
NHC COMMUNICATIONS INC.

**REVISED INITIAL
ANNUAL INFORMATION FORM
FISCAL 1999**

MAY 23, 2000

TABLE OF CONTENTS

THE COMPANY	1
BUSINESS OF THE COMPANY	1
HISTORY	1
THE INDUSTRY	5
<u>The Telecommunications Market</u>	5
<u>The Corporate Market</u>	7
<i>Physical Layer Remote Management Systems - VCCS™ Business Unit</i>	7
<i>Connectivity Products- Connectivity Business Unit</i>	8
THE COMPANY'S PRODUCT LINES	8
<i>Physical Layer Remote Management Systems - VCCS™ Business Unit</i>	8
<i>Connectivity and LAN Products- Connectivity Business Unit</i>	10
COMPANY STRATEGY	11
RESEARCH AND DEVELOPMENT	12
EMPLOYEES	13
COMPETITION	13
FACILITIES AND OPERATIONS	14
DISTRIBUTION, SALES AND MARKETING	15
<i>Sales and Marketing</i>	15
<i>Distributors</i>	15
<i>OEMs</i>	15
<i>Systems Integrators</i>	16
CUSTOMERS	16
INTELLECTUAL PROPERTY	16
SELECTED CONSOLIDATED FINANCIAL INFORMATION	17
MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS	18
DIRECTORS AND OFFICERS	19
STOCK OPTION PLAN AND OPTIONS	20
MARKET FOR SECURITIES	21
DIVIDEND POLICY AND RECORD	21
RISK FACTORS	22

CURRENCY FLUCTUATION	22
KEY PERSONNEL.....	22
EMPLOYMENT AGREEMENTS	22
POSSIBILITY OF FAILURE OF DSL	23
POSSIBILITY OF FAILURE OF VCCS™ SOLUTIONS.....	23
DEPENDENCE ON A SMALL NUMBER OF CUSTOMERS	23
VULNERABILITY OF CLECS.....	24
SALES CYCLE OF VCCS™ PRODUCTS.....	24
COMPETITION	25
<i>VCCS™ Business Unit</i>	25
<i>Connectivity Business Unit</i>	26
PRICES AND MARGINS MAY DECREASE.....	26
FAILURE TO IMPROVE EXISTING PRODUCTS AND/OR DEVELOP NEW PRODUCTS	26
MANAGEMENT OF NEW PRODUCT INTRODUCTIONS	26
FAILURE TO PREDICT MANUFACTURING REQUIREMENTS	27
LIMITED SOURCES OF SUPPLY	27
FULL DEPLOYMENT	27
ATTRACTING EMPLOYEES.....	28
RAPID TECHNOLOGICAL CHANGE.....	28
RAPID EXPANSION	28
NEW PRODUCT	28
LOSSES	29
DSL SUBSCRIBERS	29
REGULATIONS AND CERTIFICATIONS	29
INTELLECTUAL PROPERTY	30
LITIGATION.....	30
ADDITIONAL INFORMATION.....	30

THE COMPANY

NHC Communications Inc. (the “Company” or “NHC”) was established under the *Canada Business Corporations Act* (“CBCA”) by a Certificate of Amalgamation effective August 1, 1993 as a result of the amalgamation of National Hav-Info Communications Inc. (“Hav-Info”) and its wholly-owned subsidiary Mux Lab Inc. (“Mux Lab”). The Company’s name was changed to NHC Communications Inc. on January 25, 1995. Hav-Info had originally been incorporated on April 12, 1985 by registration of its Memorandum and Articles under the provisions of the *Company Act* (British Columbia) under the name “Hav-Info Computers Inc.” The name Hav-Info Computers Inc. was changed to “National Hav-Info Communications Inc.” on August 11, 1989. On July 29, 1993, Hav-Info was continued under the CBCA and was subsequently amalgamated on August 1, 1993 with Mux Lab, a company previously established under the CBCA by way of amalgamation on March 14, 1991 of four former direct and indirect wholly-owned subsidiaries of the Company: Mux Lab Inc., Scaneq Holdings Inc. (“Scaneq”), Alternate Connections S.A. Inc. (“Alternate Connections”) and Eqtel Equipments Telematiques Inc. (“Eqtel”). Alternate Connections and Eqtel were two wholly-owned subsidiaries of Scaneq.

Unless the context otherwise requires, all references herein to the “Company” include NHC Communications Inc., its predecessor companies, its subsidiary, NHC Europe S.A.R.L., a company incorporated under the laws of France and of which the Company owns 99.8% of the outstanding shares.

The registered and head office of the Company is located at 5450 Côte-de-Liesse Road, Mount Royal, Quebec, H4P 1A5. NHC Europe S.A.R.L. is located at 18, rue Kléber, 92400 Courbevoie, France.

BUSINESS OF THE COMPANY

NHC Communications Inc. designs and manufactures innovative remotely controlled physical layer cross-connect solutions for established and next-generation voice/data networks. The Company’s Virtual Cross Connect System™ (VCCS™) addresses the physical layer switching, test access, resource sharing and PBX line provisioning and maintenance needs of telecommunications service providers and corporate enterprises. The Company’s products are exported to thirty countries on six continents.

History

The Company’s initial business, started in 1987, consisted of the provision of an on-line service of stock market and other financial information to users across Canada, which was accessed via personal computer equipped with a modem.

In 1990, the Company completed two acquisitions: Scaneq, a holding company for three operating companies (Alternate Connections, Eqtel and Exchange Market Systems E.M.S. Inc. (sometimes referred to as “E.M.S.”)), and Mux Lab. In 1991, the Company made a strategic decision to focus its resources solely upon the computer connectivity business and sold its investment in E.M.S. and its on-line stock and quotation service business in January and June of 1991, respectively.

The Company was listed on the Vancouver Stock Exchange in 1986 and transferred to The Toronto Stock Exchange in December 1993. In September 1994, the Company completed the sale of the title of its WireMan® software to a co-ownership and was appointed the exclusive world-wide distributor of this software.

In April 1995, the Company opened its subsidiary in France, NHC Europe S.A.R.L. NHC Europe S.A.R.L. is a dedicated sales and distribution location through which the Company distributes products and provides support to European customers.

In December 1995, former controlling shareholders of the Company, together with former directors and officers of the Company, sold their common shares of the Company (being approximately 60% of the then outstanding common shares) at a price of \$1.20 per share.

On August 4, 1996, the Company acquired NHC Communications Limited (formerly, The Fiber Company Limited), a private U.K. company with expertise in fibre optic transmission technology. The consideration for this acquisition included an aggregate of \$943,418 in cash, an aggregate of 775,000 common shares of the Company and 526,000 options. On October 27, 1998, the Company sold its interest in NHC Communications Limited for aggregate consideration of \$6,500,000. Eighty percent of the purchase price, or \$5,200,000 was paid on closing of the sale and \$625,726 was paid during fiscal 2000 upon achievement of specified sales and order objectives. The payment of the balance of \$674,274 was subject to the achievement of specified sales and order objectives which were not met.

In 1997, the Company discontinued research and development, manufacturing and marketing activities related to the Wireman® software (the “Software”). This decision was made after considerable effort and financial resources had been expended to market this Software while achieving minimal results. As a result of this decision, the Company recorded a loss from discontinued operations of \$108,000 in fiscal 1999, reflecting the settlement costs of an action from the co-owners of the Software totalling \$300,000 in cash (payable over the following six months) and the issuance of 450,000 common shares of the Company (the “Common Shares”) valued at \$108,000. The settlement agreement is final and conclusive and forever releases NHC from all claims past, present and future related to the Software.

Since the sale of NHC Communications Limited in October 1998, the Company has focused entirely on its switching product line, which has been renamed the “VCCS™ (Virtual Cross-Connect System™) Business Unit”, as well as its Connectivity Business Unit. Management believes that the VCCS™ Business Unit constitutes a viable platform for growth, and expects products from this line of business to account for the majority of the Company’s revenues in the near future.

On December 17, 1999, the Company released its fiscal 1999 annual consolidated financial statements which included a going concern note to the effect that it may not have sufficient funds to continue its business operations and meet its liabilities as they become due. During the days following this announcement, the Company’s share price declined to a low of \$0.08 per Common Share on December 20, 1999. The going concern note and the low share price, in management’s view, affected the Company’s discussions with potential customers, who were reluctant to commit to the Company until they received comfort that the Company had the financial means to provide them with the products and services they required.

In order to address its adverse financial situation as well as the concerns of its existing and prospective customers, the Company signed a letter of intent with Breakwater Capital Corporation (“Breakwater”) on December 23, 1999 to effect a private placement to Breakwater of up to \$1,000,000 of units consisting of 8% secured convertible debentures (the “Debentures”) and 5,000,000 common share purchase warrants (the “Warrants”). The Debentures and the Warrants are exercisable at a price of \$0.20 per Common Share, a small premium to the closing price of the Common Shares of \$0.19 on The Toronto Stock Exchange on the day prior to signing the letter of intent. The units were to be issued in two tranches. On January 20, 2000, the first tranche, in the amount of \$325,000 of Debentures and 1,625,000

Warrants, closed. The second tranche was subject to shareholder approval, as required by the rules of The Toronto Stock Exchange, and was not approved at the annual and special meeting of the Company's shareholders held on January 31, 2000. On January 20, 2000, the closing price of the Common Shares on The Toronto Stock Exchange was \$5.75 due to numerous factors, including the completion of the Company's re-engineering process (see "Company Strategy"), the focusing of its business strategy on the Company's VCCS™ Business Unit for the growing digital subscriber line ("DSL") market and the entering into of a substantial contract with a large US competitive local exchange carrier (discussed in greater detail below). As a result of the outcome of the January 31 shareholder meeting, 812,500 of the Warrants issued pursuant to the first tranche of the private placement were cancelled in accordance with their terms. Of the \$325,000 of Debentures issued to Breakwater, \$60,000 were redeemed by the Company at par value on March 13, 2000 in connection with the private placement of special warrants described below. The Company has issued 812,500 Common Shares upon the exercise of all of the Warrants.

The announcement that Breakwater was prepared to invest \$1 million in NHC (and that, consequently, the Company had certain cash resources available to it) resulted in renewed confidence on the part of potential customers. On January 26, 2000, the Company announced that it had entered into an agreement with a U.S. competitive local exchange carrier, to provide the Company's VCCS™ solutions, initially worth up to \$20,000,000 over two years. The Company subsequently entered into a revised agreement with the same customer whereby the forecasted number of VCCS™ solutions' products (although for a minimum unit configuration) to be ordered under the contract was increased to a value of up to \$26,000,000.

On January 12, 2000, the Company announced that it had completed its corporate re-engineering program and planned to stake out a position as a leader in the growing DSL market. This re-engineering has affected every part of the Company's operations, including training staff and focusing research and development on the development of new solutions for the DSL market. The Company also announced on February 15, 2000 the successful completion of interoperability testing between the Company's VCCS™ solutions and Promatory Communications' intelligent multiservice access system. The integration of these two systems provides equipment-side "connectorization" and future cross-platform integration to facilitate the delivery of DSL services. The Company also announced on March 22, 2000, the entering into of a partnering agreement between the Company and Hekimian Technologies to ensure interoperability between Hekimian's CopperMax/RT remote test unit and NHC's VCCS™ solutions. This interoperability will provide competitive local exchange carriers ("CLECs") and incumbent local exchange carriers ("ILECs") with a solution to their switching, testing and monitoring needs. As with the Promatory Communications' System, the integration of the Hekimian and NHC systems provides equipment-side "connectorization" and future cross-platform integration to facilitate the delivery of DSL services.

On March 13, 2000, the Company entered into an underwriting agreement (the "Underwriting Agreement") with Breakwater and Yorkton Securities Inc. (the "Underwriter"). Pursuant to the Underwriting Agreement, the Company issued 2,040,000 special warrants of the Company (the "Special Warrants") for gross proceeds to the Company of \$9,765,000. The purchase price of each Special Warrant was \$10.50. Each Special Warrant entitles the holder thereof, upon exercise or deemed exercise, to acquire, without payment of any additional consideration to the Company, at any time prior to the expiry time (the "Expiry Time"), being 5:00 p.m. (Montreal time) on the earlier of (i) March 12, 2001, and (ii) the fifth business day after the day on which a receipt (the "Receipt") has been issued by the last of the securities regulatory authorities, in the provinces of Canada in which purchasers of Special Warrants reside, for the Prospectus (as defined herein), one Common Share. Of the 2,040,000 Special

Warrants issued by the Company, 930,000 will be exercisable for Common Shares issued by the Company from the treasury and the balance will be transferred by Breakwater pursuant to the terms of a deposit agreement among Breakwater, Montreal Trust Company (the "Warrant Agent"), the Underwriter and the Company. The Special Warrants were issued pursuant to a special warrant indenture dated and executed as of March 13, 2000 (the "Warrant Indenture") and entered into among the Company, Breakwater and the Warrant Agent.

In addition, on March 13, 2000, the Company issued compensation warrants (the "Treasury Compensation Warrants") to the Underwriter entitling the Underwriter to acquire before the Expiry Time, without additional consideration, underwriter's warrants (the "Treasury Underwriter's Warrants"). These Treasury Underwriter's Warrants will be exercisable at any time from the exercise or deemed exercise of the Treasury Compensation Warrants to March 13, 2002 to purchase 93,000 Common Shares from treasury (the "Treasury Compensation Shares") at a price of \$10.90 per Treasury Compensation Share.

In addition, on March 13, 2000, the Company issued compensation warrants (the "Secondary Compensation Warrants") to the Underwriter, entitling the Underwriter to acquire until the Expiry Time, without additional consideration, underwriter's warrants (the "Secondary Underwriter's Warrants"). The Secondary Underwriter's Warrants will be exercisable at any time from the exercise or deemed exercise of the Secondary Compensation Warrants to September 13, 2000 to purchase 104,000 Common Shares from Breakwater (the "Secondary Compensation Shares") at a price of \$10.50 per Secondary Compensation Share.

The Common Shares issuable upon exercise or deemed exercise of the Special Warrants shall consist of 930,000 Common Shares to be issued by the Company from treasury (the "Treasury Shares") and 1,110,000 Common Shares resulting from the conversion of \$222,000 of the Debentures issued to and deposited by Breakwater with the Warrant Agent. If a receipt (the "Receipt") for a (final) prospectus (the "Prospectus") qualifying the issuance of the Common Shares to be issued and/or transferred upon exercise of the Special Warrants (the "Underlying Shares") is not issued by the securities regulatory authorities in any of the provinces of Quebec, Ontario, Manitoba, Saskatchewan, Alberta or British Columbia (the "Offering Jurisdictions") on or before 5:00 p.m. (Montreal time) on June 11, 2000 (the "Qualification Deadline"), any Special Warrants exercised after the Qualification Deadline shall entitle the holders thereof resident in such Offering Jurisdiction (or in each Offering Jurisdiction if the Receipt is not issued by the securities regulatory authorities in the Provinces of Ontario and Quebec on or before the Qualification Deadline) to receive an additional one-tenth of a Common Share from the Company or Breakwater, as the case may be, without payment of any additional consideration, for each Special Warrant held.

At the closing of the Special Warrant offering, fifty percent (50%) of the gross proceeds of the offering were deposited in escrow. If a Receipt is not issued by the securities regulatory authority of any of the Offering Jurisdictions on or before the Qualification Deadline, a holder of Special Warrants resident in such Offering Jurisdiction (or if a Receipt has not been issued in Quebec and Ontario, all holders of Special Warrants) will have a right to cause the Company and Breakwater to repurchase up to 50% of such holder's Special Warrants. The holders may receive an additional one-tenth of one Common Share for each Special Warrant not so tendered for repurchase.

Following the Company's recent private placements and the exercise of certain options, as at April 20, 2000, the Company had 16,627,812 issued and outstanding Common Shares (including the Common Shares underlying the Special Warrants) and 18,975,143 Common Shares on a fully diluted basis (without taking into account any Common Shares issuable to Messrs. Abitbol or Benatar pursuant to

certain revisions to their compensation arrangements or the grant of 100,000 options, in aggregate, to the outside directors of the Company on April 28, 2000, both of which are subject to shareholder approval).

On March 30, 2000, the Company applied under the mutual reliance review system to the securities regulatory authorities of the provinces of Quebec, Ontario, Manitoba, Alberta and British Columbia for an order deeming it to be eligible under the Short Form Prospectus System.

On March 31, 2000, the Company announced that it had signed an agent agreement with Allcom Telecomunicazioni. This agreement makes Allcom Telecomunicazioni the exclusive representative for the sale of the Company's VCCS™ products in Italy. Furthermore, on April 3, 2000, the Company announced the release of its new VCCS™ Application Program Interface Software. This software enables any DSL vendor to integrate the Company's VCCS™ technology into its own platform, allowing users to remotely perform deployment functions at the physical layer.

The Industry

The Telecommunications Market

High-Speed Access

The number of users accessing the Internet and Internet content is expected to continue to grow. Websites will likely continue to offer streaming video and audio, animation and software downloads and as a result, content will become data-intensive. As a result, users will find that the ability to connect to the Internet at high speeds will become more important. In addition, in order to conduct transactions with customers and suppliers and to communicate with remote employees, as well as to access and provide information via the Internet, businesses are using high-speed connections. This growing demand requires an increasing number of local exchange carriers to offer high-speed Internet access and other services, often over existing telephone lines. The existing lines that comprise the local loop extend from telephone companies' offices to businesses and residences. In order to take advantage of the under-utilized capacity of this telephone network structure, local exchange carriers are delivering high-speed Internet connections to businesses and residences.

New DSL Services

Prior to the U.S. *Telecommunications Act of 1996*, ILECs held exclusive licenses to offer local telephone service. Deregulation under this legislation enabled CLECs to provide competing services, as well as allowing access to ILECs' facilities in order to use existing local loop network infrastructure.

Local exchange carriers are deploying DSL to offer high-speed services on existing copper lines. These copper lines may be less expensive to deploy than alternative access technologies because DSL networks reuse the existing copper lines. Furthermore, a large portion of the cost of a DSL network can be deferred until subscribers are added. DSL also offers the ability to leverage more of the underutilized capacity of the telephone line, offer multiple services on the same line and operate as a dedicated service, thus not requiring subscribers to dial-up each time the service is used.

The DSL market is still in an early stage of development and is changing rapidly. Difficulties in providing DSL service includes the challenge in identifying, installing and determining the quality of a particular line, and the expense of deploying and maintaining DSL service using labour-intensive procedures. The Company's success depends on the wide acceptance of DSL technology by CLECs and ILECs (of which there are a limited number) and by the users of their services.

Alternative methods of providing high-speed Internet access exist including: cable modems, wireless technology and satellite technologies. Cable modems can, theoretically, provide faster download speeds than DSL. Cable modem access is provided over a line with a single user and this service targets the residential market. However, due to the cable modems' method of data transmission and cable layout patterns, all cable modem users in a neighbourhood share the same bandwidth and, therefore, download speed is slow as the number of users in that neighbourhood increases. Wireless and satellite technologies use radio frequency at speeds close to or comparable to DSL transmission speeds. These technologies do not enable ILECs to use their existing physical infrastructure for analog voice services. Furthermore, wireless and satellite technologies, as well as DSL technology, have yet to achieve widespread acceptance.

In recent years, local exchange carriers have begun to target either the consumer or business markets using DSL technology. With cable operators delivering high-speed consumer services, ILECs responded by accelerating their investments in DSL technologies. For the most part, ILECs have focused DSL deployment on consumers by using versions of DSL that work with existing analog voice services and the associated line maintenance procedures. These types of versions of DSL are limited in their abilities and are therefore not appropriate for businesses. The Company believes that ILECs will convert existing local loop equipment from analog to digital in order to deliver more competitive services.

Recent years have also seen the emergence of CLECs to provide competing services to the ILECs. As many of these new CLECs do not have a significant installed base of traditional analog voice equipment, many are deploying modern DSL equipment and implementing new telephone line maintenance procedures in the incumbent carriers' facilities (known as central offices). CLECs can therefore use the local loop to offer high-speed services to business customers.

Installation and Maintenance

ILECs lease space in their central office to CLECs, who use such access to the local loop to deploy DSL by installing network equipment and leasing specific copper telephone lines. In order to achieve this, the ILECs must connect copper lines to the specifications of the CLECs. This process involves many hours of labour. In order to connect a line from the competitive local exchange carrier to the subscriber's site the ILECs' personnel must complete these connections manually.

DSL Deployment Challenges

As mentioned above, DSL installation requires connections to the copper line in a process that is labour intensive. Human error often occurs in installing the copper line and the testing method is not always reliable. Therefore, connections are often performed incorrectly and correcting these mistakes by dispatching personnel can be costly both in time and cost.

As DSL uses higher frequencies than analog voice service, DSL requires a higher quality of copper line and may be affected by electrical interference. Therefore, devices that are connected to the copper line can cause problems for DSL, as well as faults occurring on the line. In order to qualify the line and detect electrical interference, a greater range of frequencies must be monitored by local exchange carriers. As a result, expensive equipment and a high amount of labour has been required to install, qualify, maintain and trouble shoot lines for DSL.

As DSL runs on the local loop, DSL networks require local exchange carriers to deploy DSL equipment in a large number of central offices so that they may provide service in a geographic area. A DSL multiplexer (a "DSLAM"), a necessary piece of equipment, receives signals from multiple DSL

connections and puts the signals on a larger, high-speed transmission line. If a DSLAM fails, the local exchange carrier would need to replace the defective equipment or reconnect the subscriber lines around the failure manually. Therefore, local exchange carriers are automating and remotely managing activities related to DSL deployment and maintenance.

Most equipment vendors have targeted the needs of ILECs and their local analog voice services and have not developed products aimed at the needs of CLECs and new digital services. As traditional systems are often based on proprietary software, they can be difficult to integrate with DSL equipment. New infrastructure equipment with standard interfaces providing for the automation and remote management of line installation, qualification, maintenance and service migration (that would otherwise be manually implemented) is required for the wide deployment of competitive DSL services.

The Corporate Market

Physical Layer Remote Management Systems - VCCS™ Business Unit

Physical layer remote management systems are used for cabling control and may be used for videoconferencing to automate connecting and disconnecting parties, sharing of expensive resources such as for LAN testing and/or remote physical management. In these applications, products must have the ability to handle a variety of protocols and be based upon an open architecture to allow products to be controlled by third-party solutions.

In addition, the pace of change in technology has resulted in the use of a wide variety of applications by corporate enterprises to combine voice, data and video on networks while these enterprises communicate across campuses, cities and continents. The emergence of these new services places different demands on the network for both applications and service. Network managers must be able to quickly provision lines and services while minimizing network downtime and service costs.

The nature of this application is changing as the boundaries between WAN (Wide Area Network) and LAN (Local Area Network) become unclear by the expansion in inter-networking. As enterprises become increasingly reliant on their networks for mission-critical applications, network managers must be able to maintain a comprehensive network to avert problematic issues and ensure complete network visibility and profitability. Based on industry studies, management is of the view that the global network support services market may increase by 16% annually and may exceed \$150 billion by the year 2001.

The sector the Company has identified is related to automating the manual operations required to connect test equipment to troubled areas to identify a problem. Downtime is measured as the time required to physically locate and connect equipment.

In management's view, hard downtime results in considerable productivity and revenue losses. In addition, management believes that the top two causes of hard downtime are hardware failure and physical layer problems and that over half of all network outages can be traced to a problem at the physical layer, which in many cases is currently being managed manually. In management's view, these costs could be significantly reduced by automating and managing the physical network. This covers many applications ranging from sharing expensive equipment to fall-back switching.

Connectivity Products- Connectivity Business Unit

With the introduction of the personal computer, the adaptation of premises wiring technology, commonly used in telephone systems, to the computer connectivity industry accelerated the use of premises wiring as a more user-friendly and cost-effective alternative to coaxial cabling.

The increased proliferation of personal computers has created a need for communication not only among personal computers but also among the different types of mainframes currently in the marketplace. This has resulted in the development of LANs and WANs —Local Area Networks and Wide Area Networks. LANs were developed to connect personal computers in order to share peripheral devices such as printers in a limited work area, while WANs were developed to connect LANs to remote networks and mini- and mainframe computers.

In order for a network to function properly, all connected devices must obey standard LAN topologies, or protocols, that govern access to the network and communication with other devices on the network. Specifications are available to all developers who wish to design products conforming to an individual protocol.

Networking connectivity is a mature market, which is highly competitive and characterized by rapid technological changes. Products and components are differentiated by their speed, area of operation, and the protocols with which they work.

Video connectivity products serve many industries, including security and surveillance and videoconferencing. The Company's video connectivity products provide cost-effective solutions for campus video and video-to-desktop applications.

The Company's Product Lines

The Company's operations are focused on two (2) business units: physical layer remote management systems (VCCS™ Business Unit), comprised of high-performance switching products which operate at the physical layer or cable plant layer; and products which address the needs of IBM connectivity users (Connectivity Business Unit), being the Company's connectivity and LAN products under the Mux Lab™ brand of connectivity solutions. The Company no longer focuses on fibre optics products following the sale of NHC Communications Limited.

Physical Layer Remote Management Systems - VCCS™ Business Unit

The Company has grouped its physical layer remote management solutions into the VCCS™ (Virtual Cross-Connect System™) Business Unit. NHC's VCCS™ solution is designed to meet the voice and data switching needs (PBX line provisioning and maintenance, test access and resource sharing) of the telecommunication service providers and the corporate enterprise market segments.

NHC's VCCS™ solution consists of a remotely controlled physical layer cross-connect matrix which has been designed to perform local and remote loop qualification and testing, service provisioning and migration as well as equipment failure fallback.

NHC's carrier product VCCS™ solutions support up to 3,200 paired circuits which connect loop-side pairs to corresponding equipment side pairs at the physical layer. It also allows pairs to be grouped for special line applications and has a built-in test port, which makes it ideal for quick and easy connection of diagnostic test equipment to any of the lines. Testing can be done remotely, without the

need for dispatching a technician on site. The VCCS™ solution is installed at the customer's premises (or collocation premises) and in its largest configuration is housed in a 19 or 23 inch rack-mount chassis well suited for telecommunication applications where space is at a premium.

The software component of the NHC's VCCS™ solutions also integrates state-of-the-art technological design principles and provides support for both pre-configured and user-defined scenarios that enhance productivity and improve customer service by allowing complex changes to be accumulated and initiated after normal business hours. The software allows for the unattended local or remote operation of three-switches controlled by one controller, while an unlimited number of controllers can be managed by a master VCCS™ operating system software residing on a PC platform.

The VCCS™ technology provides a complete turnkey system approach and supports a variety of interfaces. The VCCS™ technology enables enterprises to more efficiently manage their network's cabling infrastructure while allowing instantaneous "moves, adds and changes", loop qualification and testing as well as xDSL service deployment. For telecommunication managers as well as for network managers in other settings, the VCCS™ technology minimizes overall system maintenance costs by reducing service requests and minimizing network service downtime.

Physical layer remote management systems for enterprise solutions constituted approximately \$3,610,000 or 31% of the Company's sales for the fiscal year ended July 30, 1999, compared with approximately \$3,450,000 or 28% for the fiscal year ended July 31, 1998, and approximately \$2,920,000 or 22% for the fiscal year ended August 1, 1997. These sales arise from a line of smaller cross connect solutions which are aimed at the corporate enterprise market. These solutions are called "enterprise solutions" and are used to share expensive test equipment in different environments.

Stakit™, Switchex™ and ShareIt™, the Company's proprietary physical layer remote management enterprise solutions, offer low-cost solutions suitable to the medium to low end of the physical layer remote management products market. Management believes the Company's products offer an attractive solution in this area to companies with outlying or remote branches, such as insurance companies, banks and retail chains. Based on industry reports, management estimates that this market may grow at a compounded rate of approximately 28% per annum for the next two years.

Currently, remote branches are generally handled by local systems integrators or contractors with a more expensive solution than the Company offers and a slow response time, which can result in costly downtime. Management believes that Stakit™, Switchex™ and ShareIt™ offer the benefits of resource sharing, instantaneous remote fault bypass and broad compatibility of protocols.

The Stakit™ family of products allows for more outputs than inputs and is used to share costly equipment such as network general monitoring and diagnostic equipment. New products in the family include Stakit™/SF, Stakit™/WAN, Stakit™/SF (4 x 16) and Stakit™ 16P TAP.

NHC's Switchex™ electronic patch panel allows users to manage the connections of a computer network with a large number of terminals through a single personal computer. Switchex™ is comprised of a hardware switching module, connection ports and database software, and replaces traditional patch panels by allowing cross connections between host computer ports and wall station outlets to be controlled electronically instead of manually. Switchex™ is protocol-independent and works with most computer environments and/or protocols. In addition to Switchex™, the Company has launched Switchex™ ISP, for use by Internet Service Providers (ISPs).

Switchex™ allows end users to view or change any link in the computer network. Changes include rewiring sites and adding, subtracting, or moving terminal ports. New connections are automatically added to the network and simultaneously recorded in the database. Operators can allocate from one to four pairs to any given port or outlet to create multiple connections. Changes can be effected on-site or remotely via modem. The software keeps track of every change, move, addition, and pair number in the network, creating a detailed database on active workstations, host ports, user status, locations, equipment types, and cable specifications for each link.

Management believes that Switchex™ significantly reduces the costs associated with the downtime normally required to make moves, adds and changes on computer networks. Management further believes that Switchex's™ open architecture and low cost provide advantages over alternative solutions.

The Company's ShareIt™ product works in conjunction with Switchex™ and is a LAN/WAN matrix switch which automates and manages moves, adds and changes on segments of LANs and WANs. Because ShareIt™ is designed and intended for use only in specific LAN and WAN environments, it possesses features which are designed specifically for that market. The Company has sold Switchex™ and ShareIt™ products for Internet points of presence applications and for high-performance LAN analysis and test equipment applications. The Company began manufacturing VCCS™ carrier equipment in September, 1999 and announced on January 26, 2000 that it had been awarded a contract by a competitive local exchange carrier in the United States for VCCS™ solutions, with an estimated value of up to \$26 million if the contract is fully realized.

A robotic matrix represents a key component to the Company's VCCS™ solutions and is currently sourced from Oki Electric Industry Co., Ltd. This is the Company's sole supplier of the robotic matrix and alternative sources are not currently qualified and may not be available. See "Risk Factors – Limited Sources of Supply".

Connectivity and LAN Products- Connectivity Business Unit

Connectivity products constituted approximately \$8,140,000 or 69% of the Company's sales for the fiscal year ended July 30, 1999, compared with approximately \$9,080,000 or 72% and \$10,530,000 or 78% for fiscal years 1998 and 1997, respectively.

The Company's line of connectivity products includes baluns, repeaters, signal extenders, multiplexers, emulation cards and hubs. The Company faces competition in the connectivity products market from a variety of sources ranging from large multinational companies, such as LAN Optics Inc., IBM and AMP Incorporated who compete mainly on product range and quality, to small offshore manufacturers who compete mainly on price. Management attributes the Company's strength in this market to its product design and quality, its quality of service and responsiveness, and its established distribution network. The Company's Mux Lab™ product line played a significant role in the development of IBM AS400 connectivity standards, which has contributed to the Company's reputation in this market.

Baluns provide reliable transmission of data communications signals via economical unshielded twisted pair wiring. Baluns convert unbalanced signals, commonly found in traditional coaxial cabling, to balanced signals necessitated by twisted pair wiring.

Repeaters and signal extenders augment the strength of data communications signals, enabling them to be transported over greater distances via unshielded twisted pair wiring. The Company's product line includes repeaters and signal extenders for the IBM 3270, 3X, AS400 and Token Ring markets.

Multiplexers permit the combination of several signals to be transmitted on one line and their separation at their destination. The Company produces a terminal multiplexer for the IBM 3270 and the IBM AS400 family.

Emulation cards enable personal computers and workstations to run applications software and retrieve information within specified computer environments by emulating a workstation within that designated computer environment.

Hubs provide a cross connection point between computer controllers and individual workstations. Hubs house (and sometimes manage) connections from a single computer environment. The Company's Twinstar™ III product is a star wiring hub for the IBM AS400 environment.

The VideoEase™ line of videobaluns enables companies to use existing twisted pair wiring instead of coaxial to manage video connections and transmit baseband and broadband video and audio signals. In fiscal 1999, the Company continued to add video connectivity products to its product line, targeting the video connectivity and security and surveillance markets.

The Company's connectivity products service markets which are more mature than those of the Company's other product lines. Consequently, these products tend to be highly developed and require relatively low levels of research and development activities. The Company is constantly upgrading and modifying its connectivity products based on customer demand.

Except for the video connectivity market, management anticipates continued competition and price erosion in the connectivity and LAN products markets. Thus, while the Company continues to introduce products compatible with and building upon its established line of connectivity and LAN products, management has de-emphasized development of new connectivity and LAN products and has instead decided to increase the focus of its resources on the development of its VCCS™ Business Unit. Management anticipates that sales of the Company's connectivity and LAN products as a percentage of the Company's total sales will decrease and that its sales in physical layer remote management products as a percentage of the Company's total sales will increase.

Company Strategy

Entering fiscal 2000, the Company adopted a new corporate strategy, Corporate Mission 2000, which includes its product market development program and a focused strategy to penetrate new select markets and exploit niche applications in the emerging corporate enterprise and telecommunications markets. Corporate Mission 2000 includes the reorganization of the Company into two distinct business units: The VCCS™ Business Unit and the Connectivity Business Unit.

The first part of the Company's mission involves delivering existing technologically rich and economical physical layer remote management switching network solutions to the corporate enterprise service market. The Company plans to leverage the expertise and market strength gained in this market to penetrate the telecommunications and Internet markets.

The Company plans to focus on the VCCS™ Business Unit, including its VCCS™ solutions and the Switchex™ ISP, which were launched in fiscal 1999, to achieve its strategic objectives. Both were

developed with participation and feedback from key industry players. The Company's VCCS™ solutions, which are software-controlled voice and data switching systems that will allow telephone companies and other users to automate the process of voice and data circuit line provisioning, are based on a tested technology which is already being used in the United States and Japan. NHC completed the deployment of a VCCS™ solution-based system with a large U.S. electric utility company in fiscal 1999. Switchex™ ISP is an adaptation of the Company's recognized Switchex™ line which is tailored to the needs of ISPs and marketed directly to the leading ISPs in North America and Europe.

The Company's objective is to be a leading provider of solutions to enable telecommunication service providers to automate and remotely control the installation, qualification and maintenance of copper telephone lines for DSL service.

The Company's initial target customers for its VCCS™ products are CLECs specifically focused on offering DSL services to business users. Management expects this market to grow as new CLECs emerge and as established CLECs supplement their existing services with DSL services.

In management's view, CLECs and ILECs in many countries will gradually convert their installed base of analog voice equipment to more efficient DSL equipment due to superior economics, demand for new services and continued deregulation. The Company expects to expand its sales, marketing and support capabilities to meet the growing demand for high-speed access solutions, and will increase brand recognition both domestically and internationally.

By continuing to add features and functionality to its products, the Company expects to increase the utility and applicability of its product offerings and offer better value to its customers. The Company's knowledge of its clients' needs enables it to design additional features and capabilities into the VCCS™ line of products.

Strong relationships with original equipment manufacturers will enhance the Company's market position and make it a more attractive vendor to a broader base of customers. Accordingly, the Company is continuously developing relationships with original equipment manufacturers to expand its distribution and customer support capacity globally and satisfy the equipment financing requirements of certain customers.

The Company intends to make its products an attractive complement to all DSLAM and test equipment vendors and to encourage joint sales and marketing activities with vendors. The Company outsources part of the manufacturing of its products at all levels and uses automated design, manufacturing and test processes to minimize cycle times, reduce manufacturing costs and improve product quality.

Research and Development

For the fiscal year ended July 30, 1999, the Company incurred gross research and development expenditures of \$1.92 million representing approximately 16% of sales, as compared with \$1.79 million or 14.0% of sales for the fiscal year ended July 31, 1998. Management continues to consider research and development an important part of the Company's operations.

Through fiscal 1999, the Company pursued its research and development efforts on products designed to meet the needs of the corporate enterprise market and selected growth industries, including telecommunications and the Internet. The Company focused on key competencies and products, mainly in physical layer remote management, including development of VCCS™ solutions for the telecom and

Internet markets and the Stakit™ family of products. Current switching product development includes Stakit™/Fiber (Fast Ethernet and FDDI), Stakit™/Tap (Fast Ethernet), and Switchex™ISP (SNMP). Management anticipates that research and development efforts in fiscal 2000 will focus on physical layer remote management products in the VCCS™ Business Unit.

The Company expects to invest development resources in various areas, including service qualifications, network management, operational support system interfaces and manufacturing cost reductions.

Since fiscal 1995, the Company has produced several new products for the European and North American markets in the IBM connectivity sector, including the TwinStar™ III shielded true-repeater-based active star hub, the TwinMux shielded multiplexer and the shielded Miniplex balun in Europe, and the TwinStar™ III and TwinMux modules for the European and North American markets.

Employees

The Company considers its relationship with its employees to be excellent. The Company employs 56 people in the areas of engineering, sales, marketing, customer service, production, administration and quality control. Of these employees, the Company employs 11 full-time senior engineers involved in research and development activities, consisting mainly of the design and development of new products and the enhancement, modification, and customization of existing product lines. Teams of hardware and firmware engineers are responsible for current products as well as those presently under development, while a separate group is focused on emerging technologies. NHC Europe S.A.R.L. employs four people in the areas of sales, marketing and customer service. In addition, the Company has sales agents in Boston, Chicago and Philadelphia, and as of March 2000, Ottawa, Ontario.

The Company's engineers are supported by a team of technicians and computer aided design operators as well as a dedicated department for archiving all technical aspects of the products. Prior to being placed into production, new products and revisions of existing products undergo vigorous in-house, alpha tests followed by on-site, beta tests. Throughout the product development process, the manufacturing, engineering, and purchasing departments work closely together to ensure consistent production quality at an economical cost.

The Company's employees are not covered by a collective bargaining agreement or union contract and the Company has never experienced a strike or work stoppage.

A portion of the proceeds from the Company's recent private placement financing will be allocated to increasing its sales force and attracting additional employees for its marketing, research and development and support services.

See "Risk Factors – Attracting Employees and Employment Agreements".

Competition

The Company has different competitors in its different lines of business. In the growth markets targeted by the VCCS™ Business Unit, the Company competes against emerging and established companies. Moreover, the convergence of information technology and telecommunications, which widens the addressable market for the Company's products, also brings into play equipment manufacturers that have historically focused on the telecommunications market.

The market for the Company's products is highly competitive and characterized by rapid technological changes. Physical layer remote management products are differentiated by functionalities and the protocols with which they work, while connectivity products and components are differentiated by their speed, area of operation and protocols. Typically, one company develops a breakthrough technology or an improvement to an existing technology which then gains acceptance within the computer community as a standard. As standards become established, more companies are able to compete on the basis of price. The Company competes on the basis of product quality and price.

Companies that have traditionally focused on analog voice network products have joined with DSL equipment providers as the Company's competitors. These competitors may have significant market presence and financial resources. If the Company's products expand to incorporate the functionality traditionally contained in other equipment, other vendors will also become competitors. Competitive factors include: the speed of new product introductions, the depth of product functionality, ease of installation, integration and use, system reliability and performance, technical support and customer service, compliance with government and industry standards, size and price.

The rapid technological developments relating to high-speed telecommunications markets bring the risk that competitors may foresee the course of market developments more accurately than the Company. As a result, the Company's products may become obsolete. Furthermore, competing high-speed technologies, including cable modems, satellite technology and wireless technologies may prove to be superior to DSL-based services and may reduce or eliminate the demand for the Company's products. As the properties of copper lines are subject to speed and distance limitations, wireless and cable technologies may become more accepted, and therefore more successful.

In its Connectivity Business Unit, the Company competes with a wide variety of producers, ranging from large multi-national companies, who compete mainly on product range and quality, to smaller offshore manufacturers, who compete mainly on price.

See "Risk Factors – Competition".

Facilities and Operations

In Canada, the Company currently leases its head office premises in Montreal encompassing 36,000 square feet for its head office and manufacturing activities and also leases approximately 2,340 square feet of space at its Paris office. The Company's head office lease terminates in November, 2003 and provides for annual basic rent of \$167,855 (with increases over time tied to the Consumer Price Index). The Company does not own any real estate.

The Company manufactures part of the products which it distributes. Its manufacturing equipment is modern and includes high-capacity wave-soldering and ultrasonic welding and coil winding equipment for custom transformers. Products are tested during all stages of the production process by the Company's quality control department. The quality assurance program includes computerized circuit board analysis, anti-static control, a twenty-four hour burn-in chamber and live environment testing.

The Company uses a sophisticated management resource processes (MRPII) software, which enhances customer service by improving the management of inventory and manufacturing capacity. The Company's Montreal facilities have been in compliance with ISO 9001 standards since July 1997.

Distribution, Sales and Marketing

The Company sold some products directly to end users in fiscal 1999. However, most of its sales are made through a distribution network comprised of three major channels: distributors, original equipment manufacturers (OEMs) and systems integrators.

Sales and Marketing

The Company's VCCS™ Business Unit distribution network is supported through the Company's direct sales force servicing the United States, Canada, Europe, the Pacific Rim, and Latin America. The Company maintains three independent sales agent locations in the United States (Boston, Chicago, and Philadelphia) and one in Europe through NHC Europe S.A.R.L. All other geographic territories are serviced through the Montreal facilities. The Company also employs additional direct sales people servicing North America, South America and Asia and employs customer service and sales support people. Field service of a more technical nature is provided through the Company's Engineering and Technical Support Departments. To date, the Company's direct sales efforts of its VCCS™ Business Unit have been primarily focused on CLECs and other telecommunications service providers deploying DSL.

The marketing staff provides additional sales support through initiatives such as: an international advertising campaign, product presentations, public/media relations, participation in major industry trade shows in the United States and around the world, and distributor co-op programs. The Company's marketing staff also performs activities such as marketing communications, marketing research, product documentation and pricing.

Distributors

The Company's Connectivity Business Unit distributors stock, catalogue, deliver, and service equipment marketed under the Company's brand names. These distributors frequently resell products to dealers, systems integrators, and smaller value added resellers ("VARs") who provide advice on network design and configuration, offer recommendations on the selection of product, and frequently resell products to end users. The Company's distributors range in size from very large national distribution companies with over 30,000 VARs and dealers throughout the United States to regional distributors or smaller interconnect companies specializing in specific computer environments.

OEMs

OEMs of the Connectivity Business Unit purchase products which are developed, designed, and manufactured by the Company using casings and logos identifying the OEM's brand name. These OEM products are then distributed using the OEM's own distribution channels. An OEM must have technical support to test the product, to develop styling and/or packaging to be consistent with its line, and to verify the quality of the product.

In developing products for resale by OEMs, the Company often works with products and technologies which have been developed or are under development for its own use. Frequently, in response to a request from an OEM, the Company will design a product from the ground up for such OEM's exclusive or non-exclusive use or add exclusive or non-exclusive features to existing products.

Systems Integrators

Systems integrators (“SIs”) are becoming increasingly important to the Company as a channel of distribution for its more sophisticated products, including the Stakit™ family of products. SIs are focused on end-user sales, usually in a specific market segment or geographic area, and comprise a single tier distribution channel - only one link between the manufacturer and the customer. Their business is predominantly project-oriented and they use the Company’s products as value-added integrated components as part of a larger solution. SIs contribute to training and technical competency in the Company’s products but typically do not carry inventories of finished goods.

Customers

The VCCS™ Business Unit’s largest customer is a CLEC in the United States. Customers from the corporate market segment of this business unit include a variety of large U.S. companies which utilize switching products for resource-sharing, Internet applications and video-conferencing. (See “Risk Factors – Dependence on a Small Number of Customers and Vulnerability of CLECs”.)

For the Connectivity Business Unit, the largest customers of the Company are its OEMs, and the largest of these include Black Box.

On a geographic basis, sales for the North American and European segments accounted for approximately 72% and 28% of the Company’s sales, respectively, in fiscal 1999 and 59% of the Company’s sales were to the U.S. market.

Intellectual Property

The Company distributes its software with explicit warnings and instructions regarding its use and the illegality of unauthorized duplication. Although the Company has not registered any of its copyrights, it does include copyright warnings with all of its software products. The Company has applied for, and has registered, certain trademarks to protect some of the names of its most popular products. The Company holds registered Canadian trademarks for NHC Communications™, Mux Lab™, E.Planet™, Twinstar™, ShareIt™, and Switchex™ and has applied for a Canadian trademark for R-BOSS. The Company holds a U.S. trademark for Mux Lab®, Switchex®, Twinstar®, ShareIt®, WireMan® and E.Planet® and has received U.S. trademarks for NHC Communications®. The Company currently does not have any patents with respect to its products.

NHC’s VCCS™ solution includes a robotic cross connect element which is manufactured and owned by a large manufacturer. The electronics, controls and management firmware and software of these solutions are the property of the Company. The manufacturer of this product and the Company have entered into mutual distribution and supply agreements with respect to the robotic cross connect component, the firmware and the software elements.

Management believes that the quality and competence of its personnel coupled with the effectiveness of its research, development, and marketing strategies and programs are an effective means of maintaining its competitive position and that these means may be more effective than the various legal options which may be available to try to protect its products and technologies. (See “Risk Factors – Intellectual Property”.)

SELECTED CONSOLIDATED FINANCIAL INFORMATION

The following selected consolidated financial information is derived from the Company's consolidated financial statements. For full particulars, see the Company's consolidated financial statements and notes thereto included in the annual report of the Company. The consolidated financial statements for the fiscal year ended July 31, 1998 included the sale of the Company's interest in NHC Communications Limited, which sale was effective on July 31, 1998. Total revenue for fiscal 1997 and fiscal 1998 has been restated to reflect only continuing operations.

Five Year Summary

Year Ended	July 30, 1999	July 31, 1998	August 1, 1997	August 2, 1996	July 31, 1995
	<i>(in thousands of dollars, except per share data)</i>				
Total Revenue	\$11,746	\$12,529	\$13,446	\$13,546	\$12,202
Loss from continuing operations	(2,627)	(826)	(2,198)	(2,716)	(1,612)
Net income (loss)	(2,180)	979	(15,080)	(1,893)	11,834
Total assets	8,639	12,791	12,866	61,882	49,284
Long-term debt	—	69	285	443	241
Dividends	—	—	—	—	—
Income (loss) from continuing operations per share (primary)	(0.21)	(0.07)	(0.18)	(0.30)	— ⁽¹⁾
Income (loss) from continuing operations per share (fully diluted)	— ⁽¹⁾	— ⁽¹⁾	— ⁽¹⁾	— ⁽¹⁾	— ⁽¹⁾
Net income (loss) per share (primary)	(0.17)	0.08	(1.21)	(0.21)	1.38
Net income (loss) per share (fully diluted)	— ⁽¹⁾	0.07	— ⁽¹⁾	— ⁽¹⁾	1.19

Quarterly Summary

Quarter Ended	July 30, 1999	April 30, 1999	January 29, 1998	October 30, 1998
	<i>(in thousands of dollars, except per share data)</i>			
Total revenue	\$2,824	\$2,810	\$3,323	\$2,789
Income (loss) from continuing operations	(1,623)	(582)	(195)	(227)
Net income (loss)	(1,739)	(443)	23	(21)
Income (loss) from continuing operations per share (primary)	(0.13)	(0.05)	(0.01)	(0.02)

Income (loss) from continuing operations per share (fully diluted)	— ⁽¹⁾	— ⁽¹⁾	— ⁽¹⁾	— ⁽¹⁾
Net income (loss) per share (primary)	(0.13)	(0.04)	0.00	0.00
Net income (loss) per share (fully diluted)	— ⁽¹⁾	— ⁽¹⁾	— ⁽¹⁾	— ⁽¹⁾

Quarter Ended	July 31, 1998	May 1, 1998	January 30, 1998	October 31, 1997
<i>(in thousands of dollars, except per share data)</i>				
Total revenue	\$2,912	\$3,260	\$3,800	\$2,557
Income (loss) from continuing operations	(653)	(176)	224	(221)
Net income (loss)	1,861	(406)	(71)	(405)
Income (loss) from continuing operations per share (primary)	(0.05)	(0.01)	0.01	(0.02)
Income (loss) from continuing operations per share (fully diluted)	— ⁽¹⁾	— ⁽¹⁾	0.01	— ⁽¹⁾
Net income (loss) per share (primary)	0.15	(0.03)	(0.01)	(0.03)
Net income (loss) per share (fully diluted)	0.12	— ⁽¹⁾	— ⁽¹⁾	— ⁽¹⁾

Note:

⁽¹⁾ The calculation of the net loss per share would be anti-dilutive and is therefore not provided.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS

The entirety of Management's discussion and analysis of results of operations for the fiscal year ended July 30, 1999 is incorporated herein by reference. As outlined above, under the heading "Business of the Company", a note to the fiscal 1999 annual consolidated financial statements stated that the Company may not be able to continue as a going concern. On January 12, 2000, the Company announced that it had completed its Corporate Mission 2000 Strategy enabling it to penetrate new select markets and exploit niche applications in the emerging corporate enterprise and telecommunications markets. On January 20, 2000, the Company completed the first tranche of a private placement with Breakwater. This contributed to the Company's ability to enter into new contracts, such as the agreements with a large U.S. competitive local exchange carrier. The second tranche of this private placement was not approved by the Company's shareholders at the annual and special meeting held January 31, 2000. The Company completed a private placement of special warrants for gross proceeds to the Company of \$9,765,000 on March 13, 2000 (one-half of which is subject to escrow). Management believes that the private placements and the agreement with the U.S. competitive local exchange carrier have placed the Company

in a better, more secure financial position than at the date of the management's discussion and analysis that accompanied its fiscal 1999 annual consolidated financial statements.

DIRECTORS AND OFFICERS

The following table sets forth the name, municipality of residence, position held with the Company and principal occupation of each of the directors and senior officers of the Company. As well, the table indicates the year in which the particular individual became a director of the Company. The directors of the Company serve until their successors are elected or appointed. The board of directors is comprised of six directors. During the last five years, the persons listed below have been engaged in their current principal occupations or in other executive or managerial capacities with the companies indicated opposite their names, except as otherwise indicated.

Name and Municipality of Residence	Position	Principal Occupation	Year became a director	Shares Beneficially Owned or over which Control and Direction is Exercised
Sylvain Abitbol ⁺⁽¹⁾ Ville Mont Royal, Quebec	Chairman, President, Chief Executive Officer and Director	President and Chief Executive Officer of the Company	1990	497,776 ⁽²⁾
Ralph Benatar ^{*(3)} Town of Hampstead, Quebec	Chief Financial Officer, Chief Operating Officer, Secretary and Director	Chief Financial Officer and Chief Operating Officer of the Company	1990	330,043 ⁽²⁾
Gilles Cloutier ^{+*(4)} Montreal, Quebec	Director	President and Chief Executive Officer, European Financial Corporation	1995	20,000
Pierre Deschamps ⁺⁽⁵⁾ St. Sauveur, Quebec	Director	Director of various companies (Minacom International, SPG Hydro International)	1998	28,000
Claude C. Frenette ^{*(6)} Montreal, Quebec	Director	President, Montaigne International Holdings Inc. (an investment firm)	1998	40,000
Peter Snucins ^{*(7)} Toronto, Ontario	Director	President and Chief Executive Officer, Polycorp Inc.; Chairman, Fallingbrook Management Inc.	1998	30,000

Notes:

+ Denotes member of the Human Resources and Corporate Governance Committee.

* Denotes member of the Audit Committee.

(1) Mr. Abitbol owns 472,026 options to purchase Common Shares.

(2) On April 28, 2000 a special committee comprised of the four outside directors of the Company approved the issuance to each of Messrs. Abitbol and Benatar of up to an additional 218,750 Common Shares, subject to the achievement by the Company of certain material corporate milestones within two years. The number of Common Shares issuable in the event one of the milestones is achieved is based on the market price for the Common Shares at the time the event occurs. On May 16, 2000, The Toronto Stock Exchange approved such compensation arrangements, subject to the Company obtaining shareholder approval. See "Risk Factors – Employment Agreements".

- (3) Mr. Benatar owns 472,026 options to purchase Common Shares.
- (4) Presently, Mr. Cloutier is President and Chief Executive Officer of European Financial Corporation. From 1990 to autumn 1994, Mr. Cloutier was an executive counsel to the Chair of the Quebec Securities Commission. From autumn 1994 to June 1996, Mr. Cloutier was Director and Chairman of the Board, International Financial Services Inc. Mr. Cloutier owns 20,000 options to purchase Common Shares.
- (5) Mr. Deschamps became a director of the Company on June 12, 1998. From January 1998 to August 1999, Mr. Deschamps was Vice-President for ACT International, an international marketing consulting firm. Prior to that time, from 1994 to 1998 Mr. Deschamps was Vice-President of the information technology sector of Innocentre, a not for profit organization assisting high technology companies. Between 1989 and 1994, Mr. Deschamps was Vice-President and General Manager for Unitel Inc., a telecommunications company. Mr. Deschamps owns 40,000 options to purchase Common Shares.
- (6) Mr. Frenette became a director of the Company on June 12, 1998. Since 1986, Mr. Frenette has been the Chairman and Chief Executive Officer of Montaigne International Holdings Inc., an international investment firm with diversified interests on the fields of industry, public service consulting and real estate, resort and hospital development. Mr. Frenette owns 40,000 options to purchase Common Shares.
- (7) Mr. Snucins became a director of the Company on August 5, 1998. Mr. Snucins is the founder and Chairman of Fallingbrook Management Inc., an investment holding company. Moreover, since 1993, Mr. Snucins has been President and Chief Executive Officer of Polycorp Inc., a designer and producer of polymer rubber products. Mr. Snucins owns 20,000 options to purchase Common Shares.

The directors and senior officers of the Company, in the aggregate, beneficially own, directly or indirectly, or exercise control or direction over approximately 5.6% of the issued and outstanding Common Shares.

The Company is required to have and has an Audit Committee. The Company also has a Human Resources and Corporate Governance Committee. The members of each committee are indicated in the above table. The Company does not have an executive committee.

STOCK OPTION PLAN AND OPTIONS

Originally adopted in 1994, the Company maintains a Stock Option Plan under which non-assignable options to purchase Common Shares may be granted to the directors, officers and employees of the Company and any other person or company engaged to provide ongoing management or consulting services for the Company at the discretion of the Company's board of directors. The aggregate number of Common Shares in respect of which options may be granted is fixed at 2,350,000. Options granted are exercisable over periods not exceeding ten years, and the purchase price for the Common Shares is payable in full at the time the options are exercised. Options are granted at an exercise price being the market price of the underlying Common Shares at the time of grant.

As at the date of this Annual Information Form, options to purchase 2,242,984 Common Shares had been granted to certain officers, directors and employees and therefore 107,016 options remain available for grant pursuant to the Company's Stock Option Plan. On April 28, 2000, the board of directors of the Company approved a resolution increasing the number of Common Shares reserved for issuance under the Company's Stock Option Plan from 2,350,000 to 2,600,000, subject to shareholder and regulatory approval. In addition, the board of directors approved the grant, subject to shareholder approval of the amendment to the Stock Option Plan described above, of options to purchase 25,000 Common Shares to each of the four outside directors of the Company. See "Risk Factors – Employment Agreements".

The following table sets forth details of all unexpired options granted as at May 18, 2000 respecting options held by executive officers, directors and employees of the Company and any other persons:

Total Number of Options Held by:	Details of the Number and Purchase Price of Underlying Common Shares (Market Price at time of Grant)	Expiration Date of Options	Closing Price Per Common Share Underlying Options as at May 18, 2000
4 Directors (who are not also executive officers of the Company): 220,000	120,000 @ \$5.75	January 31, 2010	\$9.00
	100,000 @ \$7.75 ⁽¹⁾	April 28, 2002	
5 Executive Officers of the Company: 1,321,931	688,631 @ \$1.20	January 31, 2001	
	436,500 @ \$1.80	October 18, 2006	
	11,800 @ \$2.35	March 18, 2006	
	185,000 @ \$5.75	January 31, 2010	
26 Employees of the Company: 71,400	10,000 @ \$0.80	May 26, 2009	
	16,250 @ \$2.35	March 18, 2006	
	45,150 @ \$5.75	April 3, 2006	

Note:

- (1) The grant of these options is subject to shareholder approval of an amendment to increase the number of Common Shares reserved for issuance under the Company's Stock Option Plan from 2,350,000 to 2,600,000 and are exercisable only upon the achievement by the Company of certain material corporate milestones.

MARKET FOR SECURITIES

The Common Shares are listed and posted for trading on The Toronto Stock Exchange under the symbol NHC.

The following table sets out the price range and trading volumes for the Common Shares on The Toronto Stock Exchange for the periods indicated:

Period	High	Low	Volume
Fiscal 1998	\$1.60	\$0.35	5,886,682
Fiscal 1999	\$1.22	\$0.20	7,814,403
August-October 1999	\$0.34	\$0.20	1,656,095
November 1999-January 2000	\$8.10	\$0.08	25,893,027
February-April, 2000	\$22.00	\$6.05	24,270,548
May 1-18, 2000	\$10.90	\$7.15	1,489,681

DIVIDEND POLICY AND RECORD

The Company has not declared or paid any dividends on its Common Shares since its incorporation and does not currently intend to pay dividends on its Common Shares and intends instead that future earnings be reinvested in its business. The Board of Directors of the Company will review this

policy from time to time in the context of the Company's earnings, financial condition and other relevant factors.

RISK FACTORS

Currency Fluctuation

Because of its export orientation, approximately 89% of the Company's revenues are received in U.S. dollars, while approximately 50% of its expenses are incurred in Canadian dollars. This puts the Company in a vulnerable position in regard to currency fluctuations. The Company hedges this exposure through the purchase of forward currency contracts on a monthly basis. While management has been successful in its hedging efforts to date, there can be no assurance that such hedging efforts will continue to successfully off-set exposure to currency fluctuation.

Key Personnel

The progress and success of the Company to date has been to a significant extent dependent on the skill of its executive officers, the loss of one or more of whom could have a material adverse effect on the Company.

Employment Agreements

The Company may in certain circumstances be required to make large payments to Messrs. Abitbol and Benatar in connection with the provisions of their employment agreements with the Company providing for option grants. Under the terms of the agreements (which were entered into in 1994), and based on an interpretation of the subject provisions, which is not universally acknowledged, the Company may be required to pay to each of Mr. Abitbol and Mr. Benatar an amount in respect of 195,474 options that were not granted as at April 24, 2000 to Messrs. Abitbol and Benatar equal to the difference between the exercise price of \$1.20 in respect of such options and the market price of the Common Shares on The Toronto Stock Exchange at the time a settlement of this issue, if any, is reached, plus an additional amount equal to the incremental income tax payable as a consequence of this payment as compared with the income tax which would be payable if such options would have been exercised at \$1.20 and sold at such price. Accordingly, the Company may be obligated to pay a large sum to each of Mr. Abitbol and Mr. Benatar in respect of this obligation.

On April 28, 2000, a committee comprised of the independent directors of the Company agreed to amend the terms of Messrs. Abitbol's and Benatar's compensation arrangements and approved the issuance to each of Messrs. Abitbol and Benatar of up to 218,750 Common Shares, subject to achievement by the Company of certain material corporate milestones within two years. The number of Common Shares issuable in the event one of the milestones is achieved is based on the market price for the Common Shares at the time the event occurs. On April 28, 2000, Messrs. Abitbol and Benatar entered into an agreement with the Company reflecting the revised terms of their compensation arrangements as approved by the committee of independent directors. On May 16, 2000, The Toronto Stock Exchange approved such compensation arrangements, subject to the Company obtaining shareholder approval. In the event shareholder approval is not obtained or the Company fails to achieve the milestones set out in the compensation arrangements and no Common Shares are issued to Messrs. Abitbol and Benatar pursuant to such compensation arrangements, the Company may be required to further negotiate the terms of their employment agreements and resolve any issues relating thereto. Failure to reach an agreement may result in one or both of Mr. Abitbol and Mr. Benatar desiring to leave

the Company. As mentioned under the heading “Key Personnel”, the loss of either Mr. Abitbol or Mr. Benatar or both would have a material adverse effect on the Company.

Possibility of Failure of DSL

If DSL technology fails to gain widespread acceptance, the Company’s revenues and results of operations will be harmed. The Company’s products are primarily used by local exchange carriers who offer DSL-based services. The Company’s future success is substantially dependent upon whether DSL technology gains widespread market acceptance by local exchange carriers, of which there are a limited number, and by end users of their services. Local exchange carriers are continuously evaluating alternative high-speed data access technologies and may at any time adopt technologies other than DSL. Numerous other high-speed access technologies, including cable modems, wireless technology and satellite technologies compete with DSL-based services. Cable modem service can theoretically provide faster download speeds than DSL. Both wireless and satellite technologies enable users to transmit and receive information using radio frequencies at speeds close or comparable to DSL transmission speeds. These competing technologies may ultimately prove to be superior to DSL-based services and reduce or eliminate the demand for the Company’s products.

The inability of the Company’s current or future competitive local exchange carrier customers to acquire and retain subscribers as planned, or to respond to competition for their services or reduced demand for their services, could cause them to reduce or eliminate their DSL deployment plans. A competitive local exchange carrier is a company that, following the U.S. *Telecommunications Act of 1996*, is authorized to compete in the local communications services market. If the Company’s customers are forced to reduce or eliminate their DSL deployment plans, sales to them will decline.

Possibility of Failure of VCCS™ Solutions

Future growth and a significant portion of future revenue depend on the success of the Company’s VCCS™ solutions. Accordingly, failure of the Company’s VCCS™ products or future products to maintain and achieve meaningful levels of market acceptance and customer satisfaction would limit sales and revenue growth.

The success and deployment into customers’ networks of the VCCS™ solutions will also depend on customer satisfaction with such products and numerous other factors, including:

- the realization of operating cost efficiencies for the Company’s customers when VCCS™ products are deployed and customers’ ability to quantify these operational efficiencies;
- successful development of systems and software that address customer infrastructure requirements; and
- customers’ successful integration of the Company’s software into their operational support systems.

Dependence on a Small Number of Customers

The Company’s revenues to date have been recognized from a small number of customers. Purchases by large customers and, therefore, the Company’s revenues, may vary significantly from quarter to quarter. The loss of any one of the Company’s major customers or a reduction or delay in purchases of the Company’s products from any one of these customers would cause revenues to decline and could cause the Company’s share price to decline if revenues are below expectations.

Management expects that the majority of revenues will depend on sales of the VCCS™ solutions to a small number of customers, specifically CLECs. In addition, a small number of customers may account for a large amount of the Company's revenues in any particular quarter, and these customers may change from quarter to quarter.

There is a limited number of local exchange carriers that are potential customers, and this number may not increase in the future. Accordingly, future revenues will depend significantly upon the timing and size of future purchase orders from the Company's largest customers.

In addition, because the Company is dependent on a limited number of customers, management expects the Company will experience volatility relating to the budgeting cycles of the Company's customers and the telecommunications industry in general. Adverse changes in the Company's revenues or operating results as a result of these budgeting cycles or any other reduction in capital expenditures by the Company's large customers could substantially reduce the trading price of the Company's Common Shares.

Vulnerability of CLECs

Because the Company's customer base consists of new and emerging CLECs, the Company will not be able to increase its revenues if these customers' business models, which are largely unproven, are not successful or if the financial condition of these customers deteriorates. These carriers require substantial capital for the development, construction and expansion of their networks and the introduction of their services. Financing may not be available to emerging CLECs on favourable terms, if at all. A reduction in the financing available to the Company's customers, or the inability of such customers to obtain financing, could impair the Company's ability to make future sales as well as to collect for sales have already been made. The telecommunications service provider industry has recently experienced consolidation. The loss of a customer, through industry consolidation or otherwise, could reduce or eliminate the Company's sales to that customer.

Sales Cycle of VCCS™ Products

Because the sales cycle for the Company's VCCS™ solutions is long, the Company's revenues in a given quarter may not meet market expectations if the Company experiences delays in customer orders. In addition, the Company may have incurred substantial sales and marketing expenses during a given quarter, without offsetting revenues. As a result, delays resulting from this lengthy sales cycle could reduce revenues and decrease profits, or result in a loss. Specifically, the Company's customers' network planning and purchase decisions normally involve a significant commitment of resources and a lengthy evaluation and product qualification process. The decision to purchase the VCCS™ solutions is made as part of this network planning process, and the Company's sales cycle can be as long as one year or more. Throughout the sales cycle, the Company often spends considerable time and resources educating and providing information to prospective customers regarding the use and benefits of its products. After making the decision to purchase the Company's VCCS™ solutions, customers may delay or cancel the deployment of such products. Timing of deployment is unpredictable, can vary widely and depends on a number of factors, many of which are beyond the Company's control, including:

- customers' current network deployment procedures;
- customers' level of expertise;

- status and performance of customers' other network equipment;
- degree of software development and integration necessary for the customer to deploy the VCCS™ solutions; and
- financial and administrative resources of the customer.

Competition

VCCS™ Business Unit

The market for telecommunications equipment is highly competitive. Moreover, the convergence of information technology and telecommunications, which widens the addressable market for the Company's products, also brings into play equipment manufacturers that have historically focussed on the telecommunications market. If the Company is unable to compete effectively, revenues could decline, expenses could increase, and earnings could decrease or the Company could experience losses. Many of the Company's current and potential competitors have significantly greater sales and marketing, technical, manufacturing, financial and other resources. In addition, a number of smaller companies are expected to produce products that compete with the Company's. Due to the rapidly evolving market in which the Company competes, additional competitors with significant market presence and financial resources, including other large telecommunications equipment manufacturers, may enter that market, thereby further intensifying competition.

The Company also competes with DSL equipment providers who have each announced plans to incorporate competitive features and functionality into their DSL access multiplexers. A DSL access multiplexer is a network device, usually located at a telephone company's central office, that receives signals from multiple DSL connections and puts the signal on a larger, high-speed transmission line. If current and potential customers choose to deploy DSL access multiplexers that include features and functions that are competitive with the Company's products, or delay purchases of the Company's products to evaluate these DSL access multiplexers, the Company's business could be seriously harmed. To the extent the Company expands the capabilities of its products to incorporate functionality traditionally contained in other equipment, the Company may also face increased competition from other vendors.

The Company's VCCS™ solutions are comprised of three main elements: 1) the robotic matrix; 2) the electronics, controls and management firmware; and 3) the management software. The electronics, the controls, the firmware and the software are the property of the Company and substantial resources have been invested in the development of those peripheral elements that complement the robotic matrix. Those elements enable customers to manage the robotic matrix remotely, thereby providing the Company with a significant distinct advantage over its competitors who have yet to develop comparable products. Without the ability to provide remote applications with this robotic matrix, the Company believes that its competition is at a distinct disadvantage and will be required to dedicate significant resources to develop similar products. The robotic matrix is subject to a non-exclusive distribution agreement in North America with Oki Electric Industry Co., Ltd. While this manufacturer has agreed to restrict the number of customers who will be authorized North American distributors of its robotic matrix to two distributors (including the Company), there is a risk that another distributor may obtain the matrix and compete directly with the Company's VCCS™ solutions. This would likely have an adverse effect on the Company's sales of these solutions in North America. The arrangement between the Company and Oki Electric Industry Co., Ltd. limiting the number of distributors of the robotic matrix expires in August

2000 and the Company expects to renew this arrangement for a further term. Finally, the Company has also obtained the right to distribute the robotic matrix outside of North America and expects to increase its sales of the VCCS™ solutions in the rest of the world.

In the telecommunications market, the Company's main competitors include established and emerging players, including Turnstone Systems, Inc., Quantum Link and Con-X. In the enterprise market, the Company's main competitors are DataComm and LanHopper.

Connectivity Business Unit

In its Connectivity Business Unit, the Company competes with a wide variety of producers, ranging from large multi-national companies, who compete mainly on product range and quality to offshore manufacturers, who compete mainly on price. Connectivity market competitors include established computer companies such as IBM, Omnitron, 3com, Transition Networks, N-Lynx, Nbase, AMP Network Devices, LAN Optics, Network Video Technologies, Energy Transformation Systems (ETS), Lucent Technologies and BH Electronics.

Prices and Margins May Decrease

The market for telecommunications equipment is characterized by declining prices due to increased competition, new products and increasing unit volumes. Due to competition and potential pricing pressures from large customers in the future, the Company expects that the average selling price and gross margins for the Company's products will decline over time. If the Company fails to reduce production costs, gross margins will decline rapidly. The Company may not be successful in redesigning its products or achieving cost reductions in a timely manner, particularly as new products are introduced. In addition, redesign may not provide sufficient cost reductions to allow the Company to remain competitive.

Failure to Improve Existing Products and/or Develop New Products

The Company's failure to develop products or offer services that satisfy customer requirements would reduce sales and harm operating results. Many current and potential customers may require product features that VCCS™ solutions do not have. In addition, some potential customers may seek to use the Company's products for uses the Company has not anticipated, and the Company may be required to determine whether the requested functionality can be integrated into the products. To the extent the Company is required to add features to its products in order to achieve a sale, the sales cycle will lengthen, and the Company will incur increased development costs for the products. To increase sales, the Company must effectively anticipate and adapt to customer requirements and offer products and services that meet customer demands.

Management of New Product Introductions

The introduction of new or enhanced products requires that the Company manage the transition from older products in order to minimize disruption in customer ordering patterns and ensure that adequate supplies of new products can be delivered to meet anticipated customer demand. The Company's inability to effectively manage a product transition may cause material delays in the deployment of DSL services by the Company's customers, which could cause such customers to cancel orders or return products. The introduction of new and enhanced products may cause certain customers to defer or cancel orders for, or to return, existing products. Although the Company maintains reserves for product returns, these reserves may not be adequate.

Failure to Predict Manufacturing Requirements

In addition, lead times for some of the materials and components used in the Company's products are very long and depend on factors such as the specific supplier, contract terms and demand for each component at a given time. Long lead times for some materials and components have in the past, and may in the future, cause the Company to purchase inventories of some parts, increasing costs and the risk of the parts' obsolescence. If the Company fails to carry a sufficient inventory of long lead time items, if lead times increase or if demand for the Company's products increases unexpectedly, the Company may have insufficient access to components necessary to meet demand for products on a timely basis.

Limited Sources of Supply

The robotic matrix, a key component used in the manufacture of the Company's VCCS™ solutions is currently sourced from Oki Electric Industry Co., Ltd., the Company's sole supplier of the robotic matrix for which alternative sources are not currently qualified and may not be available. The Company's agreement with Oki Electric Industry Co., Ltd. can be extended until April 24, 2008, provided that the Company satisfies certain minimum purchase obligations during the two years ending on April 24, 2001. Financial or other difficulties faced by this supplier or significant changes in market demand for these components could limit the availability of these components. Any interruption or delay in the supply of any of these components could:

- adversely affect the Company's ability to meet scheduled product deliveries to its customers and
- cause the loss of sales to existing and future customers.

The purchase of components for products other than those used in the above-mentioned matrix are subject to risks of price increases and potential quality assurance problems.

All of these components are critical to the production of the Company's products, and competition exists with other manufacturers for these key components. The Company might not be able to qualify or identify alternative suppliers in a timely fashion, or at all. Consolidations involving suppliers could further reduce the number of alternatives available and affect the cost of components. An increase in the cost of components could make products less competitive and result in lower margins.

Full Deployment

Errors or other problems in the Company's VCCS™ solutions or other products could result in:

- loss of or delay in revenues and loss of customers or market share;
- failure to achieve market acceptance;
- diversion of development resources;
- increased service and warranty costs;
- legal actions by the Company's customers; and
- increased insurance costs.

Because the Company's products are designed to provide critical services, if errors, defects or failures are discovered in current or future products, or as new versions are released, the Company may be exposed to significant legal claims. Any claims, whether or not successful, could damage the Company's reputation and business, increase expenses and impair operating results. Although the Company

maintains product liability insurance covering some damages arising from implementation and use of its products, the Company's insurance may not fully cover claims sought against it. Liability claims could require the Company to spend significant time and money in litigation or to pay significant damages.

The Company's recently introduced VCCS™ solutions are designed for large and complex networks. Consequently, customers may discover errors or defects in the Company's hardware or software only after it has been fully deployed and operated as part of their infrastructure in connection with products from other vendors, especially DSL access multiplexers and DSL modems.

Attracting Employees

The Company's products and services require a sophisticated selling effort targeted at several key people within prospective customers' organizations. This process requires the efforts of experienced sales personnel as well as specialized systems and consulting engineers. In addition, the complexity of the Company's products and the difficulty of configuring and maintaining them require highly trained customer service and support personnel. The Company intends to hire a significant number of engineering, sales, marketing and customer service and support personnel in the future. Management believes the Company's success depends, in large part, upon its ability to attract and retain these key employees. Competition for such persons is intense. The Company may not be successful in attracting and retaining these individuals.

Rapid Technological Change

The markets for high-speed telecommunications products are characterized by rapid technological developments, frequent enhancements to existing products and new product introductions, changes in customer requirements and evolving industry standards. Intense competition among numerous high-speed access technologies has further driven innovation and increasingly complex product requirements. The Company may be unable to improve the performance and features of its products as needed to respond to these developments. The introduction or market acceptance of products incorporating superior technologies or the emergence of alternative technologies or new industry standards could render existing or potential future products less economical, obsolete and unmarketable. For example, it semiconductor, robotic or other technologies become effective alternatives for the Company's product architecture, its products may become obsolete.

Rapid Expansion

The Company intends to continue to expand in order to pursue existing and potential market opportunities. This rapid growth places a significant strain on management and operational resources. Customer relationships could be strained if the Company are unable to devote sufficient resources to them as a result of its growth.

New Product

The Company began selling VCCS™ solutions to the telecommunications industry in the second quarter of 2000. As a result, investors and analysts may find it difficult to forecast future revenue and operating results of the Company. The price of the Company's Common Shares could fall substantially if its revenue or operating results are less than projected. If the Company does not achieve its expected revenue growth, its operating results will be below its expectations and the expectations of investors and market analysts, which could cause the price of the Common Shares to decline substantially. The Company's operating history in this market is limited, however, and it is difficult or impossible to

accurately forecast the Company's revenues. The revenue and income potential of the Company's business is unproven and results to date for any historic period should not be relied upon as an indication of the Company's future performance.

Losses

The Company has experienced losses in the past and may experience losses in the future, which could cause the market price of the Company's Common Shares to decline. The Company may not succeed in generating revenue growth consistent with its recent experience, and its revenues may not be sufficient to achieve profitability. If the Company incurs losses, the market price of its Common Shares may decline substantially. The Company incurred an operating loss from continuing operations of \$1.27 million in its fiscal year ended July 31, 1998 and \$2.41 million in the year ended July 30, 1999, and the Company may not increase its profitability in the future. The Company expects to continue to incur significant product development, sales and marketing and administrative expenses. In particular, expenses are expected to increase substantially in the next 12 months as the Company increases its sales and marketing activities by expanding its direct sales force, develops its technology, expands its existing product lines and adds new features to penetrate new markets, develops additional infrastructure and hires additional management to keep pace with its growth. The Company's operating expenses are largely based on currently anticipated revenue trends, which may not be realized, and a high percentage of its expenses are and will continue to be fixed in the short-term. The Company will need to generate significant revenues to achieve profitability.

DSL Subscribers

If the Company's customers are unable to acquire and retain DSL subscribers, they may curtail their DSL deployment plans and reduce their purchases of the Company's products. The inability of the Company's current or future CLEC customers to acquire and retain subscribers as planned, or to respond to competition for their services or reduced demand for their services, could cause them to reduce or eliminate their DSL deployment plans. If the Company's customers are forced to reduce or eliminate their DSL deployment plans, sales to them will decline.

Regulations and Certifications

The Company's business may be adversely affected by regulation of the communications industry. The jurisdiction of the Canadian Radio-television and Telecommunications Commission ("CRTC") in Canada and the Federal Communications Commission ("FCC") in the United States extends to the communications industry, to the Company's customers and to the products and services that the Company's customers offer. Future CRTC and FCC regulations, or regulations set forth by other regulatory bodies, may reduce the demand for our products. For example, the FCC regulates access to copper telephone lines and the ability of CLECs to deploy equipment at an ILEC's facility. In addition, international regulatory bodies are beginning to adopt standards for the communications industry. The delays that these governmental processes entail may cause order cancellations or postponements of product purchases by the Company's customers, which would reduce the Company's revenues and harm its operating results.

The operational and regulatory relationship between ILECs and CLECs could change in ways that would reduce the need for the Company's products. Substantially all of the Company's revenue is derived from CLECs which lease copper lines from ILECs in the United States. Because the CLECs do not have access to the ILECs' line maintenance systems, the CLECs have typically implemented an

independent line maintenance system and may deploy the VCCS™ solution as a key component of this system. In the future, CLECs may gain access to ILEC's line maintenance infrastructure if mandated by the FCC, which would eliminate or reduce the need for the Company's products.

In addition to complying with CRTC and FCC regulations, the Company's products are required to meet certain safety requirements. Typically, the Company's products must be Network Equipment Building Standard, or NEBS, compliant and certified by Underwriters Laboratory before they may be deployed in central office applications in the U.S. The Company cannot be sure that it will be able to obtain the regulatory approvals and certifications it needs to sell future and newly developed products on a timely basis, or at all. If the Company fails to obtain these approvals and certifications on a timely basis, its future revenues and business could suffer.

Intellectual Property

If the Company fails to adequately protect its proprietary rights, competitors could offer similar products relying on technologies developed by the Company potentially harming the Company's competitive position and decreasing revenues. Existing and future patent applications, if any, may not be approved, any issued patents may not protect the Company's intellectual property and any issued patents could be challenged by third parties. Furthermore, other parties may independently develop similar or competing technology or design around any patents that may be issued to the Company. Attempts may be made to copy aspects of the Company's products or to obtain and use information that the Company regards as proprietary. The Company attempts to protect its intellectual property rights by limiting access to the distribution of its software, documentation and other proprietary information and by relying on a combination of copyright, trademark and trade secret laws. In addition, the Company enters into confidentiality agreements with its employees and certain customers, vendors and strategic partners. These steps may fail to prevent the misappropriation of the Company's intellectual property.

Litigation

The Company attempts to limit legal exposure by way of problems experienced by its customers that might be directly attributed to its products. The Company mitigates this risk through comprehensive training of customers and through the use of provisions in its contracts which limit the Company's exposure to potential product liability claims. However, there can be no assurance that the steps taken by the Company will eliminate such claims by its customers.

ADDITIONAL INFORMATION

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of securities of the Company, options to purchase securities and interests of insiders in material transactions is contained in the Company's Management Information Circular relating to the annual and special meeting of shareholders of the Company held on January 31, 2000. Additional financial information, including consolidated comparative audited financial statements for the year ended July 30, 1999 and management's discussion and analysis of operating results, is available separately. Copies of all of these documents may be obtained upon request from the Secretary of the Company, 5450 Côte-de-Liesse Road, Mount Royal, Quebec, H4P 1A5.

The Company, upon request to the Secretary at the address mentioned in the preceding paragraph, will provide to any person or company:

- (a) when the securities of the Company are in the course of a distribution pursuant to a short form prospectus or a preliminary short form prospectus has been filed in respect of a distribution of its securities:
 - (i) one copy of this Annual Information Form together with one copy of any document, or the pertinent pages of any document, incorporated by reference in this Annual Information Form;
 - (ii) one copy of the comparative financial statements of the Company for the year ended July 30, 1999, together with the accompanying report of the auditor and one copy of any subsequent interim financial statements of the Company;
 - (iii) one copy of the Company's management information circular dated December 29, 1999 and any subsequent management information circular; 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 (i) to (iii) above; or
- (b) at any other time, one copy of the documents referred to in (a)(i) to (iii) above, provided that the Company may require the payment of a reasonable charge if the request is made by a person who is not a holder of Common Shares of the Company.