segments – communications, storage, and defence and industrial automation – to generate revenue and leverage the Company's investment in and knowledge derived from leading customers to provide high performance System Interconnect that meets the demands of the market segments.

Leverage relationships with key customers, technology partners and suppliers. Tundra will continue to focus substantial resources on establishing, maintaining and strengthening relationships with key customers, technology partners and suppliers. Such relationships are critical to the Company's ability to gather input for its product definition and to develop its longer-term product strategy. In turn, key customers benefit from an early understanding of the Company's future System Interconnect products.

Maintain technology leadership. The Company has developed leading-edge System Interconnect technology as a result of its focused research and development activities and intensive product development. Tundra has built an engineering team with extensive expertise in semiconductor design, product definition and system architecture. The Company intends to continue to make important investment in research and development, which, together with insights gained from its strategic alliances, will be used to expand its product portfolio in embedded systems applications.

Provide extensive customer support. Throughout the long system design cycles in the embedded systems market, Tundra provides ongoing support to its customers. The Company's customer support includes applications engineering, reference designs, application support notes and driver software. The Tundra web site is used to deliver timely technical information and product updates and to facilitate dialogue with its customers. These various support activities maintain the Company's close contacts with its customers and assist the customers in reducing their time to market.

Further integrate COT production model. The Company continues the program of purchasing its silicon wafers through the customer-owned tooling ("COT") manufacturing flow in order to provide future margin improvements in its products. The current versions of the QSpan products are manufactured using the COT flow. In addition, the Company has transferred and continues to transfer some of its existing products, including the Universe group of products, to the COT flow. For future designs, the Company may use the COT or ASIC manufacturing flow depending on availability of technology and relative costs.

Sales, Technical and Customer Support and Marketing

Sales

Tundra sells its products worldwide through a network of direct sales personnel, independent distributors and manufacturers' representatives. Tundra has sales offices in Ottawa, Ontario (Canada), Dallas (United States) and Maidenhead (United Kingdom). The Company also has a team of 15 independent manufacturers' sales representatives in North America. Outside of North America, Tundra has distributors or representatives in the United Kingdom, France, Italy, Germany, Sweden, Finland, Spain, Israel, Japan, Korea, Taiwan, Singapore, Hong Kong, China and Australia. To manage and service its representatives and distributors, the Company has three Channel Directors, supported by 9 applications engineers and a customer service team of six. The sales and sales support teams work from the Company's headquarters and the sales office located in the United Kingdom. The Tundra sales force maintains a high level of technical capability in order to work with engineering teams of the Company's customers to increase the likelihood of customers designing-in Tundra product. The direct sales force and applications engineers provide both sales support and in-depth technical support to the Company's representatives and distributors and directly to Tundra customers.

In the year ended April 30, 2003, the Company had one customer, Motorola Computer Group, that accounted for 16% (2002 - 11%) of total revenue.

Export sales for the years ended April 30, 2003 and 2002 represented 93% and 88% of total revenue respectively. Substantially all of the Company’s sales are denominated in US dollars. In fiscal 2003, the United States accounted for 60% (2002 – 63%) of revenue, Canada accounted for 7% (2002 - 12%), Europe accounted for 19% (2002 - 13%), and the Far East and the remainder of the world accounted for 14% (2002 - 12%) of total revenue.

Technical and Customer Support

Tundra is respected throughout the industry for its outstanding commitment to customer support. Tundra ensures that its customers can take immediate advantage of the Company’s products through its applications engineering group, unmatched design support tools, and full documentation. Customer support also includes Web-based and telephone access to in-house technical resources.

Tundra believes that its experienced sales and technical support teams provide to the Company an advantage in delivering quality assistance to its customers to address their time-to-market needs. The Company's sales cycle has two phases which parallel the development cycle of the Company's products, as described above under "Tundra Product Development Cycle": the customer development phase and the volume production phase.

During the customer development phase, following the delivery to the customer of product specifications, manuals and application notes, the customer will purchase small quantities of Tundra products for prototype development. Throughout this stage, which can last up to one year, the customer is supported by the Company's representatives and distributors in the field, its applications engineers and the direct sales force. The Company's applications engineering group in particular is heavily involved with the customer during this phase. The Company also provides to the customer Tundra Design Support Tools comprising evaluation cards, software drivers and required software simulation models of each semiconductor product. In special circumstances, the Company's applications engineers will be further assisted by engineering resources drawn from Tundra product design teams.

During the volume production phase, as the customer's product moves into production, the sales emphasis shifts to servicing the customer's volume production requirements. This involves a shift of support away from engineering and towards establishing an interface between the customer's procurement staff and the Company's customer service function. In some cases, the customers may use a board-build house for this

production phase whereby they subcontract manufacturing functions to third parties. In these cases, Tundra ships volume products directly to these companies.

Marketing

The Company employs a range of marketing activities, processes and tools to successfully market its products to its customers and partners. Marketing efforts focus primarily on engaging with the customers to define product requirements through aligning product and IP roadmaps and refining the product definition strategy. In addition, the Company continues to work on the "product to market" support by working with key customers to successfully introduce and support new products to market. Furthermore, the marketing function is complimented by marketing communications and public relations activities to support the Tundra System Interconnect brand and positioning in the marketplace.

Operations and Product Procurement

There are three generic steps in the production of semiconductor products following the design phase: wafer fabrication, package assembly and testing. Tundra is a fabless semiconductor company, which purchases the silicon wafers required to manufacture its products from third party foundries. This strategy permits the Company to concentrate its resources on product design, market development and customer support, rather than developing process technologies and operating a manufacturing facility. Tundra subcontracts the packaging and testing of its products.

Silicon wafers can be purchased through two different manufacturing flows: ASIC and COT. The traditional production model, the ASIC flow, involves the delivery by a fabless company of a complete chip design, in data form (at the netlist level), to a fabrication vendor, which carries out all the steps from layout through fabrication to final test. In the COT flow, the fabless company performs all required production steps except mask making and fabrication. The COT flow requires significant additional internal design and post-fabrication engineering support, but results in wafers and chip products at a lower cost than the ASIC flow. Historically, all of the Company's products followed the ASIC flow. In the last five years, the Company has employed the COT flow in order to provide margin improvements in its products and to allow the Company increased control of all aspects of the manufacturing process without investing in the establishment of a foundry. The QSpan II, Universe II, Powerspan II and Tsi310 products are manufactured using the COT flow.

To date, substantially all of the Company's semiconductor devices have been manufactured, assembled and tested by a small number of silicon foundries, including AMI, IBM and TSMC. Assembly and test houses include Advanced Semiconductor Engineering, Inc., IBM, and Amkor Technology, Inc. The Company does not have long-term manufacturing agreements with its suppliers. In the event that a supplier is unable or unwilling to continue to manufacture the Company's products in required volumes, the Company would be required to move its designs to another facility and to provide that foundry time to commence volume production, a process which could require six months or more. The Company has successfully made such transitions in the past. Also, as process technology evolves, suppliers may discontinue production and the Company may be required to seek alternative sources of supply. In order to manage the risk of interruption of supply, the Company has chosen suppliers that have provided and continue to provide high levels of service and continuity to companies such as Tundra. The Company also maintains inventories of wafers and finished product. Where a supplier has indicated its intention to discontinue production, the Company may increase its inventory levels to maintain continuity of supply while it identifies and qualifies a new supplier. For package assembly and test operations, the range of suppliers used by the Company provides the Company flexibility to transfer its operations to other sources, if required, in manageable timeframes.

The manufacture of semiconductor products is a highly complex and precise process. Defects in masks, impurities in the materials used, contamination of the manufacturing environment, equipment failure and

other difficulties in the fabrication process can cause a substantial percentage of wafers to be rejected or numerous die on each wafer to be nonfunctional. Significant manufacturing problems can occur at any time without warning, resulting in substantially higher product costs and inventory shortages. In order to maintain high quality and production yields, Tundra employs its own staff of production engineering and planning personnel. Before production is initiated with a supplier, Tundra staff qualifies the supplier's products and production lines to ensure that the supplier's products will meet Tundra standards. Tundra monitors wafer production, packaging and testing to ensure the maintenance of quality at the supplier's facilities. The Company has an engineering test lab at its principal office, which it uses to monitor the quality of the products of its suppliers and to perform engineering evaluations of prototype chips.

Technology

Tundra is a leader in the development of high performance, System Interconnect semiconductor chips that can bridge diverse bus types and meet exacting functional and performance requirements. The ability to cost-effectively provide this complete functionality and to meet time-to-market requirements is key to the Company's success to date. The use of leading edge semiconductor fabrication technology is mandated by the stringent performance requirements of Tundra customers. The complex chip design process, which necessitates the integration of hundreds of thousands of logic gates, is managed by the Company through the aid of sophisticated computer aided design ("CAD") tools.

System Architecture

The starting point for the development of any semiconductor product is a detailed specification of the functional requirements. The Company defines these specifications through a detailed understanding of the customer's system level requirements and how such requirements can be optimized by the performance of the Company's chip products. The Company's designers, architects, product managers and applications engineers have a broad knowledge of system architectures and state-of-the-art microprocessors. The Company's close interaction with key customers allows Tundra to design a product that fits a customer's system architecture and that balances cost and performance goals. Such interaction also allows the Company to anticipate the customer's future system performance requirements which is essential as the design cycle may take up to one year to complete.

Design Methodology

From the chip specification, Tundra designs the logic necessary to implement the required functionality, verifies the behaviour of the logic through simulation, synthesizes the logic to the transistor level and translates, through the use of third party libraries, the resulting circuitry into the physical patterns required to fabricate its semiconductor chips. This methodology requires extensive use of CAD tools and software supplied specifically for this purpose. The Company has developed extensive expertise in all steps of this design process. The verification of the logic through high level simulation, including the use of software models, for devices with which the chip will interact and the verification of the logic performance across a diverse set of application needs are key to successful first-pass functional silicon devices. As a result, Tundra has successfully designed products which are highly functional in the first fabrication cycle.

Given the long design cycles necessitated by chip complexity, the high cost of device fabrication, and the reliance of the Company's customers on accurate prototype delivery schedules in order to meet time-to-market needs, Tundra places a heavy emphasis on achieving first-pass success. This includes mitigating the risk of functional errors through the use of separate design and verification teams, detailed project and risk management and ensuring that the development teams have the appropriate mix of skills and experience. Tundra has invested in both the capital equipment and expertise necessary to perform system level emulation to allow the testing of a complete logic design in a real system environment prior to fabrication of the design in silicon. This testing further extends the verification of the design and allows testing of the chip design against the microprocessor and other devices with which it will interact in the

customer's embedded system, continuing the Company's progress towards its goal of reducing its time-to-market.

Semiconductor Process Technology and Libraries

The fabrication processes for the implementation of the Company's products are selected to provide the appropriate performance in order that the products will function at the required operating frequencies and will result in competitive die sizes at competitive costs. Tundra designs with a range of digital complementary metal oxide silicon ("CMOS") processing technologies with feature sizes ranging from 0.8 microns to 0.13 microns. Tundra anticipates that new designs will use 0.25, 0.18 and 0.13 microns or smaller geometries. These libraries are the link between the chip schematic design and its physical layout on the silicon wafers. Following layout, fabrication vendors create masks from which wafers are fabricated. The finished wafers are diced and assembled into chips for final testing.

Design re-use

During the chip design phase, to manage the complexity of the process, designs are carried out hierarchically. Functional logic blocks are designed and linked together. Tundra has developed an extensive library of such blocks, which, together with chip architectures, such as the de-coupled architecture used in the Company's bridge chips, represent the intellectual property base for future designs.

Research and Development

Tundra believes that a strong research and development program is key to the Company's position both in the markets it currently addresses and in future growth areas. The Tundra research and development team possesses extensive knowledge in system level applications, chip design, chip verification and chip fabrication technology. The addition, in September 2000, of the Quadic team in South Portland, Maine, further broadened the Company’s R&D capability. Quadic’s technical staff represents over 200 years of collective experience in designing complex, leading-edge semiconductors. The company’s back-end layout and analog design expertise provides Tundra with in-house capability in chip layout and in the design of highly specialized analog circuitry. The Company’s acquisition of Quadic’s highly advanced R&D resources has broadened and accelerated delivery of Tundra System Interconnect devices, key building blocks in the development of sophisticated, high speed communications systems.

The Company's applications engineering team works closely with the design team in order to provide the Company's customers with technical expertise following a design-win to facilitate the customer's design. The applications team is also responsible for the development of system test hardware for evaluation and verification of prototype chip products. This forms the basis of evaluation cards and software, which are subsequently used to support customers.

In fiscal 2003, the Company’s research and development expenses, net of third party funding, investment tax credits and government assistance, were $12.4 million compared to $ 14.1 million in fiscal 2002.

Competition

For the Company's VME and PCI products, competition occurs for new products during the latter stages of the chip development phase and for mature products during the early stages of a new customer product development. See "The Development Cycle". During these phases, customers evaluate alternative approaches to sourcing components for new embedded system designs. These approaches may include purchasing products from an external supplier, such as Tundra or its competitors, or designing the component in-house using ASICs or programmable logic devices. Generally, using ASICs for in-house development of such components has become extremely complex, requiring significant engineering resources, expertise, breadth of technology and financial commitment. These challenges, coupled with intense product competition in the embedded systems market, have resulted in embedded system

manufacturers increasingly outsourcing components to third-party suppliers. The competitive elements that determine the customer's approach and final decision regarding component sourcing are: timely completion and introduction of new product features; product performance; compatibility with standards; overall customer technical support; cost of the solution and quality of documentation.

Achieving the design-win is key to the Company's success as Tundra products are largely sole-sourced products once they are designed into a product by the customer. In addition, the customer's products typically have product life cycles of two to five years. Once the Company's product has been designed-in to the customer's products, competitors have infrequent opportunity to supplant the Company's products with competitive solutions. However, the Company generally maintains its close relationship with customers and provides full technical and sales support as required through the product life cycle to position the Company for design-wins on subsequent customer products. In the volume production phase, the Company seeks to maintain ongoing customer satisfaction through optimal inventory in-house or in distribution, timely and effective customer support and competitive pricing strategies.

The Company's VME products, which represent a significant portion of the Company's current revenue, have one main competitor: Thales Computers ("Thales") (formerly Cetia, Inc.). Thales has introduced a product that competes with the Universe II. In PCI bridging applications, the Company's competitors include Marvell Technology Group Ltd. (“Marvell”), and PLX Technology, Inc. ("PLX"). Both PLX and Marvell have products that compete with the Company's PCI product family. Also, Tundra believes that other competitors may launch products into this market. Tundra believes that its large design-win base and close relationships with customers and strategic partners, coupled with new product introductions, will enable the Company's products to compete with these products. However, to maintain and improve its competitive position, Tundra must continue to develop and introduce, in a timely and cost-efficient manner, new products, product features and services that address the offerings of its competitors.

The Company expects competition to intensify in the future, particularly with the development of the RapidIO standard for System Interconnect. The popularity of RapidIO technology will attract additional competition from new and established companies. Many of the current and potential competitors of Tundra have longer operating histories and substantially greater financial, technical and marketing resources and name recognition than the Company. There can also be no assurance that the Company's strategic partners and end-users will not internally develop the products they currently obtain from the Company or, in the case of a strategic partner, that it will not establish a partnership with a party other than the Company. In addition, the Company's current or potential competitors may develop products comparable or superior to those developed by the Company or adapt more quickly than the Company to new technologies, evolving industry standards, new product introductions, or changing customer requirements. If a competitor develops products comparable or superior to those developed by Tundra, significant price competition might develop which could force the Company to lower its prices. Any of these events could have an adverse effect on the Company's business, results of operations and financial condition.

The Company expects competition to RapidIO from developing technologies that are comparable or superior to RapidIO. The transition from bus-based technologies to fabric-based interconnect represents opportunities for the establishment of several new technology choices: Ethernet, Hypertransport, PCI Express and Advanced Switching. Each of these technologies has particular suitability to different applications and in each case could be a seen as a better choice by potential customers. All have been developed to optimized for particular applications, the company believes RapidIO represents the best choice for embedded applications in its markets; based on strong customer and strategic partner relationships. Ethernet while widely deployed in the LAN market is not efficient or reliable in its data transfer. Hypertransport has established by AMD has some limited following, but does not support serial or the multi-processor capability of RapidIO. PCI Express and Advanced Switching (AS) use a common spec layer and are most comparable to RapidIO and are backed by Intel. PCI Express use is expected in

the PC Desktop and a second generation in the Server/ Storage market. Advanced Switching is directly targeted at embedded applications and represents the strongest threat to RapidIO.

The 8000 Series peripheral chip and data security products of the Company have many competitors because they were developed to mimic (be pin-compatible with) existing products. The Company expects to continue to derive revenue from this market as most large competitors exit the market.

Intellectual Property

Protection: The Company relies on a combination of trade secret, copyright, trade-mark and patent laws, non-disclosure and other contractual agreements, and technical measures to protect its proprietary rights. As part of its confidentiality procedures, the Company enters into confidentiality and invention assignment agreements with its employees and, where the Company views it appropriate, non-disclosure agreements with its consultants, customers and strategic partners. The Company also limits access to and distribution of its documentation and other proprietary information.

Trade-marks: The Company has registered the TUNDRA® trade-mark in Canada, the United States and the United Kingdom. The Company has also registered the Tundra Toolbox® trade-mark in Canada. Universe, QSpan, SCV64, PowerSpan, PowerPro, Tsi310, Tsi400, Tsi500, Tsi550 and Silicon Behind the Network™ are unregistered trade-marks of the Company. The Company also has obtained the domain name registration "tundra.com" and has established a website at that address.

Patents: The Company has applied in Canada and the United States to obtain patent protection for one of its bridging systems. The Company has filed several applications in the United States and Canada to obtain patent protection for inventions pertaining to buffer management, physical layers in network computing systems, and fault tolerance.

Patent Strategy: The Company has established an internal Patent Review Board to oversee patent strategy and patent development. Employees are encouraged to submit inventions for review by the Patent Review Board. The Patent Review Board considers the merit and novelty of the inventions, and considers the business and strategic focus of the Company when it determines whether or not to seek patent protection for the inventions.

Limits and Risks: There can be no assurance that employees will submit additional inventions for consideration, that any additional patent applications will be filed, that patents will be granted or that the Company's products will not infringe patent rights of other persons. In addition, there can be no assurance that other persons have not or will not apply for patent protection for products which utilize the same or similar processes as the Company's products. Litigation may be necessary to protect the Company's proprietary technology. Any claims or litigation can be time-consuming and expensive. The inability of the Company to adequately protect its proprietary rights could have a material adverse effect on the Company's business, results of operations and financial condition. Despite the Company's efforts to protect its proprietary rights, unauthorized parties may attempt to copy aspects of the Company's products or to obtain and misuse information that the Company regards as proprietary.

Employees

Tundra employs a total of 172 employees. The Company believes its relationship with its employees is good. None of the employees is represented by a labour union or subject to a collective bargaining agreement. No work stoppages have occurred. Substantially all of the Company's employees own common shares and/or options to acquire common shares of the Company.

Facilities

The Company's head office is located at 603 March Road, Ottawa, Ontario. The Company purchased the

building in January 2000 and completed an expansion of the building in September 2001. The Company leases sales office space in Maidenhead, U.K.; Dallas, Texas; and South Portland, Maine.

Legal Proceedings

The Company is not a party to any material litigation and is not aware of any pending or threatened litigation that would have a material effect on the Company and its business.

ITEM 4 - SELECTED CONSOLIDATED FINANCIAL INFORMATION

The following table presents selected historical consolidated financial data of the Company for the periods indicated. The selected historical consolidated data for the Company as of and for each of the years in the five year period ended April 30, 2003 are derived from the audited consolidated financial statements of the Company. Historic results are not necessarily indicative of the results that may be expected for any future period or for a full year. The Company prepares its consolidated financial statements in accordance with Canadian GAAP. The selected historical consolidated financial data should be read in conjunction with the Consolidated Financial Statements of the Company and the notes thereto.

Financial Statement Data

(In thousands of Canadian Dollars except per share amounts)

	Year Ended				
	April 30, 2003	April 30, 2002	April 30, 2001	April 30, 2000	April 30, 1999
Revenue	$34,018	$28,800	$64,741	$40,672	$27,809
Net Earnings (Loss)	(31,952)	(5,226)	4,444	4,614	2,184
Per Share (Basic)	(1.89)	(0.32)	0.30	0.33	0.20
Per Share (Diluted)	(1.89)	(0.32)	0.29	0.31	0.19
Balance Sheet Data					
Total Assets	$91,059	$121,010	$141,355	$58,167	$49,393
Total Long Term Liabilities	0	0	687	0	0
Shareholders' Equity	73,390	104,801	118,117	51,758	46,060

Quarter Ended	Sales	Net Earnings (Loss)	Basic Earnings (Loss) Per Share	Diluted Earnings (Loss) Per Share
April 30, 2003	$9,130	$165	$0.01	$0.01
January 26, 2003	8,360	30	0.00	0.00
October 27, 2002	8,303	(1) (31,588)	(1) (1.87)	(1) (1.87)
July 28, 2002	8,225	(559)	(0.03)	(0.03)
April 30, 2002	7,432	(1,077)	(0.06)	(0.06)
January 27, 2002	6,344	(1,530)	(0.09)	(0.09)
October 28, 2001	5,214	(1,903)	(0.12)	(0.12)
July 29, 2001	9,810	(716)	(0.05)	(0.05)

(1) Includes the effects of a charge of $31,275 for the impairment of goodwill.

Dividend Policy

The Company has not declared or paid any dividends on its common shares. The Company does not anticipate paying any dividends on its common shares in the foreseeable future. The Company's dividend policy will be reviewed from time to time in the context of the Company's earnings, financial condition and other relevant factors.

ITEM 5 - MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Reference is made to the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" from pages 12 to 20 of the 2003 Annual Report of the Company, which section is incorporated herein by reference.

ITEM 6 - MARKET FOR SECURITIES

The common shares of the Company are listed and posted for trading on the Toronto Stock Exchange under the symbol TUN.

ITEM 7 - DIRECTORS AND OFFICERS

Directors

Directors are elected each year at the annual meeting of the shareholders of the Company to serve until the next annual meeting or until a successor is elected or appointed.

The name, municipality of residence, period of service and principal occupation of each of the directors of the Company are as follows:

Name and Municipality of Residence	**Director Since**	**Principal Occupation(s) within the 5 preceding years**
ADAM CHOWANIEC[(1)] Ottawa, Ontario	October 15, 1996	Chairperson of the Board, Tundra Semiconductor Corporation Chief Executive Officer, Tundra Semiconductor Corporation
MICHAEL S. COHEN[(1)] Toronto, Ontario	December 18, 1995	Managing General Partner, VenGrowth Capital Partners Inc.
MICHAEL P. LEVIS[(2)] San Francisco, California	October 20, 1997	Independent Consultant Vice President, Marketing, Xicor, Inc.,
DARREL A. MANK[(1)] Rolla, Missouri	September 16, 1999	Independent Consultant Senior Vice President, Cadence Design Systems Inc.
DANNY B. OSADCA Ottawa, Ontario	October 15, 1996	Principal – Osadca Group (Consulting Service) Chairperson, President & Chief Executive Officer, DY4 Systems Inc.
JAMES N. ROCHE Ottawa, Ontario	October 15, 1996	President and Chief Executive Officer, Tundra Semiconductor Corporation Executive Vice President and Chief Operating Officer, Tundra Semiconductor Corporation

Name and Municipality of Residence	Director Since	Principal Occupation(s) within the 5 preceding years
CHARLES E. THOMPSON[2] Phoenix, Arizona	October 15, 1996	Retired Senior Vice President, Motorola Inc.
MICHAEL UNGER[2] Ottawa, Ontario	September 13, 2001	President and CEO, ILIOS Consulting Corporation President of Optical Networks, Nortel Networks

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(1) Member of the Audit Committee
(2) Member of the Human Resources and Corporate Governance Committee

The Company has an audit committee, human resources and corporate governance committee, the members of which are noted above. The Company does not have an executive committee of the Board.

Executive Officers

The name, municipality of residence and position held by each of the officers of the Company are as follows:

Name and Municipality of Residence	Principal Occupation(s) within the 5 preceding years
JAMES N. ROCHE Ottawa, Ontario	President and Chief Executive Officer, Tundra Semiconductor Corporation Executive Vice President and Chief Operating Officer, Tundra Semiconductor Corporation
NORMAND Y. PAQUETTE Ottawa, Ontario	Executive Vice President and Chief Financial Officer, Tundra Semiconductor Corporation
RICHARD J. O'CONNOR Ottawa, Ontario	Chief Technology Officer, Tundra Semiconductor Corporation Vice President, Marketing & Business Development, Tundra Semiconductor Corporation

BENNY CHANG South Portland, Maine	Vice President, Research and Development, Tundra Semiconductor Corporation Vice President and Treasurer, Quadic Systems, Inc.
DAVID A. FERRIS South Portland, Maine	Vice President and General Manager South Portland Division, Tundra Semiconductor Corporation President, Quadic Systems, Inc.
DAVID J. LISK Ottawa, Ontario	Vice President, Operations, Tundra Semiconductor Corporation
JOSEPH CONNELLY Ottawa, Ontario	Vice President, Sales and Marketing, Tundra Semiconductor Corporation General Manager China, Microchip Technologies Inc.
MICHAEL W. LUPIANO Ottawa, Ontario	Vice President, Human Resources, Tundra Semiconductor Corporation President, Lupiano and Associates Ltd. Vice President, Human Resources, GSI Lumonics

The directors and officers of the Company as a group, beneficially owned, directly or indirectly, or exercised control over, 8.8% of the common shares of the Company as at April 30, 2003.

ITEM 8 - RISK FACTORS

The following risk factors, each of which could have a material adverse impact on the Company's business, financial condition and results of operations, should be considered carefully in addition to the other information contained in this annual information form:

Economic Conditions

The Company's success is subject to global economic conditions and market conditions in the telecommunication and related industries. Over the last two years there has been a significant slowdown in worldwide economies and difficulties in the communications sector which have significantly affected the demand for the Company's products. This downturn has had a negative impact on the Company's revenues and profitability. The Company can not predict how long the downturn will last and continues to have concerns over the strength and duration of economic recovery in the industry. If global economic conditions do not improve or if they worsen, they will likely have material adverse effects on the Company's business, results of operations and financial condition.

Competition

The market for the Company's products is intensely competitive, rapidly evolving and subject to technological change. The introduction by any of the Company's competitors of competitive products on a more timely basis than the Company or with superior functionality to the products of the Company could have a material adverse effect on the Company's business, results of operations and financial condition. To maintain and improve its competitive position, the Company must continue to develop and introduce, in a timely and cost-effective manner, new products, product features and services that keep pace with offerings by its competitors and there can be no assurance that the Company will successfully do so. The principal competitive factors in the Company's markets are quality, performance, price, timeliness, customer support, reputation and product features such as compatibility and functionality.

The Company expects competition to persist, increase and intensify in the future with increased price competition developing in the Company's markets. If significant price competition develops, the Company would likely be forced to lower its prices, which could have an adverse effect on the Company's business, financial condition and results of operations. A number of the Company's current and potential competitors have longer operating histories and substantially greater financial, technical and marketing resources and name recognition than the Company. In addition, although a potential competitor may not currently compete with the Company, there is no assurance that such potential competitor will not become a direct competitor in the future. There can be no assurance that the Company's current or potential competitors will not develop products comparable or superior to those developed by the Company or adapt more quickly than the Company to new technologies, evolving industry standards, new product introductions, or changing customer requirements. The Company's current and potential customers continuously evaluate whether to design, develop and support internally the silicon solutions provided by the Company, thereby obviating the need for relying on an outside vendor such as the Company. In addition, although the Company has developed business relationships with Motorola, Intel and IBM, there can be no assurance that they will not decide that it is more advantageous to establish a relationship with a party other than the Company or to compete with the Company directly. Such an event could have a material adverse effect on the Company's business, results of operations and financial condition.

Ability to Address Time to Market Requirements

The continued success of the Company is dependent on its ability to design and develop highly sophisticated silicon solutions in accordance with the time to market requirements of its customers. The Company must manage a chip development cycle which can span a period of one to two years. Over such

a period of time, projects can run into significant cost overruns and time delays. In addition, the discovery of product defects once the Company has shipped prototype products to a customer could result in time delays of three to six months while the defects are identified and corrected and new prototypes are manufactured and tested. An inability on the part of the Company to meet the time requirements of one or more customers could result in the loss of significant current and future revenue to the Company and could cause material reputational harm to the Company. There can be no assurance that the Company will be able to manage the product development cycle, adequately verify in simulation its designs and satisfy its customers' time to market requirements. In such cases, the business, results of operations and financial condition of the Company could be materially and adversely affected.

Strategic Acquisitions

The Company's growth strategy includes and will continue to include strategic acquisitions of other companies, technologies and product lines that complement its internally developed products and overall strategy. These acquisitions involve significant risks and uncertainties. These risks and uncertainties include the difficulty of integrating newly-acquired operations and products, the risk that the industry may develop in a different direction than anticipated and that the technologies acquired do not prove to be successful in the market, the risk of entering new markets in which the Company has limited experience and where competitors may have a stronger market presence, the risk of diverting the attention of senior management from operations, and the potential for future impairments of goodwill and additional charges for the amortization of intangibles. Tundra's ability to successfully integrate newly-acquired businesses and products could have a material adverse effect on its revenues, gross margins and expenses. An acquisition could require substantial cash resources, require the Company to incur or assume debt obligations, or issue additional equity which may dilute its common stock.

Ability to Attract and Retain Key Personnel

The Company's success is highly dependent on its continuing ability to identify, hire, train, motivate and retain highly qualified management, technical and sales and marketing personnel. Competition for such personnel is intense and there can be no assurance that the Company will be able to attract and retain such qualified technical and managerial personnel in the future. The Company's operations are dependent on the abilities, experience and efforts of a number of key personnel, including senior management and product development personnel. Should any of these persons be unable or unwilling to continue in the employment of the Company, the Company's business, results of operations and financial condition could be materially adversely affected. The inability to attract and retain the necessary technical and sales and marketing personnel could have a material adverse effect on the Company's business, results of operations and financial condition.

Rapid Technological Change

The market for the Company's products and services is characterized by rapid and significant technological advancements, the introduction of new products and services, changes in customer demands and evolving industry standards. Because of the rapid technological change in the semiconductor industry and in industry standards, the Company must devote significant resources to ongoing research and development. The adoption of new technologies or new industry standards by embedded system manufacturers can render the Company's products obsolete and unmarketable. New technology could include the integration of PCI bridges onto microprocessors. This presents substantial risks for the Company because the Company's products have very lengthy development and sales cycles. The Company's future success will depend upon its ability to address the increasingly sophisticated needs of its customers by designing, developing, testing, marketing and selling enhancements to its products and services on a timely basis that keep pace with technological developments, emerging industry standards and customer requirements. There can be no assurance that the Company will be successful in developing

and marketing enhancements to its products and services or in developing new products and services that respond to technological changes, evolving industry standards or customer requirements, that the Company will not experience difficulties that could delay or prevent the successful development, introduction and sale of such enhancements or new products and services, or that such enhancements or new products and services will adequately address the requirements of the marketplace and achieve any significant degree of market acceptance. There can be no assurance that the Company can continue to keep its products and services technologically competitive.

The Development Cycle

The Company's lengthy product development cycle is a source of significant risk. Over the period of the development cycle, customers' projects can be cancelled, experience significant time and cost overruns, and be overtaken by technological change. The obtaining of a design-win by the Company is no assurance that the Company's product will in the future reach volume production. There can be no assurance that the Company can successfully manage the development cycle. In addition, the design-wins achieved by the Company to date are not a guarantee of future volume production or revenue. The Company's design-wins are solely an expression of interest by potential customers in purchasing the Company's products and are not supported by binding commitments of any nature. Therefore, there can be no assurance that any design-win will result in purchase orders for the Company's products. Reasons that a design-win may not result in a purchase order may include product development delays, pricing issues, availability of competing products, inability to deliver products in volume, technological obsolescence, changes in market needs or preferences, changing standards and changes in customer product lines and the business health of the customer. The inability of the Company to convert design-wins into purchase orders could have a material adverse effect on the Company's business, financial condition and results of operations.

Source of Supply — Manufacturing Risks

Substantially all of the Company's semiconductor devices are manufactured, assembled and tested by a small number of silicon foundries, including TSMC, IBM and ASE. In addition, the Company is continuing to change its production flow from the ASIC flow to the COT flow. While the Company has recognized significant cost savings through the adoption of the COT flow, the Company is required to devote significant resources to additional production functions and to rely on third party contractors to provide highly specialized design and prototype assistance. TSMC, IBM and ASE also manufacture products for other companies. The Company does not have a long-term manufacturing agreement with any foundry. Therefore, none of the Company's manufacturers is obligated to supply products to the Company for any specific period, in any specific quantity or at any specific price, except as may be provided in a particular purchase order that has been accepted by the manufacturer. The Company's reliance on third party manufacturers for the manufacture, assembly and testing of its products involves a number of risks, including the possible absence of adequate capacity as the Company expands, the unavailability of, or interruption in access to, certain process technologies and reduced control over delivery schedules, quality assurance, manufacturing yields and costs. There can be no assurance that the Company will be able to obtain semiconductor devices within the time frames and in the volumes required by the Company at an affordable cost or at all.

In the event that a manufacturer is unable or unwilling to continue to manufacture the Company's key products in required volumes, the Company would be required to qualify acceptable alternative foundries and such foundries would need time to prepare for volume production. It could take six months or longer for another foundry to commence volume production, and no assurance can be given that any additional foundry would become available to the Company or that any additional foundry would be able to provide products on a turnkey basis or would be in a position to satisfy the Company's production requirements on a timely basis and at acceptable price levels. The loss of a supplier, the inability of the Company in a

period of increased demand for its products to obtain additional foundry capacity from its manufacturers, the inability of manufacturers to maintain acceptable manufacturing yields, or any other circumstances that would limit the Company's ability to obtain adequate supplies of manufactured products, would delay shipments of the Company's products significantly. A delay in shipments could cause cancellation of orders, damage relationships with current and prospective customers or result in the loss of customers. Any such event would have a material adverse effect on the Company's business, financial condition and results of operations.

The Company's products are assembled and tested by third party subcontractors. Such assembly and testing is conducted on a purchase order basis rather than under a long-term agreement. As a result of its reliance on third party subcontractors to assemble and test its products, the Company cannot directly control product delivery schedules, which could lead to product shortages or quality assurance problems that could increase the costs of manufacturing or assembly of the Company's products. Qualification of assembly and test subcontractors normally requires a significant investment of time. If the Company is required to find alternative subcontractors, product shipments could be delayed significantly. Any problems associated with the delivery, quality or cost of the assembly and testing of the Company's products could have a material adverse effect on the Company's business, financial condition and results of operations.

Yield Risk

The manufacture of the Company's products is a highly complex and precise process, requiring production in a highly controlled environment. Changes in a foundry's manufacturing processes or the inadvertent use of defective or contaminated materials could adversely affect the foundry's ability to achieve acceptable manufacturing yields and product reliability. To the extent that the Company's manufacturers do not achieve such yields or product reliability, the Company's customer relationships, business, financial condition and results of operations could be adversely affected. In addition, the Company is required to purchase all products produced using the COT production flow, including defective products. Therefore, the Company's continued move to the COT production flow could result in additional costs to the Company in the event of significant manufacturing defects, which costs could have a material adverse effect on the Company's business, financial condition and results of operations.

Dependence on Alliances

The Company's product development strategy is to develop its products closely with its chosen processor providers, such as Motorola, and to augment its internal design resources through its relationships with third party contract design centres. Accordingly, the success of the Company will be dependent in large part on its ability to develop these and additional strategic relationships and on the performance and success of the Company's partners. The loss by the Company of any partner, particularly one of its chosen processor providers, or the inability to attract new partners as a result of competitive products offered by other companies, could have a material adverse effect on the Company's business, results of operations and financial condition. In addition, the existence of the Company's relationship with certain of its partners may limit or preclude the possibility of establishing relationships with competitors of such partners.

Backlog

Customers purchase the Company's products pursuant to short-term purchase orders. Typically, a customer will only place an order with the Company eight to twelve weeks prior to the Customer's required delivery date. Therefore, the Company has minimal backlog at any particular date. Cancellations of or reductions in pending purchase orders could have a material adverse effect on the Company's business, financial condition and results of operations.

Potential Fluctuations in Operating Results

The Company has experienced, and is likely to continue to experience, significant fluctuations in quarterly or annual results caused by a number of factors. The development and sales cycles associated with the Company's products are lengthy and subject to significant delays. In addition, the implementation of the Company's products generally involves a significant commitment of resources of prospective customers. As a result, the time required to implement the Company's products can vary significantly with the needs of its customers and is generally a process that extends for several years. There also may be other factors that significantly affect the Company's quarterly or annual results which are difficult to forecast, including changes in demand for the Company's products, the cancellation of projects by its customers, the introduction or enhancement of products by the Company and its competitors and market acceptance of those enhancements or products, delays in the introduction of products or enhancements by the Company or its competitors and changes in the Company's pricing policies or those of its competitors. Operating results are affected by the mix of products and services sold, the mix of international and North American revenue, regulatory changes, foreign currency exchange rates, timing and level of capital expenditures of the Company's customers and general economic conditions. The Company's operating expenses are based in part on the Company's expectations as to future revenue levels and to a large extent are fixed in the short term; therefore a shortfall in quarterly sales could lead to a quarterly operating loss.

International Markets

Revenue outside of North America accounted for approximately 32%, 25% and 42% of the Company's total revenue during fiscal 2003, 2002 and 2001, respectively. The Company may commit additional resources to expand its international sales and support channels. There are certain difficulties and risks inherent in doing business internationally, including greater difficulty in accounts receivable collection, the burden of complying with multiple and conflicting regulatory requirements, foreign exchange controls, longer payment cycles, import and export restrictions and tariffs, potentially adverse tax consequences and political and economic instability. There can be no assurance that the Company will be able to sustain or increase revenue derived from international operations or that the Company will be able to penetrate new foreign markets.

International sales also entail risks associated with currency fluctuations. Substantially all of the Company's revenue in fiscal 2003 was, and the Company's revenue is likely to continue to be, received in US dollars. A significant portion of the Company's expenses, however, will be incurred in Canadian dollars. Foreign currency transaction gains and losses arising from normal business operations are credited to or charged against earnings in the period incurred. As a result, fluctuations in the value of the US dollar relative to the Canadian dollar have caused and will continue to cause currency transaction gains and losses. The Company anticipates that, as its international sales increase, risks associated with currency fluctuations may increase. The Company cannot predict the effect of exchange rate fluctuations upon future operating results. There can be no assurance that the Company will not experience currency losses in the future. The Company undertakes hedging transactions to cover its currency exposure and intends to hedge a portion of its currency exposure in the future as management deems appropriate; however, there can be no assurance that the Company will be successful in such hedging activities.

Misappropriation of Company's Proprietary Rights — Infringement Claims

The Company's success depends significantly upon its proprietary technology. The Company relies on a combination of patent, copyright, trade-mark and trade secret laws, non-disclosure agreements and other contractual provisions to establish, maintain and protect its proprietary rights, all of which afford only limited protection. The Company has applied in both Canada and the United States to register patents in respect of certain inventions relating to its technology and products. There can be no assurance that any

pending or future patent or pending or future trade-mark applications will be granted in respect of the Company's technology and business or that any pending or future patents or current or future trade-marks will not be challenged, invalidated or circumvented or that the rights granted under such patents or trade-marks will provide competitive advantages to the Company.

Despite the Company's efforts to protect its proprietary rights, unauthorized parties may copy aspects of the Company's products or obtain and use information that the Company regards as proprietary. Moreover, effective patent, trade-mark, copyright and trade secret protection may be unavailable or limited in certain foreign countries, making the possibility of misappropriation of the Company's proprietary technology more likely. There can be no assurance that the steps taken by the Company to protect its proprietary technology will prevent misappropriation of such technology and such protections may not preclude competitors from developing products with functionality or features similar to the Company's products. In addition, as the Company has only sought patent protection for a very limited number of inventions relating to its products in Canada and the United States, there can be no assurance that other persons will not apply for patent protection for products which utilize the same or similar processes to those of the Company. Litigation may be necessary to protect the Company's proprietary technology. Any claims or litigation can be time-consuming and expensive. The inability of the Company to adequately protect its proprietary rights could have a material adverse effect on the Company's business, results of operations and financial condition.

Although the Company does not believe that it is infringing the intellectual property rights of others, claims of infringement are becoming increasingly common as the number of products and competitors in the Company's industry segment grows, the functionality of products in different industry segments overlaps, and legal protections, including patents, are applied to software products. There can be no assurance that the Company will not receive future communications from third parties asserting that the Company's products infringe, or may infringe, the proprietary rights of third parties. Any such claims, with or without merit, could be time consuming, result in costly litigation and diversion of technical and management personnel, cause product shipment delays or require the Company to develop non-infringing technology or enter into royalty or licensing agreements. Such royalty or licensing agreements, if required, may not be available on terms acceptable to the Company or at all. In the event of a successful claim of product infringement against the Company and failure or inability of the Company to develop non-infringing technology or to license the infringed or similar technology, the Company's business, operating results and financial condition could be materially adversely affected.

Product Complexity and Product Defects

The Company's products are highly complex and sophisticated and, from time to time, contain design defects that are difficult to detect and correct. There can be no assurance that errors will not be found in new products after commencement of commercial shipments or, if discovered, that the Company will be able to successfully correct such errors in a timely manner or at all. In addition, despite tests carried out by the Company on all of its products to achieve, as far as possible, first pass product success, there is no assurance that the Company will be able to fully simulate the environment in which its products will operate and, as a result, the Company may be unable to adequately detect design defects inherent in its products and which only become apparent when the products are installed in a customer's product. The occurrence of errors and failures in the Company's products could result in loss of or delay in market acceptance of the Company's products, and alleviating such errors and failures in the Company's products could require significant expenditure of capital and other resources by the Company. The reputational harm resulting from product errors and failures would be damaging to the Company. The consequences of such errors and failures could have a material adverse effect on the Company's business, results of operations and financial condition.

The Company regularly provides a limited warranty with its products. There can be no assurance that the financial impact of these warranty obligations will not be significant in the future.

Product Concentration

The Company currently derives a substantial portion of its product revenue from its VME family of products and the Company expects that product revenue from these products will continue to account for a substantial portion of the Company's product revenue for the foreseeable future. The Company's future performance will also depend in part on its ability to successfully develop, introduce and market new and enhanced products at competitive prices, including the Company's Tsi310, Powerspan, PowerPro, and RapidIO products. Broad market acceptance of these products is, therefore, critical to the Company's future success. Factors that may affect the market acceptance of the Company's products include market acceptance of its customers' products, the price, functionality and availability of competing products and technologies, and the success of the sales efforts of the Company and its customers. There can be no assurance that the Company will be able to develop products that will attain broad market acceptance. Failure of the Company's products to achieve broad market acceptance would have a material adverse effect on the Company's business, financial condition and results of operations.

Key Customers

The Company currently depends on a small number of customers for a significant portion of its revenues and expects that this will continue in the foreseeable future. Consequently, the Company's future performance is dependent on its ability to maintain or increase sales to these key customers as well as its ability to attract new customers. Tundra's ability to succeed will be impacted by various factors such as reductions, cancellations or delays in orders, the loss of one or more current customers, failure by one or more significant customers to pay its invoices, and the selection of one of the Company's competitors products by one of Tundra's key customers. The loss of any of the Company's largest customers or a significant reduction in sales that the Company makes to them would have a material adverse effect on the Company's business, financial condition and results of operations.

Dependence on Growth of Outsourcing

Traditionally, the Company's customers have internally developed the key ASIC components for their systems. More recently, they have begun to outsource these semiconductor devices as a result of intense time-to-market pressures, the increasing technological complexity of network systems and development costs. The Company's success depends in large part on increased acceptance of outsourcing as an alternative to in-house development by these companies. Many of the Company's current and potential customers have substantial technological capabilities and financial resources. These customers may currently be developing or may in the future determine to develop or acquire components or technologies that are similar to or may be substituted for the Company's products and, therefore, may discontinue purchases of the Company's products. If such customers develop or acquire the technology to develop their own components rather than purchase the Company's products, the Company's business, financial condition and results of operations would be materially adversely affected.

Dependence on Third Party Distribution

The Company sells its products to customers primarily through distributors and manufacturers' representatives. The Company's relationships with many of its distributors and manufacturers' representatives have been established within the last four years and the Company is unable to predict the extent to which some of these distributors and manufacturers' representatives will be successful in marketing and selling the Company's products. Moreover, the distributors may choose to market and sell competing products. Manufacturers' representatives and distributors may terminate their relationships with the Company at any time. The Company's future performance will also depend, in part, on its ability

to attract additional distributors or manufacturers' representatives that will be able to market and support the Company's products effectively, especially in markets in which the Company has not previously distributed its products. There can be no assurance that the Company will retain its current distributors or manufacturers' representatives or that it will be able to recruit additional or replacement distributors or manufacturers' representatives. The loss of one or more of the Company's distributors or manufacturers' representatives could have a material adverse effect on the Company's business, financial condition and results of operations.

Cyclicality of Semiconductor Industry

The semiconductor industry has historically been characterized by wide fluctuations in product manufacturing, assembly and testing, supply and demand. From time to time, the industry has also experienced significant downturns, often in connection with, or in anticipation of, declines in general economic conditions. These downturns have been characterized by diminished product demand and production overcapacity. Conversely, in times of high growth, production capacity may be unavailable. Industry-wide fluctuations in the future could have a material adverse effect on the Company's business, financial condition and results of operations.

Volatility of Stock Price

The market price of the Company's outstanding common shares has been and may in the future be highly volatile and could be subject to wide fluctuations in response to variations in results of operations, announcements of technological innovations or new products by the Company or its competitors, changes in financial estimates by securities analysts or other events or factors. In addition, the financial markets have experienced significant price and volume fluctuations that have particularly affected the market prices of equity securities of many high technology companies and that often have been unrelated to the operating results of such companies or have resulted from the failure of the operating results of such companies to meet market expectations in a particular quarter. Broad market fluctuations or any failure of the Company's operating results in a particular quarter to meet market expectations may adversely affect the market price of the Company's common shares.

ITEM 9 - ADDITIONAL INFORMATION

The Company shall provide to any person, upon request to the Secretary of the Company at 603 March Road, Ottawa, Ontario, K2K 2M5:

(a) When the securities of the Company are in the course of a distribution under a preliminary short form prospectus or a short form prospectus,

(i) one copy of the current Annual Information Form ("AIF") of the Company, together with one copy of any document, or the pertinent pages of any document, incorporated by reference in the AIF;

(ii) one copy of the comparative financial statements of the Company for its most recently completed financial year for which financial statements have been filed together with the accompanying report of the auditor and one copy of the most recent interim financial statements of the Company that have been filed, if any, for any period after the end of its most recently completed financial year;

(iii) one copy of the information circular of the Company in respect of its most recent annual meeting of shareholders that involved the election of directors or one copy of any annual filing prepared instead of that information circular, as appropriate; and

(iv) one copy of any other documents that are incorporated by reference into the preliminary short form prospectus or the short form prospectus and are not required to be provided under clauses (i), (ii) or (iii); or

(b) at any other time, one copy of any documents referred to in clauses (a)(i), (ii) and (iii), provided that the Company may require the payment of a reasonable charge if the request is made by a person or company who is not a security holder of the Company.

Additional information, including directors' and officers' remuneration, and the principal holders of the Company's securities, options to purchase securities and interests of insiders in material transactions, is contained in the Company's Management Proxy Circular dated July 24, 2003 prepared in connection with its Annual and Special Meeting of Shareholders to be held on September 18, 2003. Additional financial information is provided in the Company's comparative financial statements for the year ended April 30, 2003. A copy of the Management Proxy Circular and the Company's Annual Report, which contains the Company's comparative financial statements for the year ended April 30, 2003, may be obtained upon request from Investor Relations, at the Company's head office.