Access to the Information Highway

A Report by

Community Information Access Centres of Canada

March 1995

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Introduction

THE BACKGROUND

"Canadians will need to become more technologically proficient and skilled in order to take full advantage of emerging information networks and services. We must find a means to: i) offer hands-on experience on new information technology; ii) training and support to inexperienced users of IT; iii) access to Freenets."
ACCESS ISSUES: Preliminary observations by the Working Group on Access and Social Impacts of the Information Highway Advisory Council]

If Canada is to become a leading participant in the new, global information society, we will need to ensure that there is universal and affordable access to the new technology. This is more than access to the *tools* of the new technology, it is also access to the *skills and knowledge* to use them.

Our educational system is responding to this challenge and, in future, graduates will have learned the necessary skills. However, in the short term, there will be a majority of Canadians who have not been exposed to computers in school. Some 40% have used them in work, and have even received some limited training. Some 20-30% have bought computers for home use and learned the hard way, sometimes becoming very skilled.

As to the information highway, only some 17% have access to modems at home and, of those, even fewer have signed up to the growing number of Internet gateways. This means that to most Canadians the information highway and the new information technology is just a glossy magazine article or a television report. There is therefore a challenge to open this new world to them. *How can this be done?*

While it is now accepted that universal access to the technology can be provided, through wired and wireless means, this is only the beginning. The information society will require that all Canadians not only can afford the cost of connection and the capital investment in the necessary equipment, but also that they have acquired the skills and knowledge to be able to exist as workers and consumers in the new knowledge-based society.

The challenge for Canada is to ensure that the transition to such a society occurs as quickly and smoothly as possible. For this to happen, schools will need to be given computers, connected to the information highway and work out new curricula. Adults will need to have access to the tools of the relevant knowledge and an opportunity to acquire its skills on an ongoing basis.

Adults needs could be met in various ways. For those economically able to do so, immediately purchasing a computer and the other peripherals and services needed will provide access, while buying training courses will provide the necessary skills. However, even adults who can afford to buy a computer and training` will require some help and guidance, in the beginning, in such areas as which equipment is needed and what courses to attend.

For the majority of Canadians, the investment required to buy the full package for home access will mean that penetration will take some years. During the transition, it will be necessary to

provide some community-based, shared services, equipment and training, and, given that the technology will be constantly evolving, some ongoing support of this kind will also be required. Failure to do so will result in a division occurring between those with the skills and knowledge and those without – the info-rich and the info-poor.

The Information Highway Advisory Council has established a Working Group on Access to prepare policy for the government in this area, and will be recommending action and programmes. A public discussion document is being distributed and public comment sought. The Council is due to report in June and has shown it is aware of the transitional problems.

Along with federal and provincial initiatives, community-based action is already occurring. Freenets are in the process of being established in many cities across Canada, and some, such as the Capital Freenet, are fully operational. The recently set-up Toronto Freenet has been overwhelmed by the public demand and is constantly installing new lines.

Libraries are also conscious of the public's growing awareness of the Internet and the Ontario Libraries" Network 2000 initiative is leading the way in responding to this.

Businesses, too, are beginning to see the commercial advantages of the Internet, as well as other aspects of the new information technologies. While there is some friction developing between established Internet users and what are termed "newbies", this is expected to sort itself out as the "netiquette" adjusts to new styles of use.

Community Information Access Centres of Canada (CIAC), now a federally incorporated non-profit organization, was born in a Toronto community and is concerned with the same objectives as the Freenets and the library networks: to bring the information highway within the reach of day-to-day Canadians.

Although all these community-based initiatives are located in *geographic* communities, the use of the information highway tends to support many different types of communities: those with a common interest in a variety of subjects, such as classical music, parenting, electronic mail, space, sports, travel, craft supplies, current affairs, horticulture, or how to care for a family member with Alzheimer's disease.

Providing access to the benefits that information technology can bring requires removing the barriers to access that currently exist, such as the main problem of connectivity, affordability, and training. In addition, there are special needs to be considered, such as those of the disabled, the housebound, the elderly and, sometimes forgotten, the time-stressed, such as small business owners.

Community-based networking is sensitive to these specific needs and, provided that it has some form of initial funding and then moves to revenue generation to recover costs on an ongoing basis, it can provide a more effective response to the access needs of Canadians than a more distant, less flexible arrangement.

THE RESEARCH

CIAC was set up to address the need for both immediate and ongoing access to the information technology equipment and training needs of adults, and is proposing to do so by establishing community-based information access centres across the country. The first centre was set up in Toronto in 1994 and others are following – from Ontario to BC.
In order to inform this process and to add to understanding of the options in this area, CIAC will be holding a 'think tank' workshop called "Bridging the Gap" in Toronto on this subject on 9-11th March, 1995.

In September 1994, CIAC was also asked, based on its gathering experience of involving communities in setting up Centres, to carry out research for Industry Canada that would address the following objectives:

- examine current thinking and action in the field of improving access to the information highway;
- undertake a local needs analysis in an urban and a rural setting; and
- create an implementation plan for community information access centres

A report, to be delivered in three parts, is the result of this action research project.

Part One of the Report on Access – Current Initiatives – looks at the present state of access to the Information Highway by:

a) looking at the reactions of foreign governments, and some examples of specific initiatives on access;
b) examining the situation in Canada, province by province, including government policies, infrastructure availability and other initiatives;
c) looking at an the Ontario Libraries" Network;
d) discussing the initial status of government policy and some proposed action on community-based networks
e) including a short discussion of private networks; and
f) including a brief look at content providers.

The Report from the CIAC Workshop will form an Addendum to Part One

Part Two - A Needs Analysis in an Urban and a Rural Setting - looks at some specific access needs of Canadians in a variety of social categories.

Part Three - A Manual on Setting Up and Operating a Community-Information Access Centre - will set out in detail exactly how such a Centre can be established, beginning with how to involve the community to how to establish a viable cash flow that will allow cost recovery.

Access to the Information Highway

Part One
Current Initiatives

A

International Initiatives

La révolution de l'an 2000 sera celle de l'information pour tous. Comparable en ampleur technique à celle des chemins de fer ou de l'électrification, elle sera plus profonde dans ces effets car les réseaux de télécommunications constituent désormais le système nerveux de nos sociétés"

[Les autoroutes de l'information - Rapport au Premier ministre (Edouard Balladur)] Gérard Théry, Ingénieur-General des Télécommunications

INTRODUCTION: TECHNOLOGICAL AND SOCIO-ECONOMIC EFFECTS

The first part of the report examines current thinking and actions, and outlines current initiatives, both here in Canada and overseas. These initiatives are responding to the advent of new technologies and their related socio-economic effects.

Technological Developments

The key technological innovation driving information technology has been the conversion of data, whether sound, pictures, text or numbers, into streams of digital "bits". Digitization means that information can be manipulated at high speed. The exponential increase in computing power over the past twenty years, coupled with dramatic reductions in cost, have made computer applications essential to business and government, and much more affordable for use in homes and schools. At the same time, the development of inexpensive fibre optic cable, new wireless technologies, digital compression and switching techniques, allows these digital bitstreams to be communicated at high speed over a wide variety of wireless and wireline networks. It is now possible to exchange information anywhere in any format, and to conduct transactions electronically over any distance. These trends have accelerated the demand for, and pace of introduction of, new products and services. They have also stimulated the demand for national broadband networks capable of transmitting high quality voice, video and data.

These technologies are causing the "convergence" of industries. By upgrading their networks, cable companies could offer competitive local telephone services, and telephone companies could compete in the delivery of broadcasting or video services. Both these industries, along with the computing, publishing and entertainment industries, are exploring markets for new information and interactive services. Information providers and carriers are seeking to expand their activities beyond traditional borders. Some analysts have estimated that the size of the worldwide market for information technology products and services currently exceeds (US) $1 trillion and will double by the year 2000. Governments are moving to update their regulatory and policy regimes so as to open up these markets to competition.

Socio-economic Effects

Communications and information technologies are transforming the way Canadians interact and do business, opening up new opportunities and challenges in both domestic and international markets. They influence where and how we work, play and study; how we research, design and manufacture products; how we bank and pay our bills and taxes; how we learn about the world, educate our children and retrain for changing jobs; how we interact with friends and family and spend our leisure. The global integration of markets makes the timely exchange of information a critical competitive advantage. New businesses are developing to feed new markets. Most new jobs created will require the ability to access, analyze, create and use information. These capabilities have become essential for economic growth and social well-being.

As a result of all these developments, there is a need for an upgrade in the skills and knowledge base of the general population. Both as workers and as consumers it is essential to create a society that is sophisticated in the new technologies – failure to do so will result in decreasing

competitiveness and falling relative standards of living. To meet this challenge, programmes and mechanisms are being developed in many countries that will educate people in the new information technology and give them easy and affordable access to its tools.

Two Major Problems

As Gérard Théry points out in his report to the Prime Minister of France, information technology is the new nervous system of society. For this reason most countries have realised the critical necessity of dealing with two major problems:

- how to create the physical infrastructure, the content and services; and
- how to create the skills and knowledge base in their populations to enable them to use the new technology

Canada's major trading partners – the United States, the European Community and Japan – are responding to the challenge through ambitious infrastructure investment programs and regulatory and legislative reforms aimed at rapidly modernizing communications and information networks, encouraging a continuous stream of innovative value-added products and services, and supporting the early exploitation of new technologies by all sectors of the economy.

THE USA

The Clinton Administration announced the National Information Infrastructure (NII) initiative in September 1993, calling for joint industry and government action to create a seamless and interoperable national broadband information infrastructure. The NII will be built by the private sector, within the enabling policy and regulatory framework provided by the government. The government has also agreed to allocate up to (US) $2 billion per year for advanced R&D; the development of education, health care and government services applications that will run on the network; and network access and training programs.

US cable and telecommunication companies have begun to form strategic partnerships and alliances to take advantage of the convergence of technologies and the expected relaxation of regulations prohibiting cross-ownership and competition. The US has a very high speed infrastructure and is intending to connect every school and library by 1997. A vast range of initiatives have begun and involve every aspect of American society, from seniors to multinational corporations. A full listing of the US programmes would be excessive at this point, but the following is a sample of representative access initiatives.

SeniorNet

SeniorNet is a non-profit organization whose goal is:

> *"to build an international community of computer-using older adults. ... SeniorNet is providing older adults with access to practical instruction in computer skills and opportunities for continued learning that will enhance their lives."*

Senior Net, out of San Francisco, had 40 SeniorNet Learning Centres operating across the US and New Zealand in 1994. SeniorNet provides its centres with training, curriculum materials, technical support and online time. It also operates a national on-line network on America Online, provides products and services to independent members, organizes conferences, publicizes the concept of computer-using seniors, and conducts research on the use of computers by older adults.

Smart Valley

Smart Valley, in California's San José area– Silicon Valley – has as its mission to:

> *"enhance economic growth and quality of life in Silicon Valley by facilitating construction of a vibrant, regional electronic community – a role model for the emerging national information infrastructure."*

The organisation consists of volunteers, staff and a board of directors that includes people from Hewlett Packard, Stanford University, 3Com Corporation, Mohr Davidow Ventures, Tandem Computers, Pacific Bell, Silicon Graphics Inc, Tele-Communications Inc, Stanford Medical School, Skornia Law Firm and a representative from the US Congress. Member companies each contribute $50,000 (US) or more to help facilitate projects, programs and consortia that are working for the organization's goal. This is a model that is being copied elsewhere in the US, and here in Canada with the formation of the Smart Toronto project.

SC PAN

Smart Valley operates SC PAN – Smart County Public Access Network – which is a county-wide network of public access stations in Bay area schools, public libraries, county and municipal administrative centres, a county hospital and over ten retail sites. The goal is to allow a broad range of potential users, who have previously been unable to participate in the information revolution due to economic or cultural barriers, to have Internet access.

Smartschools

Smart Valley is developing a blueprint for bringing network-based communications technology into all K-12 public schools in the county. The proposal includes a blueprint for teacher training, curriculum development, wiring, and hardware and software, that can be adapted to fit each school's needs.

The Rural Televillage Initiative

This concept is still in its early stages. In November 1994 a conference called "Creating the Televillage: A New Strategy for Rural Development" was sponsored by the Kentucky Science and Technology Council, South Central Bell, GTE Corporation, AT&T Corporation, Herman Miller Inc, the Kentucky Cabinet for Economic Development and Economic Innovation International Inc of Boston. This conference explored the idea of:

> *"A virtual community of people, business, schools, libraries and healthcare organizations [that] can be linked – connected through telecommunications and empowered by the ability to move and access work and information any place any time."*

The Televillage strategy seeks to enhance the development of rural communities and create new economic opportunities and improve the quality of rural living.

Community Networking

This concept was explored in some detail, with interviews of over 500 individuals and over 300 organizations, by the Morino Institute and presented to the Apple Conference on Building Community Computing Networks in Cupertino, California in May 1994. The philosophy and principles behind the community networking movement are to help people solve problems and address the needs of their day-to-day lives by their own grass roots efforts. For example, the Alzheimers's Disease Support Center on the Cleveland Free-Net.

Community networking is seen as a process that is facilitated by the tools of electronic communications and information, and that improves human communication and interaction in a community by:

> *"• bringing together people within local communities and focusing their attention on key issues within the community for debate, deliberation and resolution;*
> *• organizing human organization and information relevant to the community's needs and problems on a timely basis;*
> *• requiring, engaging and involving - on an ongoing basis - the participation of a broad base of citizens, including community activists, leaders, sponsors, and service providers;*

- *striving to include people in low-income neighbourhoods, those with disabilities or limited mobility, and the struggling middle class;*
- *making basic services available at a fair and reasonable cost for broad-based access within the community;*
- *most importantly, doing what commercial providers find difficult to do well: represent local culture, local relevance, local pride, and a strong sense of community ownership."*

The Conference noted that four substantive actions have legitimized community networking:

- The Ameritech grant to National Public Telecomputing Network to deliver the Ameritech Learning Village

- The Annenberg, Corporation for Public Broadcasting and US West grant to Big Sky Telegraph for rural education

- The CPB/US West grant program of $1.4 million (US) to 12 communities for public education and information online services

- The NTIA/TIIAP grant program of $26 million (US) toward the development of public interest telecommunications applications and services.

THE EUROPEAN COMMUNITY

The European Community has just adopted a new four year research and technology development program, which includes a (US) $3.8 billion component in support of the development of a new information infrastructure. These monies will support advanced communications R&D and the evolution of the underpinning technologies, and the development of distance learning, health care and other services of public interest.

The Europeans believe that this new information infrastructure will consolidate internal markets, provide a platform for more efficient government administration, and promote more balanced economic, social and cultural development.

The Bangemann Group Report (Europe and the Global Information Society: Recommendations to the European Council), which was prepared for a meeting of the European Council on June 24 1994, made a whole series of recommendations, including a section called "The Social Challenge". While most of the report deals with technology and regulation, this section notes that:

> *"The main risk lies in the creation of a two-tier society of have and have-nots, in which only a part of the population has access to the new technology, is comfortable using it and can fully enjoy its benefits. There is a danger that individuals will reject the new information culture and its instruments."*
>
> *"Fair access to the infrastructure will have to be guaranteed to all, as will provision of universal service, the definition of which must evolve in line with the technology."*
>
> *"A great deal of effort must be put into securing widespread public acceptance and actual use of the new technology.* ***Preparing Europeans for the advent of the information society is a priority task. Education, training and promotion will necessarily play a central role.*** *The White paper's goal of giving European citizens the right to life-long education and training here finds its full justification. In order best to raise awareness, regional and local initiatives, whether public or private, should be encouraged."* [Emphasis in original]

It would seem that Europe has a need to be even more concerned than North America about access, as the Report also provides the following statistics:

a) the prevalence of personal computers

USA has	34 PCs per hundred citizens
Europe has	10 PCs per hundred citizens

The European country that comes closest to the US in this respect is:

UK with	22 PCs per hundred citizens

b) the availability of cable systems

USA	60%+ households have cable TV systems
Europe	25% households have cable TV systems

Although one needs to be aware of the European dimension, and its emphasis on providing infoway training though distance education, there are wide differences among members states (in Belgium 92% households are on cable but in Greece this figure is only 2%) and a variety of national programs in the member countries. Two EU countries are considered in this report.

France

The French Report on the Information Highway is a report from the Telecommunications Engineer General, Gérard Théry, delivered to the Prime Minister, Edouard Balladur, in 1994. It stresses that the new information age is more than just an industrial revolution or a renewal of communication services. The information highway is seen as a universal challenge.

Faced with this challenge, France considers she can be among the leaders in this more and more open world, if she can quickly define a strategy that uses all her resources to the optimum.

Particularly, the report recognizes that digitization and ATM switches are key technology changes. France Télécom is the fourth largest telecommunications company in the world. Nearly 90% of all switching gear in the French telephone system is now digital – making it one of the most modern in the world. Its networks cover the whole of France and, after further upgrading, it would form the basis of a French Information Highway system.

A natural evolution is seen from the telephone to the videophone. France's Integrated Services Digital Network (ISDN) phone system - "Numéris" – can transfer 64 kilobits of data per second, while providing a simultaneous return channel. Numéris is hooked up to ISDN networks in the US, Japan, Germany, Hong Kong, Australia and the UK. The system permits use of "Visage" videophones. One major French bank, Crédit Industriel et Commercial, is already using the system, providing high-quality interactive services for its clients.

Minitel provides about 15,000 different interactive information services to nearly 30 million private and business subscribers, through 6 million small terminals. The French government sees the development of Minitel towards the access of multi-media databases for its subscribers.

The report also stresses the role of the information highway in creating change in society. The information highway can create an equality of access to culture and education. However, as the French point out, because of its Anglo-Saxon origins, the Internet may offer dozens of pages of reference to Shakespeare but Proust is unknown.

The French government also sees the raising of the awareness and understanding of the new technology in French society as a key factor in French policies. In setting up its strategy for the new information age, the report proposes two major objectives:

- all homes and workplaces should be connected to the information highway by the year 2015,

- access to the new services should be as universal as access to the telephone

"We must not allow a situation to emerge where there is a two-tier society: one where the richest people businesses, and cities have access to knowledge, education and entertainment, while the poorest people and the rural area are excluded from the new means of communication." [trans]

UK

In the UK the CCTA has published a number of papers dealing with the UK government's position on a range of issues.

Government Involvement
The UK government sees its role as using the opportunities of the information highway to improve public services, by exploiting the opportunities provided by the technologies, with the major players being:

- The Department of Trade and Industry with the responsibility for telecommunications, and regulation;

- OPSS with the responsibility for improving the quality of government service and promoting more open government;

- Department of National Heritage with the responsibility for broadcasting.
  UK government departments currently have access to the government Data Network (GDN)

Academia
The Joint Academic Network "SuperJANET" is widely used across universities and other educational establishments.

The Public
Only 15% of UK homes currently have PCs, although this is rising rapidly. The entry price for a multimedia PC is still considered too high for the average home consumer, and PC hardware and software is constantly changing, which involves even more costs.

Most PC applications are not seen as simple enough to be used by the average home user without training. However, there are already centres developing independently to address the access issues. One of these is situated in South Bristol, which is itself a centre of the electronics industry.

The South Bristol Learning Network
The South Bristol Learning Network's aim is to create opportunities for lifelong learning by the use of existing and emerging information technologies, and to contribute to local economic development. It has trained over 50 people and employed them as "Communication Entrepreneurs". The Learning Network initiatives include:

- InfoCentre - a city-wide electronic online public access information service
- A Bulletin Board Service - an e.mail link that forms the basis of a Bristol "Freenet"
- A Public Access Local Channel Cable Television
- Training Programs for local organizations to use infotech services
- A Centre of Expertise to disseminate information on the information highway
- Workstore - a multi-media production company

THE PACIFIC RIM

Japan

In Japan, the Nippon Telegraph and Telephone Company has announced its intention to wire every school, home and office with fibre optic cable by 2015, and is in the second year of a five year (US) $68 billion program to upgrade their infrastructure. The total costs of building this domestic fibre network are estimated at between (US) $150 and $230 billion.

In parallel, the Japanese are investing heavily to ensure that users will have access to a wide variety of services. This spring, they will launch a (US) $50 million three year pilot project to assess the feasibility of integrated telecommunications and broadcast service applications through fibre-to-the-home networks. The project will include 300 homes and offices, and will test video on demand, high definition TV videoconferencing, teleshopping and telemedicine.

DEVELOPING COUNTRIES

The concept of Telecentres is one that has become popular in many developing countries and the World Bank recently sponsored a conference in Brazil on Telecentres.

A Telecentre in India may mean not much more than a telephone in a phoneless area, but in Costa Rica the concept is much more sophisticated.

Those countries with little technology infrastructure can find that community centres may be more affordable than trying to put equipment in every home. For example, the model of the community television is a useful one on which to base an information highway infrastructure.

B

Canada:
Federal & Provincial Initiatives

GOVERNMENT OF CANADA

Information Highway Advisory Council

In April 1994 The Hon John Manley, Minister of Industry, issued a document "The Canadian Information Highway: Building Canada's Information and Communications Infrastructure." This document discussed the challenge of the global information economy, a national vision for Canada, outlined the existing infrastructure and announced the establishment of an Advisory Council representing industry, labour, consumer and public interest groups to advise the Minister on a national strategy.

The Advisory Council is guided by three policy objectives:

- creating jobs through innovation and investment in Canada
- reinforcing Canadian sovereignty and cultural identity
- ensuring universal access at reasonable cost

The Advisory Council has set up five working groups:

- Access and Social Impacts
- Canadian Content and Culture
- Competitiveness and Job Creation
- Learning and Training
- R & D, Applications and Market Development

The Advisory Council is due to make its final report to the Minister by June 1995. It has to date published the following public discussion papers:

"Privacy and the Canadian Information Highway" Oct 1994
"Providing New Dimensions for Learning, Creativity and Entrepreneurship" Nov 1994
"Access, Affordability and Universal Service on the Canadian Information Highway" Jan 1995

CANARIE Inc

In June 1993, the federal government, in partnership with the private sector, announced the creation of the Canadian Network for the Advancement of Research, Industry and Education (CANARIE). CANARIE, a non-profit corporation, will manage and investment fund of $115 million (with $89 million from the private sector) with the following objectives:

- to connect researchers across Canada with a high-speed, broadband network and upgrade CA*Net.
- to accelerate the development of new network products, applications and services
- to establish a high-speed experimental test network.

SchoolNet

SchoolNet is a joint federal, provincial and territorial initiative linking schools and libraries across Canada to the Internet. By the end of 1998, SchoolNet aims to link all of Canada's schools, libraries, colleges and universities to the Information Highway.

SchoolNet Community Access Project

The objective of this joint federal, provincial and territorial initiative is to provide rural communities with affordable public access to the Internet and provide opportunities for economic growth and job creation. The aim is to establish up to 300 centres across Canada annually for three years.

The community projects will be selected competitively by an independent review process administered by CANARIE Inc.

Funding will be up to a maximum of $30,000 per site and must be matched dollar for dollar by the local project. This matching amount can be via donated "in kind" products or services.

Other Initiatives

The federal government is also cooperating with the provinces on a number of initiatives including:

- ACOA/Enterprise Network
- STEM - Net
- Canada Business Service Centres
- The Federal/Provincial/Municipal Infrastructure Program

These are discussed under the provincial section.

NEWFOUNDLAND AND LABRADOR

Government

In June of 1992 the provincial government released a Strategic Economic Plan for Newfoundland and Labrador. This plan presented a number of recommendations to diversify the economy, several of which focused on technological innovation and knowledge based and communications industries. The province has also established the Industrial Technologies and Information Industries Sector within the new Department of Industry Trade and Technology.

The provincial government has recently awarded a contract to NGL Limited to develop a comprehensive strategy and action plan that will guide the development of the Newfoundland IT sector over the next five years. It is expected that a major focus of study will be on the Electronic Highway. The report is to be delivered by June 1995.

Infrastructure

Nfld Tel has completed the installation of a fibre optic network between St John's and Port aux Basques that complements its existing digital microwave network. A diversity fibre route is being planned and will eventually replace the microwave network between St John's and Port aux Basques, which will then be deployed in Labrador. It is estimated that the telephone network is 87% digital, with every community over 1000 lines having digital capability. Unitel also has a digital microwave network that provides telecommunication service to the province.

Cable Atlantic and NI Cable provide the bulk of CATV service in Newfoundland. Cable Atlantic operates systems in the larger urban areas including St John's and Corner Brook while NI Cable serves a large number of the small rural communities. Both companies have recognized the requirement for a movement to fibre and are in the process of undertaking studies and/or upgrade activities. There are over 125,000 cable subscribers and 5300 km of cable plant in the province.

Nfld Tel has extended cellular radio service along the St John's to Corner Brook corridor while Cantel provides service only in the Corner Brook and greater St John's areas.

Other Initiatives

A number of public sector networks operating within the province formed the Council of Public Interest Networks (C-PIN) in 1993. Its primary objective is to achieve distance insensitive and universal access to network capabilities throughout the province in an effort to support provincial economic development. The four networks involved in this endeavour are:

ACOA/Enterprise Network
This is a jointly funded project by federal and provincial governments that supports and develops information products for delivery via dial-up access. Rural based telecentres (information business support offices) provide information and assistance to small and medium-sized enterprises, non-governmental organizations, the public sector and educational institutions. As

of December 1993, 150 organizations had access to 25 databases and the six telecentres served 1000 clients a month.

STEM-Net

This is a jointly funded project by both federal and provincial governments, is a computer network for Kindergarten to Grade 12, and college educators, in Newfoundland and Labrador. It provides access to Internet services, electronic mail, library services and will develop bulletin board and on-line conferencing services. Interest has increased significantly over forecasts. As of January 1994, 3400 applications had been received from educators requesting access and 9500 hours of usage were recorded.

Telemedicine and Educational Technology Research Agency TETRA

This is a distance education interactive communications network providing distance education services in health and university courses. In 1993 the agency provided 7000 hours of programming through 210 sites throughout the province. It operates 8 network sites and a dial-access bridge. TETRA has undertaken a number of international activities including a teleconferencing system for a number of east African countries.

NLnet

This is the Newfoundland and Labrador regional network of CA*Net. As of December 1993, five sites outside St John's were operational with NLnet router and modem services. Frame relay technology is in use between Corner Brook and St John's. There are multiple sites in the St John's area.

PRINCE EDWARD ISLAND

Government

The most recent throne speech indicated that the government recognizes the importance of new infrastructure and indicated that, together with the private sector, they will be building an electronic highway for Prince Edward Island. This refers to PLINet which will provide information networking in the province and CA*Net access. The throne speech also stated that this network would be the backbone of other initiatives, such as the Island Health Information System, which will improve efficiency of health care.

Infrastructure

Island Telephone has installed a province-wide fibre optic network. This network complements existing microwave facilities operated by Island Tel. The company has also been pursuing the installation of digital switching facilities. Call management features are available in many communities on the island. Close to 8000 multi party lines were still in use in 1992. Unitel also provides telecommunications services on the island via a microwave network between New Brunswick and Charlottetown.

Cellular radio service is available from both Cantel and Island Tel.

Island Cablevision operates all of the cable systems on the island, with the exception of the system in Summerside. The Island Cablevision systems are all interconnected via a private microwave system, This permits the distribution of a common channel line-up to all locations. There are over 24,000 cable subscribers and 800 km of cable plant on the island.

Other Initiatives

For the last two years the PEI Federation of Agriculture has operated a network, FAN 2000, which provides training and information services such as commodity prices, weather reports and other database services.

NOVA SCOTIA

Government

The Nova Scotia government recently released a report by NGL Limited on an integrated approach to telecommunications facilities and services. It touches on many familiar themes on the role of government vis à vis the electronic highway and recommends the formation of the "Premier's Council on the Electronic Marketplace". It has been recommended that the Premier chair the council, which would be composed of twelve members (three from cabinet and the remaining nine chosen from Nova Scotia's opinion leaders. The role of the council would be to advance electronic highway and information infrastructure development by recommending how to:

- develop a supportive economic, policy and regulatory environment;
- reinvent government to become a client-focused, responsive, cost efficient provider of world-class services and leadership; and
- reinvigorate communities by stimulating the deployment and use of electronic highway services and applications throughout the province.

The report also makes a number of recommendations on areas such as procurement policy for the purchase of electronic goods and services, tax and regulatory structure, access, security and privacy, and the re-engineering of government services.

A multi-disciplinary interdepartmental implementation team has been formed to look at the study's recommendations. The government will conduct consultations with interest groups and the public.

The government also recently signed a Memorandum of Understanding with Maritime Tel & Tel(MT&T), which sets out common goals that each party will work towards. In particular, they have agreed to cooperate in developing the Nova Scotia electronic highway system, undertaking a cooperative marketing and image campaign, and reviewing and developing an implementation plan for the NGL report.

This agreement, signed on March 11th, has created some concern in the cable industry as the MOU has been interpreted as reducing cable companies to a secondary role in developing the electronic highway. The province maintains that this is not the case.

Infrastructure

Nova Scotia will have a 90% digital telephone network by 1995, according to Maritime Tel and Tel, up from 85% by the end of 1994. MT&T have extensive installations of fibre optic cable and digital microwave. Plans are also being developed for a province-wide digital radio trunking system and a wide area network. MT&T has become increasingly active in developing new network applications. One of their most innovative products is a televoting service that has been used successfully in both Nova Scotia and British Columbia.

Unitel operates a digital microwave network within the Province to provide telecommunication services. Extensive cellular radio coverage is provided by both MT&T and Cantel.

The largest cable systems in the province are Halifax Cable and Access Cable (Dartmouth), with over 215,000 cable subscribers and 8,600 km of cable plant. There are also several multi-system operators who have stand alone systems in numerous small communities.

Other Initiatives

College de L'Acadie
This is a distance-learning centre for the Acadian population. This centre uses audio/video and graphics facilities to link the six classrooms which are part of this program.

Network Nova Scotia
This is an audio conferencing network for distance education linking community colleges and universities in Nova Scotia used fir formal educational course delivery. It also acts as a coordinating body for distance education in Nova Scotia. Currently 21 sites throughout Nova Scotia are linked. The network is operated by the Nova Scotia Department of Education.

Nova Scotia Technology Network Inc (NSTN)
This is a private company offering Internet and networking services in Nova Scotia. Over 80 % of the Nova Scotia population will be able to use the NSTN services via a toll free telephone call and the province has the largest per capita connection levels to Internet in Canada.

Comm-Net
This is a pilot program under the leadership of the Community College of Cape Breton to provide training and education to remote areas of Cape Breton. It provides full audio and audiographics capability in four Cape Breton sites.

NEW BRUNSWICK

Government

Premier McKenna has appointed a Minister of state for the Electronic Highway. The Minister, Georges Corriveau, is responsible for the promotion and implementation of electronic highway applications within the provincial government, and also for the promotion of the province as an ideal location for EH industries.

The appointment of a Minister for the EH comes after the province partnered successfully with NB Tel on several projects to lure communications intensive industry to the province. The elimination of provincial sales tax on 1-800 service, and NB Tel's low long distance rates and modem network services have been successful in attracting call centre operators and telemarketers to the province. NB Tel estimates that in the last four years over 1500 hundred new jobs have been created by these firms.
The provincial government established a task force in September of 1993 to develop an electronic highway strategy. The task force, composed primarily of Deputy Ministers produced a report that contains recommendations on many areas, such as government being a model user, creating awareness, privacy and security standards, and regulatory responsiveness. One recommendation proposes that NB be used as a prototype development/market distribution centre for EH applications and services. Action on this report is now the responsibility of the Minister of State for the EH.

The provincial government has identified some regulatory obstacles in its efforts to promote EH services. In its view, a more flexible regulatory approach vis-à vis network service providers is necessary in order to develop and test new government services via the electronic highway and to position NB as a test bed for new applications.

Infrastructure

In November of 1993 NB Tel completed the conversion of its network to a completely digital system. NB Tel also has an extensive deployment of fibre optic cable, which rings the province. Services such as call management features, voice mailboxes, etc are now available to all NB Tel customers. The company is also conducting market trials on new services such as screen talk and have recently placed in service, in conjunction with Meditrust (mail order pharmaceutical company), a multimedia kiosk used to order prescription drugs from rural areas.

Unitel also provides digital network services via a digital microwave system and is planning to construct a telecommunications centre in Edmundston. Cantel and NB Tel offer cellular radio services in most areas of the province.

There are two main cable operators in the province. Fundy Cable serves 130,000 subscribers in the southern and northwestern parts of the province, while Cable 2000 serves approximately 50,000 subscribers in the northern and western areas. Fundy cable has had plans for deploying fibre optic cable in its systems for some time but have been delayed due to difficulties in negotiating pole attachment agreements with NB Tel. The main issue is the use of the fibre optic

cable by Fundy for non broadcasting services.

Cable 2000 serves its customers from a single headend and transports programming to its physically dispersed systems via the NB Tel fibre optic network. There are in excess of 180,000 cable subscribers and 7000 km of cable plant in the province.

Other Initiatives

Teleducation Program
The provincial government has been implementing information technologies applications to improve delivery of government services. They have established a teleducation program that provides community college and university level courses throughout the province. Courses are provided, using either audio conferencing, video conferencing, audio graphics or computer based training.

TeleEducation N B
This is part of the Department of Advanced Education and Labour and is considering the needs and approaches to access a province-wide distributed network that connects all learning centres with the delivering institutions and with Internet. Its top priority is to link schools for the delivery of courses, distribution of calendars, course information, content teaching, etc.

Service NB
The government is also conducting trials of these centres, which will be one stop shopping locations for provincial government services. Plans are to provide a mix of both walk in and electronic access.

Teleradiology
The province also is interested in the application of information technologies in health care, and is conducting a teleradiology trial between a rural hospital and a hospital in Fredericton.

ONTARIO

Government

Through its major Telecommunications Strategy Initiative (1992), the province has placed a high priority on accelerating growth in applications development and use, information technology growth, investing in education and training and, particularly within the government, acting as a model user and actively participating in all aspects of the initiative. Further, through the Province's Industrial Policy Framework, the government plans to raise the skill levels of Ontarians, increase technological capabilities/research, encourage the establishment of companies' home based activities in Ontario and, more germane to the issue, assist in the development of linkages and networks to facilitate the dissemination and retrieval of information.

The Province has established a Computing Sector Strategy (December 1993) which is intended to identify the strategic directions and tactical initiatives which the province must take to successfully compete in the new technology based information industry. During 1993 the Province also formed a Council for an Ontario Information Infrastructure, an advisory body whose recommendations are made to the Minister of Economic Development and Trade. Comprised of 16 members and 3 provincial deputy ministers, it will advise the government on an ongoing basis on such matters as identifying priorities and initiatives in the telecommunications and infomatics sectors, identifying trends and developments in telecommunications and information technology, and how the government can effectively utilize information technology and telecommunications in providing its services and day to day activities.

In addition, the government's Ontario Network Infrastructure Program (ONIP) is a four year ($100 M) capital funding program (beginning in 1993) intended to support projects in an effort to accelerate the development and use of a high capacity, interconnected, multimedia networks to homes, offices, schools, factories, and laboratories throughout the province.

Infrastructure

In Ontario, over 99% of households have access to telephone. In some remote locations communications is by radio telephone, which consists of an added radio link to the main public switched telephone network. Public telephone service is provided by Bell Canada, some 30 independent systems and the Ontario Northland Transportation Commission on a monopoly basis, while resellers and enhanced providers operate in a competitive market. Most independents interconnect with Bell Canada for long distance service. It is estimated, that there are currently some 75 resellers operating which offer a variety of switched and private line voice and data services. Some of the major companies include: Unitel Communications Inc, Sprint Canada, Fonorola and Smart Talk network.

With respect to facilities, both Bell Canada and Unitel have an extensive high capacity fibre networks along the Windsor to Quebec border and north to the Manitoba border. Common carriers (Bell/Unitel), cellular radio providers (Bell Mobility/Cantel), and the large cable TV operators (more notably Rogers/Maclean Hunter) also operate extensive microwave networks

throughout the province. An extensive radio based cellular system operated by Bell Mobility and Cantel is also available. Rogers and Shaw, who cover the majority of the cable subscribers, are in the final stages of upgrading their existing facilities with high capacity fibre, which will provide these companies with far more capacity than is required for their existing service offerings. Ontario also possesses a rather significant broadcast industry, from the many radio and TV originating stations (AM - 92, FM - 99, TV 29) to the approximately 400 cable television systems operating the province.

Toronto based Rogers Communications Inc's merger with Maclean Hunter Ltd will result in a 53 billion multimedia conglomerate that would serve over one bird of Canada's cable subscribers as well as have interests in publishing, broadcasting, cellular telecommunications and commercial printing.

Other Initiatives

Telecommunications Research Institute of Ontario
This is one of two centres of excellence in infomatics and telecommunications disciplines. It is headquartered in Kanata and is a centre jointly funded by the private and public sectors that supports R & D in the area of telecommunications and also supports collaborative projects.

Information Technology Research Centre
This second centre of excellence is headquartered in Toronto and is also jointly funded through private and public sources. Its main purpose is to sponsor research in information technology and to encourage the transfer and diffusion of information technology to industry.

Ottawa Carleton Research Institute Network (OCRI)
OCRI is a network that is utilized by participating companies, as well as the Ottawa and Carleton universities, who are actively involved in carrying out R&D activities in the infomatics and telecommunications disciplines. The network will provide the vital link with which these companies can conduct R&D related tests/trials and pilot projects. At present some of the participants in the OCRI project include National Research Council, Canadian Research Centre, Newbridge, Bell Northern Research as well as Ottawa and Carleton Universities.

Contact North
This is a Ministry of Education and Training-sponsored, not-for-profit initiative on distance education, which is enabling residents of rural and remote Ontario to obtain and upgrade their education. Students and teachers connect through telecommunications facilities (speaker phones and electronic blackboards) in which both can write in a collaborative manner.

MANITOBA

Government

Manitoba has taken steps toward mobilizing the province in becoming more competitive in the global market. In doing so they created the Manitoba Round Table on Environment and Economy and the Economic Development Board (EDB), both of which are chaired by the Premier, as well as the Manitoba Economic Innovation and Technology Council (EITC), which is chaired by the private sector and reports through the EDB. These organizations are designed to address the need for more effective leadership, consultation and partnership on economic growth policy. The EDB, the EITC, the Department of Industry, Trade and Tourism (IT&T) and the department of Rural Economic Development are all key branches in the provincial government in relation to the electronic highway due to their individual man dates.

Manitoba is proposing to direct some of the funding from the Canada/Manitoba Infrastructure Works Agreement to projects related to the information highway. This has taken some time to prepare but is now awaiting final approval and an announcement is expected soon.

The provincial government has released a policy paper entitled *Framework for Economic Growth*. Points of interest as they relate to the electronic highway include: Innovation, Rural Economic Development and Infrastructure Investment. Specifically:

Innovation - An Economic Innovation and Technology Council (EITC) has been formed to address the need for more effective partnerships with private industry. The EITC administers a $10 million Economic Innovation and Technology Fund.

Rural Economic Development - Government operations are being decentralized to rural areas and will therefore need high-speed communication lines. Major communications infrastructure improvements in rural areas are being provided through government initiatives.

Infrastructure Investment - Manitoba is committed to investing in the ability to move information - ideas, data and images - to increase competitiveness and trade. They are taking a wider approach to infrastructure, including research and development infrastructure. The commitment to the establishment of Telecommunications Research Labs is an example of this.

Infrastructure

In spite of the fact that the Manitoba Telephone System (MTS) is a provincial crown corporation, the provincial government supports competition in telecommunication services thus facilitating the introduction of new services by Unitel and various resellers; telemarketing is also being emphasized.

MTS offers service to 98% of the population throughout the province. Province-wide individual line service to rural areas and digital switching will be provided by 1996. Extensive cellular telephone services are offered to the more populated areas in the province by both MPS and Cantel. Unitel is now expanding its network in the province.

MTS and its partners are developing a broadband system which will link all 74 hospitals in Manitoba, enabling the rapid exchange of radiological imaging and other diagnostic data.

All regulation of telecommunication services is now under the jurisdiction of the Canadian Radio-television & Telecommunications Commission.

Cable television service is currently offered to 75 % of the population throughout the province. Planning is underway to upgrade the existing service and to extend coverage to rural subscribers. The latter will be achieved by way of an extensive microwave network.

Other Initiatives

Canada Business Service Centre (CBSC)
Manitoba is a partner in a pilot project called the Canada Business Service Centre (CBSC) led by Industry Canada. This project links a wide range of services and programs offered by the federal and provincial governments and private sector associations.

Smart Health
Manitoba has established a Smart Health project which links all pharmacies and three hospitals in Winnipeg.

Manitoba Community of the Future Project
The province has established the Manitoba Community of the Future Project, which will apply current telecommunications technology to bring new opportunities to rural Manitoba. This project will focus its initial efforts on distance education throughout the province using fibre optics and cellular technology.

SchoolNet and MBnet
The province participates in the SchoolNet and MBnet projects.

Interactive Television
The province utilizes interactive television in a division to deliver courses to rural schools.

SASKATCHEWAN

Government

The government has established an Advisory Committee mandated to develop a vision, policies, and strategies which will maximize the use of telecommunications and information technology. The recommendations from the committee are:

- to be competitive, it is essential that the regulatory environment, standards and rules are open and global in nature and content.
- that Saskatchewan should provide an affordable, effective and universal data network service interconnected seamlessly with international networks.
- that Saskatchewan should establish a non-profit organization that includes users and providers from the public and private sectors to administer the network. SaskTel would remain responsible for the technical management and coordination of the network.
- that greater emphasis should be placed on adapting information technology to the area of education.
- that Saskatchewan should build on existing telecommunication foundations, through SaskTel and that SaskTel should form partnerships/alliances with the private sector to share expertise and approach new markets.
- that SaskTel and the cable television industry should cooperate to develop a seamless infrastructure.
- that information technology should be a priority for the government and emphasis should be given to tax incentives, supporting R&D programs, promote partnerships and become a major user of information technology.

Infrastructure

Telecommunication services are provided exclusively by SaskTel throughout the province.

The provincial government has retained regulatory control of telecommunications for a five year period in order to facilitate the transition of SaskTel to a competitive environment. There has been no indication that the Government of Saskatchewan favours increase competition.

SaskTel has completed its program to provide individual line service throughout the province. It will have completed its program to convert its entire network to digital by 1995. SaskTel offers an extensive province wide mobile network. It offers cellular service in the more populated areas.

Cable television service is available to virtually all communities with populations over 1500. The industry is dominated by seven providers.

Other Initiatives

Provincial Data Network
SaskTel is proceeding with the development of a province-wide data network, initially at twelve centres, allowing access to public information services, electronic mail, information providers, Sasknet and Internet.

Saskatchewan Communications Network (SCN)
The offers educational services throughout the province through its satellite and fibre optic networks.

Industry Profile

There are about six significant manufacturers in Saskatchewan. SED Systems and Develcon Electronics have been the dominant firms. Research and development capability is supported by the Universities of Saskatchewan and Regina and by the Telecommunications Research labs in Saskatoon and Regina. The latter were established as a joint undertaking amongst industry, academia and government.

ALBERTA

Government

The provincial government is now in the process of formulating its policies and strategy regarding the information highway. As a first step it co-sponsored a study in cooperation with the Alberta Research Council. This study has recommended a single regional network and proposed a strategic business plan. The main recommendations from this study are:

- that the Alberta Government, through the Department of Economic Development and Tourism and the ArNet consortium, must set a goal to create a single shared Regional Network within Alberta;

- that the Alberta Government must develop a plan for networking to ensure that the Alberta Regional Network supports government fiscal and economic policies and priorities, has an adequate infrastructure to meet the needs of Albertans, and provides equitable and affordable access to all user sectors.

- that the Alberta Regional Network should be established as a not-for-profit corporation controlled by a board representing the key networking stakeholders within the province.

- that the Alberta Regional Network should be established by merging the current ArNet network with the Alberta portion of the WurcNet testbed and with the PWSS network, and upgrading the merged network to the capacities required to meet current user demands.

BAIS

Alberta Economic Development and Tourism has set up the Alberta Business Atraction Information System (BAIS), which combines a communication network, database and electronic brochures to market Alberta communities and provide information to community leaders. The system will be accessible to businesses and communities through the Internet.

ABCInfo Program

The Access to Business and Community Information (ABCInfo) Program provides funding to Alberta municipalities to participate in the BAIS program. The province contributes a matching grant (50% of the costs) to a maximum of $50,00 per region or $10,00 per municipal council.

Infrastructure

Telecommunication services are provided throughout Alberta by Alberta Government Telephones except for the city of Edmonton, which offers its own service through EdTel. Extensive private networks are also in place throughout the province primarily in support of the electric power and resource industries. There have been indications that these networks may be expanded to provide dedicated telecommunications services but nothing has materialized as yet except for firm plans by Northline telecommunications for a broadband network extending from the US border to Edmonton.

AGT has virtually completed its program to offer individual line service throughout the province. A program to convert to digital switching has completed throughout the province. Extensive high capacity backbone networks, both common carrier and private, are in place throughout much of Alberta. Mobile services are offered throughout most of the province primarily in response to the resource sector needs. Cellular mobile service is offered in the more populated areas.

As AGT is no longer a provincial crown corporation, it is regulated by the Canadian Radio television & Telecommunications Commission. EdTel is currently regulated by the City of Edmonton.
Cable television service is offered to virtually all communities with populations above 1500.

Unitel of offers service to dedicated clients but has deferred any expansion due to regulatory difficulties – i.e. a dispute over the level of cross-subsidization it must provide to AGT in support of universal telephone service.

Other Initiatives

ArNet Network
This regional network is a joint initiative of the Alberta Research Council, the University of Alberta and the University of Calgary.

PWSS
The Alberta Department of Public Works, Supply and Services operates extensive province-wide facilities, including a computer network.

WurcNet
The Western University Research Consortium on High Performance Computing is being established to implement a high speed, high performance network connecting universities and research organizations. Efforts are underway to develop interest in Manitoba and Saskatchewan.

Industry Profile

Alberta has a relatively broad base of small and medium sized firms offering developmental and manufacturing service. The provincial government actively supports the industry, both with extensive financial support and in promoting R&D capability through such initiatives as the Telecommunications Research Labs and the Microelectronic centre.

BRITISH COLUMBIA

Government

British Columbia policy on the information highway includes:

- the development of a provincial telecommunications policy framework and strategy is a priority within the British Columbia Government;
- recognizing the need for a vibrant telecommunications industry that is able to compete in world markets;
- recognizing that the primary objective of regulation must be to protect the basic subscriber's interest;
- developing strategies in order to ensure that electronic highway initiatives in BC are developed in a coordinated manner and fulfil provincial objectives, and that provincial/territorial governments will have adequate avenues for input in the development of national policies regarding information highways;

The Province is anxious to determine the Job creation benefit derive from the development of the electronic highway system before ranking it amongst its top priorities. The current BC government does not provide any significant measure of direct monetary support to firms developing applications for information highways but the Federal/Provincial/Municipal Infrastructure Program could prove to be a modest source of funding for related infrastructure projects.

The BCG has played a proactive/supportive role in the development of several provincial initiatives, such as:

Rnet BC - a non-profit society created in 1993 by industry and academia in order to build an experimental high speed research network between key research institutions in BC, develop broadband applications and, provide a western link to CANARIE. Rnet is a consortium of interested parties, not a network operator. RNet was recently awarded $2SOK, from CANARIE, as a contribution towards the establishment of the experimental network;

Provincial Learning Network (PLnet) - a major initiative that is currently under development and is a backbone network providing database connection and interactivity between public educational institutions, libraries and museums. It will provide access to Internet/CA*Net/ CANARIE. The 2000 + institutions are to be on line by the fall of 1995;

BCnet - has been the network for the R&D community in BC since 1987. It was the first such network in Canada and it is currently being upgraded - their most advanced customers are now using a transmission speed of 10 to 20 million bits/sec. BCnet is the regional Internet/CA*Net/ CANARIE backbone network;

BC Systems Corp - provides telecommunications and data services to the BCG and its crown corporations;

Research Computing BC (RCBC) - an advanced computing facility in Victoria. A memorandum of understanding has recently been signed with Alberta's High Performance Computing Centre, to form a joint Canadian High Performance Computing Centre, which could provide computing services nationally via CANARIE;

BC OnLine - provides access to registry information in the databases of BC Government land titles, companies and personal property registries;

Teleplan - system whereby doctors can bill the Medical Services Plan by computer;

SPAN (Shared Provincial Access Digital Network) - BC Systems Corp is developing an advanced digital services network to provide advanced data services with 300 LANS connecting 200 communities in BC;

Pharmacare Network - will be a part of the SPAN network connecting 1300 pharmacy outlets in the province;

FINES- system used by the Motor Vehicle Branch to aid in the collection of fines, and improve customer service and communication between of offices;

LandData BC- provides access to information data bases regarding land and land uses;

Discover BC - toll free service offering personalized travel information, bookings and reservations across BC.

Infrastructure

Telecommunications services in BC are primarily provided by BCTEL which serves approximately 2 million lines representing 98 per cent of the population and accounts for over 90 per cent of telecommunications assets and revenues in British Columbia.

Northwestel provides service to customers in the northeast corn of BC (in addition to the Yukon and the NWT).

Prince Rupert Telephone is a municipally owned company providing local service to 9,000 customers in Prince Rupert and surrounding areas.

Westel (BCRail) has recently received permission firm the CRTC to offer competitive long distance voice services (April of 1994). Westel is currently embarking on a $I 0 million expansion of digital facilities for Victoria and the Okanagan and is deploying digital switching in order to provide competitive telecommunications services.

Starcom International Optic Corp. has received permission from the CRTC to provide

telecommunications services between Vancouver and Seattle. Construction is presently underway. Starcom is a "carrier's carrier" with voice, data and image capabilities.

Unitel and various resellers also provide competitive long distance services and, gaining equal access to existing carriers in 1994.

BC Hydro will spend $35 million dollars for a digitally trunked mobile radio system.

Cable television is available in 180 communities in BC. Two major cable operators operate 31 systems in BC. The balance is locally owned and operated.

Other Initiatives

Pacific Place
Concord Pacific Developments and BC Tel are building the world's first fully operable fibre optic community in downtown Vancouver. This $3 billion project consisting of 40 residential towers (8500 units), 8 commercial building, 2 hotels, and a sports arena, will include extensive use of interactive video, security monitors, high speed data transmission and computer networking.

Asynchronous Transfer Mode (ATM)
MPR Teltech/Newbridge Networks Corporation are developed the first working Asynchronous Transfer Mode (ATM) switch, which is now being manufactured by Newbridge.

Ubiquity Broadband Network Services
BC Tel's Premium Video Conferencing face-to face, interactive voice, data and image communications can link up to eight locations simultaneously. Royal Jubilee and Victoria General Hospitals: are using *Ubiquity* to link the two training hospitals in order to improve the quality of education for interns and the quality of services provided to patients.

Burnaby 2000
BC Tel's fibre optic backbone network is linking schools within the Burnaby School District using a multi-media information system.

The Open Learning Agency (OLA)
OLA works in partnership with schools and employers to deliver education and training courses, at college and university level, to various sites throughout British Columbia using a variety of telecommunications technologies: TV, teleconferencing, videoconferencing and computer networks. OLA also houses the BC Educational Telecommunications Authority (the Knowledge Network), which delivers its educational TV to over 500,000 viewers per week.

Science World Exhibit
Science World and Industry Canada: are establishing a permanent public exhibit/window on the information highway for the 600,000 plus visitors to Science World each year. It will provide a live, facilitated link to the information highway for exploration, discovery and demonstration of related technologies.

YUKON

Government

An internal government Telecommunications Strategic Plan has been developed which recognizes the importance of enabling Yukon telecommunications infrastructure development while ensuring overall cost effectiveness for the government as an organization. The territorial government has a joint priority of stimulating the economy and reducing government expenditures.

The Government's primary consideration is to ensure that a fair and equitable level of service is delivered to Yukon subscribers. Residents of the Yukon are heavy telecommunication users with 95% of the basic telephone subscribers using switch long distance services. The average monthly long distance revenue per network access service (NAS) is $109.00 (compared to $38.00 for BCTel and $36.00 for Bell).

Due to the non-competitive nature of the Yukon long distance market, the YTG has been very active in the various telco rate filings, registering as both an intervener on behalf of the public and as an interested party to the CPTC proceedings.

Two major studies have been completed in the last two years including: °Yukon Telecommunications Review and the Government of Yukon's internal Telecommunications Strategic Plan.

The Yukon government has played a proactive/supportive role in the development of initiatives, such as:

YNet-The Government of Yukon Information Systems Branch is developing a high speed TCP/IP router based network to provide enhanced services (including remote networking) and LAN connectivity throughout Whitehorse and to the major Yukon communities; and

YukonNet Operating Society-a community based non-profit organization comprised of members from the research, education and business sectors with the goal of getting the Yukon "connected to a national or international network.

Infrastructure

The primary telecommunications service provider for the Yukon is NorthwesTel Inc. The total operating area for the company spans four time zones and close to four million square kilometres. Approximately one half of the total subscriber area population of 100,000 have network access service. The Yukon has a population of 30,000 and a subscriber base of 15,000. Communities receive their telecommunications services via analog radio service or satellite. NorthwesTel has embarked on a digital line upgrade program with a connection from Whitehorse to Grande Prairie (main trunk route to the rest of Canada).

The Government of Yukon owns and operates a Multi-Department Mobile Radio System which

is a territory wide trunked VHF digital radio system designed to provide complete highway coverage within the Yukon Territory. There are 45 network repeater sites situated at various NorthwesTel microwave tower sites providing local area mobile coverage. Each repeater is trunked to a central switch in Whitehorse via microwave radio channels.

All but one of the central office switches in the Yukon are digital. The conversion time frame for the one remaining switch is unknown due to a severe economic downturn in the community. Digital interexchange lines are currently in place to two communities. Complete conversion was scheduled for completion by 1998 however the plans have been subject to revisions on a yearly basis. Digital connection capability between the Yukon and southern Canada is expected by fall of 1994.

Cable Television Networks: Cable television is currently available throughout Whitehorse. NorthwesTel have a proposal in place to purchase the two major cable companies with the intent to use their Telco presence in other communities to roll out cable service territory wide.

NORTHWEST TERRITORIES

Government

The government commissioned a study entitled Connecting the North: Defining Users' Needs" to develop a distance education and communications strategy for the Arctic. This study identified several hurdles as critical to the improvement of current and future services. Specifically these are technical infrastructure limitations; concentration of resources in southern venues; communication tools designed for English-speaking, print based users; lack of training; lack of potential of return on investment.

A four point strategy has been identified to address these impediments.

1) conduct an inventory of applications and projects which attempt to utilize newer, intelligent telecommunication in the delivery of services.

2) establish a coordinated R&D fund.

3) develop an information dissemination and awareness service to provide basic information and training on the benefits of emerging communication technologies and their northern applications.

4) hold a symposium to launch a northern connection strategy.

The symposium was held in November 1994.

Infrastructure

NorthwesTel has a monopoly on common carrier services throughout the region. Service is offered by trunked microwave networks in the more closely spaced communities and by satellite service elsewhere. Cellular telephony is offered in Yellowknife.

Broadcast services are offered in most communities either through a local cable television undertaking or a local rebroadcast system. Signals are received at the community level via satellite.

Other Initiatives

Arctic college is utilizing a radio network for distance education.

C

Canadian Libraries: Network 2000 Ontario Initiative

NETWORK 2000 ACCESS PRINCIPLES

CLA Statement: "information and Telecommunications Access Principles"

Preamble

The convergence of computers and high-speed telecommunication networks provides increased opportunity for public access to information and participation in the democratic processes of society. Conversely, access and participation could be reduced through the imposition of user fees and centralized control.

Librarians, libraries, and library organizations will work to assure the "public good', is represented in all government and corporate initiatives for information dissemination and telecommunications policy. Cooperation with other organizations and public interest groups to protect the social interest will strengthen the efforts of the library community.

All people have the right to:

1. Literacy

- The opportunity to learn to read and write is fundamental for all people. Basic literacy includes numeracy and information literacy. Literacy is an important requirement for participating in the economic, social, cultural, and political life of the country.

- Everyone should have the opportunity to acquire the necessary skills to find and use information.

2. Universal, Equitable and Affordable Access

- Access to basic information and telecommunications network services should be available and affordable to all regardless of factors such as age, religion, ability, gender, sexual orientation, social and political views, national origin, economic status, location, and information literacy.

- Diverse sources of information must be developed through encouraging non-profit organizations and community groups to provide information and opinions and by preventing information monopolies.

- Opportunities should be created for broad public participation in the determination of information and telecommunication policy.

3. Communication

- Individuals have the right to create, exchange, access and receive the widest range of ideas, information and images.

- Individuals should have the right to choose what information to receive and what not to receive and give and not give including that which others may find objectionable.

4. *Public Space on the Telecommunications Networks*

- Government information is fundamental to participation in the democratic process and should therefore be accessible in a current, timely, accurate, and comprehensive manner.

- Access to government information should be guaranteed through active programs of dissemination.

- Opportunities to communicate electronically with elected and appointed government representatives is a vital extension of democracy.

- Government policy should encourage and support archiving of information in support of the collective human memory.

- Government policies should encourage and support the development of community information networks, such as Freenets.

- Government should provide resources for libraries and other community organizations to make electronic access to information available and to provide training to the public in the use of such technology.

- Individuals have the right to a safe ergonomically-sound environment and appropriate training or re-training when new technologies are introduced.

- Social policies accompanying the introduction of new and more efficient information technologies must emphasize benefits to the whole population, such as greater leisure time and shorter work weeks rather than narrow economic interests.

5. *Privacy*

- Privacy of personal information should be carefully protected and extended.

- Personal data collected should be limited to the minimum necessary and only after the prior written approval of the individual affected.

- Personal information collected for one purpose cannot be traded or sold without the express written permission of the individual affected. Individuals should have the right to examine personal information collected by government and corporations and have mistakes corrected at no charge.

NETWORK CLUSTERS

Network Name	Public Library Membership	Network Partners
Cochrane Automated Library Project	Cochrane	Community, Cochrane, Iroquois Falls, Black River-Matheson Board of Education; Cochrane Iroquos Falls-Black River Matheson Roman Catholic Separate School Board
DRIN (Durham Region Information Network)	Ajax, Clarington, Oshawa, Pickering, Scugog, Uxbridge, Whitby	Community, Multi-type library
GAP (Group Automation Project)	Dundalk, Durham, ErinTwp, Fergus, Flesherton, Grand Valley, Hanover, Listowel, Markdale, Meaford, Milverton, Mitchell, Shelburne, St. Marys	N/A
807 CITY	Thunder Bay	Open to all public libraries in 807 calling area
HALINET	Burlington, Halton Hills, Milton, Oakville	Multi-type institutions, Community
Hamilton Wentworth FreeNet	Hamilton, Dundas,	Wentworth County
Hastinet	Trenton, Belleville	
HOMEnet	St. Thomas, London, Stratford, Middlesex County, Huron County	
INFO (information Network for Ontario)	All public libraries in Ontario, either directly or indirectly	Public Libraries of Ontario. Ministry of Culture, Tourism and Recreation, SOLS, OLS- North, Metro, ISM- Library Information Services

Network Name	Public Library Membership	Network Partners
Innisfil - Bradford West Gwillimbury	Innisfil - Bradford West Gwillimbury	
Kent County - Wide Library Association	Kent County, Chatham	
Lanark information Highway Project	Almonte	
Manitoulin Island (Manitoulin island Resource Sharing).	Assignack, Little Current, Carnarvon, Gore Bay, Billings-East Allen, Tehkummah	None
MULTICAT	Toronto, East York, York, Etobicoke, Scarborough, Metro	Metro is a partner with SOLS & OLS-North in the development of the Information Network of Ontario. MULTICAT is part of INFO
MULTINET	Aurora, Markham, Newmarket, Richmond Hill, Vaughan	Community, Multi-type library, Private Sector
NAG (Northern Automation Group)	Dryden, Atikoken, Kenora, Keewatin, Sioux Lookout	None
NAN (Niagara Area Network)	Fort Erie, Grimsby, Lincoln, Niagara Falls, Niagara-on-the-Lake, Port Colborne, St Catherines, Simcoe, Thorold, Wainfleet, Welland	None
NCF (National Capital FreeNet)	Kanata, Nepean, Ottawa, Rideau Twp, Gloucester	Community, Multi-type library, Private Sector

Network Name	Public Library Membership	Network Partners
OLC (Ontario Library Consortium)	Bruce County, Elgin County, Huron County, Essex County, Haliburton County, Frontenac County, Kent County, Lennox & Addington County, Middlesex County, Oxford County, Northumberland County, SD&G County, Victoria County, Waterloo Regional, St. Thomas, Port Hope, Cobourg, Owen Sound	Some Public Schools have purchased the database on CD-ROM
PACLAN (Peterborough County Library Automation Network)	Peterborough	
Peel*Net	Mississauga, Caledon, Brampton	
PLAN (Partnership for Library Automation Networking)	Burleigh-Anstruther, Ennismore, Lakefield, Harvey Twp. Otonabee, Cavan	None
SLAG (Sudbury Area Libraries Automation Group)	Espanola, Nickle Centre, Rayside-Balfour, Valley East, Walden	Community
SNAG (Superior North Automation Group)	Terrace Bay, Schreiber, Nipigon, Red Rock, Dorion	Terrace Bay school boards
Sudbury Gateway	Sudbury	
Toronto Free-Net Inc.	Toronto, East York, York, Etobicoke, Scarborough, Metro	
Windsor Regional Free Access Network	Windsor	

D

Community Based Networks

COMMUNITY ELECTRONIC NETWORKS ("FREENETS")

Telecommunities Canada

Following a meeting in Ottawa in August 1994, representatives of community network associations agreed to implement a national organization - Telecommunities Canada - to address the relevant issues affecting them all. Criteria for membership in Telecommunities Canada are as follows:

- operation on a non-profit basis
- legal membership open to every citizen in the community
- provision of equitable access to all citizens in the community
- encouraging exchange, publication and access to the broadest possible range of information of interest to the community
- creation of connections to other computer-based networks to allow free flow of information
- membership subject to periodic approval by the board of directors

Member Networks

As of January 26th, 1995, there were 55 community organizations across Canada involved in organizing or operating a community network, with 14 fully operational and 5 others operating in test mode. Of the remaining 41, 14 expect to be open by June 1995.

With the exception of one community network hosted by a school district, all are governed by voluntary associations or societies. BC, Alberta, Manitoba, Ontario and Nova Scotia have operating community networks. British Columbia, with 7 community networks up and running, has more than any other province and BC and Manitoba are the only provinces with established provincial umbrella organizations for the support of community network development.

Approximately half the community networks use some variation of the word "freenet" in their name but some other common variations use words such as "infonet" "community net" "freespace" etc. Telecommunities Canada has compiled a directory - Canadian Community Networks Directory - that lists 86 people as contact names.

The typical organizational structure is:

- a small executive or steering committee (3-5 people)
- an elected board of directors (up to 12 people)
- a subcommittee structure

Users

It is estimated that approximately 150,000 members are registered in the 14 operating centres. Membership figures are available only from 5 of the 14 networks in operation. There are currently 80,00 registered members in Prince George, Victoria, Edmonton, National Capital FreeNet and Toronto and projections for these networks are in the region of 300,00 by the end of 1995. Demands on these networks are very heavy.

Listing

Name	*Province/Territory*	*Status*
Campbell River Freenet	BC	Organizing
CIAO! Free-net	BC	**Operational**
Cranbrook	BC	?
Fort St John Freenet	BC	?
Fraser Valley Freenet	BC	?
Gulf Islands Internet Access Committee	BC	Organizing
Kitimat	BC	?
Mount Arrowsmith Free-net Association	BC	Organizing
Nanaimo Schoolsnet	BC	**Operational**
Prince George Free-net	BC	**Operational**
Quesnel Free-net	BC	?
Rocky Mountain Infonet	BC	Organizing
Sea to Sky Free-net	BC	**Operational**
Vancouver Regional Free-net	BC	**Operational**
Victoria Free-net	BC	**Operational**
Calagary Free-net Association	AB	Test Mode
Edmonton Freenet	AB	**Operational**
Red Deer Free-net	AB	?
Great Plains Free-net	SK	Organizing
Saskatoon Free-net	SK	Organizing
Blue Sky Freenet of Manitoba Inc	MB	**Operational**
Eastmanet	MB	Organizing
Searden Free-net	MB	**Operational**
Atikokan Community Network	ON	Organizing
Collingwood Community Network St. Comm.	ON	?
Durham Free-net Inc	ON	Organizing
Freespace Telecoms Development Group	ON	Organizing
Guelph Freespace Steering Committee	ON	?
Halton Community Network	ON	**Operational**
Hamilton-Wentworth Freenet	ON	Organizing
HOMEnet	ON	Organizing
Lanark County Network Project	ON	?
National Capital Freenet	ON	**Operational**
Niagara Community Infonet	ON	**Operational**
North Shore Community Net	ON	Organizing
Owen Sound Freenet	ON	?
Sarnia Community BBS	ON	Organizing
Sudbury Regional Community Net	ON	Organizing
Thunder Bay Free-net	ON	?
Toronto Free-net	ON	**Operational**
Wellington Freespace	ON	Organizing
Free-net Montreal	PQ	Organizing
Fredericton Area Freenet	NB	Organizing
Cape Breton Community Network (CB Net)	NS	Organizing
Chebucto Freenet	NS	**Operational**
Huron Valley Free-net	NS	Test Mode
St John's OnfoNET	NF	Organizing

Funding and Sustainability

Freenets have been funded by a variety of methods including:

- donations
- project contracts
- product donations
- federal/provincial establishment grants
- in-kind services from municipal governments and other primary sponsoring agencies
- membership fees

The future of freenets is a subject for debate. The as yet unconfirmed but widely held belief that the Telecoms will provide Internet access to every home in Canada in the foreseeable future could serve to make the need for freenets redundant. However, their continued existence may be necessary of the charges for commercial access to the Internet is not affordable to the vast majority of Canadians.

The establishment of freenets can be considered a spur to the Telecoms to provide an affordable service. In the long term the need for freenets may vanish although some communities may prefer to be more in control of their own access to the Internet and shun commercial provision. The problem will be how the community manages to pay for this type of access.

COMMUNITY INFORMATION ACCESS CENTRES OF CANADA (CIAC)

Following extensive community input, CIAC was incorporated as a non-profit corporation in June 1994.

CIAC is currently managed by a small executive committee of the Board consisting of a President, Treasurer, Vice President & Director of Communications, Director of Corporate & Media Relations, Director of Technical Development and an Acting Director for the Prairie Region.

The main task of the Board is to fund raise and to assist communities across Canada to set up CIAC centres. It is currently also in the process of setting up an Advisory Board with representatives from business, labour, government, the education and library sectors and other relevant community organizations.

Objectives

The goals of the organization were noted in its articles of incorporation:

The object of the Company is to promote computer literacy, and to promote equal opportunities to all consumers, workers and businesses in the information economy and to promote universal access to information, especially in all electronic formats, through providing community access to equipment, programs and training by:

(a) establishing Community Information Access Centres that provide access to equipment, programs and training for electronic communications on a non-profit basis;

(b) liaising with other relevant organizations in both the public and private sector to improve public access to and awareness of electronic information systems;

(c) ensuring, where possible, all sectors of the public irrespective of income, race, gender, and physical or developmental disabilities have access to the Centres;

(d) showcasing state-of-the-art information technology equipment, programs, products and services;

(e) providing education in business development and entrepreneurship through the use of information technology

(f) raising public awareness of relevant issues in universal public access to information;

(g) promoting public education in health and wellness in the use of electronic information systems; and

(h) promoting Canadian culture in relation to electronic and multimedia communication forms.

CIAC Centres

Broadview-Greenwood
CIAC's pilot centre in Toronto was officially opened to the public in February 1995. It has an elected board of directors and 27 contracted volunteer members. It is situated in a shop front location on a busy main artery. It is staffed by participants and a coordinator from the Youth Service Canada federal program of Human Resources Development.

Most of its equipment has been donated by the private sector and its operating costs have been met so far by donations from the private sector. It is now generating a small revenue stream from user fees. It is hoped that it will be accepted for a continuation of the Youth Service Canada program and that the revenue stream will increase as publicity about the centre is more widely disseminated.

VitalNet
CIAC's first centre in Manitoba is located in South West Winnipeg. It currently has twelve members, who constitute an interim board. The Centre will be located in a neighbourhood school, with separate access. Funding for the Centre has been arranged and its opening will be announced shortly.

Other Centres
Further centres are being developed in Toronto, Atikokan, Winnipeg and Ottawa. Interest in setting up centres has been expressed from across Canada. An implementation package for setting up a CIAC centre is included as part three of this report.

Other Activities

CIAC is active in furthering the development of information technology awareness in several ways, and a communication policy is being developed to bring awareness of the need for better access to a wider audience.

As part of this initiative, CIAC was the joint sponsor with IHAC and DoI of a workshop on the problem of access called "Bridging the Gap".

It is intended to create an electronic network to assist liaison between all those supporting the CIAC objectives.

E

Private Networks

Canada has a large number of private networks for business, government, research, education and community interests. Most of these lease private lines from telecommunications carriers to establish dedicated networks which provide services customized to the specific requirements of their users or at lower cost than their public network equivalents.

LANs

Local Area Networks (LANs), which are high bandwidth networks used to link personal computers with shared servers and other networks, are now the commonest type of private network -- they are found not only in large businesses and institutions, but also in many SMEs. A LAN may link a few computers in an office building, or extend over a university campus, a hospital complex or a factory. LANs may be further linked in regional, national or international networks. The best known example of an international computer communications network is the Internet, which interconnects some 10,000 networks and over 20 million users in the US, Canada and 130 other countries. Internet growth is explosive - the numbers doubled over the last year and are growing at 10% per month.

Commercial Networks

Large organizations, such as banks, insurance companies, utilities, airlines and governments have long used private networks for direct support of their operations, marketing or related activities. Examples include SWIFT, the international network for inter-bank transfers (used by some 2,600 banks in 90 countries), the Sabre and Gemini computerized airline reservation systems and the federal Government Telecommunications and Information Services (which is the largest private network in Canada). Many industry observers argue that Canada lags behind the US in the development and use of high bandwidth private networks because of the much higher tariffs for such lines in Canada.

Educational and Community Networks

Canada also boasts a hierarchy of research, education and community networks. These are organized by particular interest groups or communities fir the exchange of information and communications geared to specific tasks, such as research, education, and access to public information. Canada's backbone research network is CA*Net plus the provincial networks.

F

Content Providers

New Opportunities

The ability to transmit, reconstitute and reproduce, in digital form, voice, text, graphics, images, sound and full motion video will open up new markets and ' opportunities for creators and producers of cultural and other content-based products and services. Production and distribution of existing cultural products and services in broadcasting, film and video, sound recording and publishing will all be affected. Moreover, new multimedia products and services are emerging which take advantage of new technologies to combine existing media and content in order to produce new products, applications and services. Opportunities abound for economic growth, job creation and exports in content-based services. While statistics on newer media are scarce, Frost and Sullivan Market Intelligence estimated that the worldwide multimedia market was $7.2 billion in 1993 and would jump to $24.3 billion by 1998.

Electronic Marketplace

The Canadian Information and Communications Infrastructure will create a new electronic marketplace for creators and producers of cultural and other content-based' products and services and will bring about a revolutionary change in the amount and type of information available to consumers. It will be possible to access multimedia services and exchange data in any format – from voice to sound to music, text and graphics to image and full motion video – as easily and confidently as we now make a phone call.

Content-Based Products and Services

Content-based products and services, along with software applications, will form the cargo on the electronic highway. Indeed, many industry observers suggest that, at least initially, entertainment media such as video-on-demand and interactive games will drive deployment of advanced networks.

Examples of other content-based services include film and video archives, sound recordings, libraries and databanks, digital reproductions of art, financial services, news and information, publishing and advertising, education and training, home shopping, and business presentations.

The Cultural Sector

Canada has already achieved stable and growing industries in the cultural sector in addition to the electronic publishing and database industries. Statistics Canada estimates that, for 1990-91, the arts and culture sector directly contributed 2.4 % of GDP ($ 14.7 Revenues for the billion) and generated direct employment exceeding 332,000 jobs. Cultural industries alone totalled $13.4 billion, divided as follows: broadcasting and cable ($4.1 billion), newspapers ($3.5 billion), film production, distribution and exhibition ($2.6 billion), book publishing ($1.6 billion), periodical publishing ($0.9 billion) and sound recording ($O.7 billion). These industries included approximately 7,600 firms, an increase of over 20% from 1986-87.

Electronic Publishing

Canada's electronic publishing and database industry has also grown steadily, branching out from the electronic publishing subsidiaries of Southam and Thomson to establish specialized strengths in financial and legal information. In Canada, a 1992 survey found some 90 Canadian firms selling information for profit and generating annual revenues of $250 million. The federal government alone has over 7,500 electronic holdings, involving annual expenditures of $1.5 billion for their collection and management (eg. statistics, geo-reference and polling data). Studies have shown that Canadian companies and organizations control the vast majority of Canadian content databases.

There is a potential to develop a very dynamic multimedia industry in Canada capable of providing a wide variety of content services. One challenge will be to encourage the cultural industries, including agencies such as the CBC and the National Film Board, to seek wider markets, work (where advantageous) with technology suppliers, and support Canada's creators in developing new information commodities, in areas such as entertainment, personalized learning and business training. Distribution channels must be strengthened and Canadian firms must act quickly to exploit markets for new services, otherwise they risk being pushed aside in both foreign and domestic markets for new information services and products.

Access to the Information Highway

Part Two
A Comparative Needs Analysis

"Canada must adopt a decentralized 'community-initiated' S & T strategy if it is to properly use science to achieve economic growth and other social goals."

Hon. Jon Gerrard Secretary of State for Science, Research & Development
Science Bulletin Vol 6/No7 Sept 1994

"In modernizing our economy, we need to modernize the means that government uses to encourage investment and to serve as a catalyst in economic growth. The information and communications revolution means that new opportunities for sustained economic growth in all regions of Canada-rural as well as urban areas-are available if regional development policies are adapted to the demands of communities in the 1990s."

Creating Opportunities, Redbook, 1993

INTRODUCTION

This report has been divided into three sections that reflect the critical issues for the creation of viable centres for the introduction of information technology to Canadians.

The first section addressed the issue of the technology context, in that it looked at what was happening in information technology both across Canada and abroad. It was necessarily partial and merely a sampling of the multitude of information technology initiatives that are taking place across the world. However, if it is intended to open centres where individual Canadians can, irrespective of income or any other factor, be introduced to the realities of information technology, it is necessary also to look at the demographic and social context in which these centres would be located.

This second section of the report therefore has looked at some of these factors in creating what is, in fact, a form of marketing study for the new centres. It looks particularly at two areas, one in urban Ontario and one in rural Manitoba. It assesses the demographic mixes and compares them on a list of variables such as age and ethnic background. It also looks at the economic factors and, in the case of the Toronto, the site of the pilot CIAC centre, it also looks at the wider GTA context.

It is clear from just this small scale study that the social mix, and therefore the needs of the populations of each area, are remarkably different. In one case, for example, the population is made up almost entirely of second generation Canadians or those who have immigrated a long time ago. In the other the position is that many of them have only come recently.

In many other factors, apart from merely living in a different size of community, one a rural area with only small population centres, the other a typical metropolitan city area, there are differences and these come out clearly. Just as clearly it will mean that each community needs to create its own centre in the form that fits it best. This illustrates the reason we believe that community based centres are essential.

METRO TORONTO PROFILE

Population[1]

Toronto represents 14% of Canada's total population and over one third of the population of Ontario. Within Toronto's GTA, more than one half of the population reside in Metro Toronto. Between 1981 and 1991, Toronto's population increased by 22% compared to a National increase of only 10% during the same period. Growing by more than 1,500 a week throughout the 90s, Toronto's population will reach 4.7 million by the year 2001 representing a 21% increase over the decade. Toronto has the population density required for massive retraining for a knowledge based, information economy.

An important feature that sets Toronto apart form most major North American cities is its dynamic ethnic diversity. Metro Toronto receives more than one quarter of all immigrants to Canada. Today, the first language of a third of the population is neither English or French. In fact, Toronto has more than 70 different ethnic groups within its borders, speaking more than 100 languages. When addressing the retraining needs of any community within Metro Toronto, decision-makers will have to simultaneously confront English instruction needs for clients who have not yet mastered the language.

The population demographics in Broadview Greenwood closely reflects the general population trends in Metro Toronto. In Broadview Greenwood eighty-one percent of immigrants arrived after 1961. One third of the immigrant population settled in the riding between 1981-1991 and came from places other than Europe or China and more than a quarter were over the age of 20 upon arrival..

When compared to suburban communities in the GTA, Metro Toronto has proportionately more single parent families, more working age residents with very low levels of education (less than grade nine), more low income households and a higher ate of unemployment.

Economy[2]

Toronto is Canada's corporate capital. A total of 193 or 39% of the Financial Post's Top 500 industries have head office operations in Toronto. And, while Metro was hard hit by the recession, the economic recovery indicates a shift to fast growing, high value-added knowledge intensive sectors. Advancements in areas of pharmaceuticals, bio-technology, medical devices, telecommunications, electronic pre-press and information technology have gained international recognition and put Toronto in a competitive position on the global market.

Experts predict that employment growth will come from the new knowledge intensive sectors which are becoming a fundamental part of Toronto's new economy. These new knowledge sensitive sectors will require a rich pool of well educated skilful employees. The growing concentration of a special needs population in Metro could hinder future growth in these areas. It is critical that the special needs population in Metro be targeted for retraining and preparation for employment in the information economy.

Telecommunication Network Infrastructure[3]

The Greater Toronto Area (GTA) is the most important telecommunication hub in Canada and it's telecommunication infrastructure is superior to that available in major US cities. The GTA is the largest "free calling" area in North America. Residents and businesses in the GTA pay a monthly flat rate for unlimited calling to over 2.2 mission telephones in Metro Toronto and surrounding areas. One of the most important factors in providing access to the tools and knowledge required in an information economy is cost. Local access centres in Metro ridings will maximize access for residents in a population rich area and eliminate long-distance charges for services.

1. Source: Metro Toronto Business and Market Guide, Board of Trade of Metropolitan Toronto, 1994.
2. Source: ibid
3. Source: ibid

Table showing GTA Telecom Infrastructure*

SERVICE	CURRENT STATUS
Free Calling	Unlimited Access to 2.2 Million telephones
Access to US Networks allowing Canada	Major US carriers have formal alliances with Canadian Carriers, direct, seamless links between advanced network services in and the US: •MCI with the Stentor telephone companies •AT&T with Unitel •Sprint with Sprint Canada
Overseas	Teleglobe is Canada's overseas carrier and has four access locations in the GTA. Coordination with Teleglobe can be handled by any carrier.
Cellular	•Toronto has more cellular telephones per capita than any other city in North America •Rogers Cantel and Bell Mobility are in the process of converting to digital to serve a greater density of customers in Metro. •Toronto is located in the longest cellular corridor in the world-continuous cellular communications area extending from Quebec City to Windsor.
Digital	In 1993 the area code 416 became the first all-digital area code in North America. This year, 1995, the entire GTA will be all-digital.
Fibre	All Bell Canada's switching centres use optical fibre. Fibre has been installed under most major roads in Metro and now Bell installs fibre entrance cables into all new business buildings that require 300 or more telephones. Unitel deploys the AT&T fibre ring system in Toronto; a series of fibre rings will be installed; cable television companies have been installing fibre on major routes for several years.
Intelligent Network Service	Common Channel signalling system 7 (CCS7) is the key technology to the new generation of intelligent network services. All of the public network switches in Toronto are linked to each other and to long distance networks using CCS7.

* *The information in the Table was taken from "Commentary on Telecommunications" by Ian Angus, Business and Market Guide, Metropolitan Toronto Board of Trade, 1994*

PORTAGE INTERLAKE PROFILE

Population[1]

The area has seen only a small rise in its population over the last ten years. Most of the population is in the 30-65 age group. The area has many seasonal residents due to the proximity of Lake Winnipeg and Lake Manitoba.

English is the mother tongue of most residents with Ukrainian and German having the next highest percentages respectively. Most immigrants arrived in the rural riding of Portage Interlake prior to 1961. More than half of the population would now represent first and second generation immigrants, mostly from European descent.

Economy[2]

Most residents are employed in agriculture related industries, followed by manufacturing, retail trade, government and health services.

There are a large number of small firms in the area; most employing under 50 people. There are some large apparel and metal manufacturing firms but companies are mainly in the food/agri-food industry or building components sectors. These companies sell locally as well as to major centres such as Winnipeg and Brandon and some export to other provinces. They would benefit from a high speed network connected to their clients/suppliers.

Telecom Infrastructure

Telephone Service
Portage Interlake is currently having an individual line service completed. Manitoba Telephone has an extensive network of local telephone service, microwave and fibre optic services but the currently planned fibre optic cable only applies to the very southernmost part of the area.

Datapac has a dial-up local access for computer to computer communications but data speeds are limited in some areas of Portage Interlake.

A study by Cross Cultural Communications called 'The Information Highway: Opportunities and Challenges for Manitoba" identified long distance charges for rural and northern users as the main obstacle to affordability of access to the information highway, and a major concern of the respondents to the study

Cellular Telephone Service
Bell Mobility and Cantel offer cellular service only to the urban centres in the south of the area.

Radio Services
Three companies provide common carrier radio services in the Portage-Interlake area but coverage is limited in the northern portions of the area.

Cable TV
There are a limited number of cable TV systems operating mainly in the southern more urban parts of the area.

1. Source: Portage-Interlake Development Corporation

2. Source: ibid

GENERAL FAMILY DEMOGRAPHICS

The urban riding of Broadview Greenwood has a higher number of single, separated and divorced residents than Portage Interlake. There are twice as many single parent families living in Broadview Greenwood.

While more residents in Portage Interlake own their own homes, homeowners and tenants pay more than twice the house payments and rent than their counterparts in Portage Interlake. This affects disposable income after housing costs are taken into consideration and reduces the income gap between residents of Broadview-Greenwood and those in Portage Interlake.

Table Showing General Family Demographics*

CATEGORY*	BROADVIEW GREENWOOD	PORTAGE INTERLAKE
Population	72,050	90,367
Single, Separated, Divorced	53%	36%
Single Parent	4%	2%
Own Home	20%	26%
Rent	20%	7%
Average Gross Rent	$906	$363
Owners Average Payments	$670	$368

* *Source: Canada Census, Profile of Electoral Districts, Cat # 93-335/336 1991*

ETHNICITY/IMMIGRATION

Sixty-seven percent of residents in Portage Interlake speak English as their first language followed by Ukrainian and German. In Broadview Greenwood the mother tongue of 60% of the population is English followed by Chinese. However, nearly a third of Broadview Greenwood reported a mother tongue other than the non-official languages of Italian, German, Chinese, Spanish, Portuguese, Ukrainian or Polish.

Another interesting difference in the two ridings lies in the arrival date of new immigrants to the respective areas. While nearly all residents in Portage Interlake and 84% of Broadview Greenwood residents are Canadian citizens, the arrival date for immigrants to both ridings differ significantly.

In the 1991 census, Portage Interlake reported 3,540 immigrants while the riding of Broadview Greenwood had 34,805. Eighty-one percent of residents in the urban riding arrived after 1961, a third of whom came between 1981 and 1991. In addition only 2% of immigrants in PI were more than 20 years old at the time of immigration whereas 26% of immigrants in Broadview Greenwood were over the age of 20.

Table Showing Ethnicity/Immigration*

CATEGORY*	BROADVIEW GREENWOOD	PORTAGE INTERLAKE
Mother Tongue English	60%	67%
Mother Tongue Other	27%	15%
Canadian Citizenship	84%	97%
Immigrant	39%	5%
Arrived Before 1961	19%	53%
Arrived Between 1961-1980	48%	28%
Arrived Between 1981-1991	33%	18%
20+ Years At Immigration	26%	2%

* *Source: Canada Census, Profile of Electoral Districts, Cat # 93-335/336 1991*

OCCUPATIONS-MAJOR GROUPS

It is assumed for the purpose of this report that the occupation groups of Managerial Administration and Related Occupations; Teaching and Related; Medicine and Health; Natural and Social Sciences and Art require higher skill and knowledge and occupations such as Clerical and related; Sales; Service; Primary; Processing; Machine Production, Fabricating, Assembly and Repair; Construction, Trades; Transport, Equipment Operators and Other occupations would require medium to low or no skill level.

Using this classification only 20% of males in Portage Interlake are employed in high skill occupations and 34% in Broadview Greenwood, while the remainder are employed in medium, low or no skill areas of employment.

Table Showing Major Groups Employing Over 1000 (Male Employees)*

BROADVIEW-GREENWOOD	MALE	PORTAGE-INTERLAKE	MALE
Managerial, Admin.	14%	Managerial, Admin	11%
Natural Sciences, Soc. Services, Art	15%	Natural Sciences, Soc. Services, Art	5%
Clerical and Related	11%	Clerical and Related	4%
Service	16%	Service	8%
Sales	8%	Sales	7%
Construction, Trades	8%	Construction, Trades	12%
Machining, product fabrication, assembly	9%	Machining, product fabrication, assembly	10%
Other Occupations	8%	Primary	26%

* *Source: Canada Census, Profile of Electoral Districts, Cat # 93-335/336 1991*

More women than men in both Portage Interlake and in Broadview Greenwood work in occupations considered to require higher skill or education. Yet, when average incomes for women in both ridings are compared one could conclude that for women a higher education does not necessarily yield a higher income.

A quarter of all working women in both ridings are employed in clerical or related occupations.

Table Showing Major Groups Employing Over 1000 (Female Employees)*

BROADVIEW-GREENWOOD	FEMALE	PORTAGE-INTERLAKE	FEMALE
Managerial, Admin.	16%	Managerial, Admin	7%
Natural Sciences, Soc. Services, Art	12%	Natural Sciences, Soc. Services, Art	0%.
Teaching & Related	5%	Teaching & Related	7%
Medical & Health	6%	Medical & Health	10%
Clerical and Related	27%	Clerical and Related	25%
Service	13%	Service	21%
Sales	0%	Sales	7%
Machining, product fabrication, assembly	7%	Machining, product fabrication, assembly	0%
		Primary	13%

* *Source: Canada Census, Profile of Electoral Districts, Cat # 93-335/336 1991*

EMPLOYMENT BY INDUSTRY

There is a profound difference between the types of industry workers in Portage Interlake and Broadview Greenwood are employed in. The largest single industry employer in Portage Interlake is the Primary Industry, whereas it is the lowest employer in Broadview Greenwood. This would account for the difference in urban and rural industry realities.

Primary industries in Portage Interlake are mainly in agriculture or agriculture related industries. In Broadview Greenwood, conversely, residents are employed in trades, manufacturing, financial, insurance and real estate as is conducive to urban economic activity.

Table Showing Employment by Industry Sector - Both Genders - Ranked Highest to Lowest*

BROADVIEW-GREENWOOD	%	PORTAGE-INTERLAKE	%
Other	29	Primary	24
Trades	14	Trades	14
Manufacturing	13	Government Services	11
Finance/Realty/Insurance	9	Other	11
Health/Social Services	9	Health/Social Services	10
Government Services	7	Manufacturing	7
Education	6	Construction	6
Communications/Utilities	5	Education	6
Construction	5	Transport/Storage	5
Transport/Storage	2	Finance/Realty/Insurance	3
Primary	1	Communications/Utilities	3

* *Source: Canada Census, Profile of Electoral Districts, Cat # 93-335/336 1991*

COMPARISON OF MALE/FEMALE OCCUPATION TYPES AND EMPLOYMENT RATES

Females in both ridings out pace males in occupations requiring higher skill and knowledge, although an overwhelming number of both males and females are employed in lower skill occupations.

Those working in high to medium skilled jobs is higher in the urban area and this holds true for both genders.

The participation rate for women is slightly lower for women but the unemployment rate is primarily the same for men and women.

The significant difference is in the unemployment rates of the two ridings. The urban rate is much higher than that for the rural area. This holds true for both genders.

Table Comparing Male/Female Occupation and Employment Rates *

OCCUPATIONS (EMPLOYEES AGED 15 PLUS)	B-G MALE	B-G FEMALE	P-I MALE	P-I FEMALE
High-Medium skilled	34%	40%	20%	29%
Low - Unskilled	66%	60%	80%	71%
15+ in Labour Force	32%	32%	38%	30%
Participation Rate	75%	63%	77%	61%
Unemployment Rate	11%	10%	6%	7%

B-G = Broadview-Greenwood, P-I = Portage Interlake

* *Source: Canada Census, Profile of Electoral Districts, Cat # 93-335/336 1991*

TYPE OF EMPLOYMENT

Both genders are employees rather than self-employed individuals but there are significant differences between the men and women. Men in Broadview-Greenwood and women in Portage Interlake are even more likely to be employed than women in Broadview-Greenwood or men in Portage Interlake.

Women tend to be employed part-time more than men in both ridings and this is most pronounced in Portage Interlake. However, there is a significant degree of part-time work in both rural and urban areas. Full time employment for men is only about 20% higher than part time work.

Table Comparing Type of Employment*

OCCUPATIONS (EMPLOYEES AGED 15 PLUS)	B-G MALE	B-G FEMALE	P-I MALE	P-I FEMALE
Employees	88%	77%	73%	86%
Self-employed	12%	7%	25%	12%
Full-time	61%	46%	58%	43%
Part-time	39%	41%	38%	54%

B-G = Broadview-Greenwood, P-I = Portage Interlake

* *Source: Canada Census, Profile of Electoral Districts, Cat # 93-335/336 1991*

INCOME

Incomes in Broadview-Greenwood were higher than those in Portage Interlake but more than half of all employed individuals in both areas ware earning less than average wage.

Even though more women work in skilled occupations than men, more women are earning less than average income. In Portage Interlake 73% of women have incomes at or below the poverty line. In Broadview Greenwood 66% of women have earnings at or below the poverty line. Moreover in Broadview Greenwood a quarter of working women earn less than $10,000 with 19% earning between $10,000 and $14,999.†

Moreover, many women are working with the added responsibility of children at home, the vast majority of whom are under 6 years of age. This confirms many other studies that show Canadian families are dependent on a second income to survive financially in the current economy.

Table Comparing Income levels*

OCCUPATIONS (EMPLOYEES AGED 15 PLUS)	B-G MALE	B-G FEMALE	P-I MALE	P-I FEMALE
Average Income	27,987	21,258	23,731	14,192
Median Income	23,737	17,123	19,594	11,284
% Earning ≤ Average Income	52%	66%	60%	73%
Children at home	n.a.	65%	n.a.	75%
Under 6 years old	n.a.	66%	n.a.	69%

B-G = Broadview-Greenwood, P-I = Portage Interlake

* *Source: Canada Census, Profile of Electoral Districts, Cat # 93-335/336 1991*

† *Source: Census Canada,*
Low income cut-off for rural Canada: 1 person-$14,137; 2 people-$17,671; 3 people-$21,978
Low income cut-off for urban Canada: 1 person-$16,482; 2 people-$20,603; 3 people-$25,623

EDUCATION

Nearly one half of the population between 15 and 24 years in Broadview Greenwood are not attending school, 10% more than Portage Interlake.

Fifty-three percent of residents in Portage Interlake over the age of 15 do not have a high school certificate and 41% of Broadview Greenwood residents have not completed high school. Only 10% of Portage Interlake residents over 15 years of age and 21% of Broadview Greenwood residents have a university degree or certificate.

In both ridings there appears to be a pressing need to upgrade education and skills if residents are to become successfully employed in the information technology economy.

Table Comparing Education Levels*

EDUCATION	BROADVIEW GREENWOOD	PORTAGE INTERLAKE
Total Pop. Btwn. 15-24 years	9,770 14%	11,685 13%
Pop. between 20-44 years	36%	48%
Population over 15 years	74%	84%
Total Pop. Between 15-24 years Not Attending School Attending Full Time Attending Part time	 46% 48% 7%	 36% 55% 9%
15+ YEARS - HIGH SCHOOL Less than Grade Nine Education Gr. 9-13 without High Sch. Cert. With High School Certificate Total Without High Sch. Cert	 17% 24% 12% 41%	 19% 34% 11% 54%
15+ YEARS POST SECONDARY With Secondary, Trades or Non University Non University Without Cert. Non University with Cert. University Without Degree or Certificate University With Degree or Certificate	 11% 6% 11% 16% 22%	 19% 5% 15% 11% 10%

* *Source: Canada Census, Profile of Electoral Districts, Cat # 93-335/336 1991*

COMPARISON OF PROFILES

Stable versus Increasing Population Base and Special Needs

The origin and arrival date of immigrants to both ridings suggest that the rural community is more stabilized than the urban riding.

Metro Toronto presents some interesting challenges in serving the access and knowledge needs of its growing special needs community. Residents who are under educated, lone parents, earn low income, are unemployed and who may also require English language training, childcare support or remedial education represent a growing portion of the urban Toronto population.

Toronto is also experiencing an increase in interprovincial migration of special needs families from provinces with less generous social security programs. This situation will likely worsen if the federal government budget replaces the CAP with block funding leaving allocation decisions for social programs up to the individual provinces.

Metro has the population density to sustain growth in these areas but there is a huge gap between what working age residents know and what they need to know in order to compete in the new economy and this is especially true of the disadvantaged section of the Toronto population. Childcare is a significant cost factor in accessing appropriate training as is physical access and appropriate computer hardware for persons with disabilities. The concentration of residents with a low level of education in Metro Toronto will result in a lower knowledge base potential.

Common Need for Information Technology Education

The low level of education of the general population is reflected in the types of occupations of workers in both the urban and rural ridings.

Both urban and rural communities have urgent needs for access to information and training to enable residents to cope with an already drastically changed and ever evolving technology-based, knowledge economy.

Ease Versus Difficulty of Connectivity

The information highway is already in place in Metro Toronto. Some of the most sophisticated infrastructure in the world is operational and growing at a rapid pace, there is a mindset shift in the business community and opportunities are arising fast growing, high value-added knowledge intensive sectors.

Portage-Interlake, in contrast is not well served in its connections to the information highway.

Access to the Information Highway

Part Three
An Implementation Manual for Community Information Access Centres

INTRODUCTION

CIAC has amassed a wealth of information from initiating and operating its first centres, and is learning more and more each day as other centres start organizing towards operational status. This experience is reproduced here in order to aid communities who wish to set up such Centres.

Communities may wish to become full members of CIAC or they may wish to become associate members. One very important advantage of membership is that fund-raising has been found to be much easier under the auspices of a national body with established financial accountability. Another advantage is that official membership provides a shared experience, and involvement in shaping the policies, aims and successes of the organization. A further reason for joining CIAC is to add support to its efforts to promote mutual interests in issues of universal access.

Setting up a CIAC can be a challenge, but one that can have beneficial effects over and above the establishment of a Centre. It can focus the attention of a community on using their own resources as a means of affecting their own economic well-being, and it can draw a community together in a common purpose.

Setting up a CIAC can be a very simple process if all the circumstances are right and funding, location and staffing are provided and an already present community group initiates the project. However, this is rarely the situation and, in order to become successful, certain key factors need to be addressed.

Key Factors for Success

The key factors for success of a Centre are:

- **Community Involvement:** helping enthusiastic people get started;
- **Structure:** setting up the project with an effective organisational structure;
- **Fund-raising:** ensuring sufficient funds for set up and operation;
- **Financial Planning:** ensuring the Centre's financially viability
- **Marketing/PR/Communications:** ensuring everyone knows about the Centre
- **Forming Strategic Alliances:** involving business, government and other agencies
- **Centre Location:** finding the right site;
- **Equipment:** getting the right mix of equipment;
- **Staffing:** finding the right co-ordinator and support staff;
- **Continued Community Support:** ensuring long-term community support for the Centre

COMMUNITY INVOLVEMENT

CIAC's mission, objectives, by-laws and organization were established following an exhaustive community consultation process that gave birth to the concept of community information access centres.

However, it was realised from the very beginning that communities vary in their resources, needs and cultural characteristics across Canada. CIAC is expressly set up to provide the maximum autonomy at the local level, while providing the necessary accountability and other advantages of a national structure.

Community involvement is therefore seen as an *essential element* in the success of the organization. As is most often the case in community based activities, the most important factor in the success or failure of a community venture is the enthusiasm and commitment of the volunteers and the quality of leadership they bring to the project.

In each community it is vital that there is at least one (preferably more) who has the passion and the dedication not only to pull the project along, but also inspire others to join in the process of establishing the centre. It is essential to identify the best individual(s) to lead the team in the early stages of the project.

Methods of Project Leadership

Self Selection
Ideally a *group* of people in the community will already be committed to active realization of CIAC's mission. When no formal group or even informal group exists, a single individual can be a very successful initiator of a project to establish a centre.

However, it may lead to problems unless the individual is sensitive to the need to involve members of the community before the project is too far advanced. Early volunteers must be willing to "share" the project with later comers if the local centre is to be successful.

A self-selected group or individual can set up an interim board of as many volunteers as want to be involved with the project.

Once these volunteers have decided to become an official part of CIAC, they can begin to contract members (as set out in the CIAC By-laws) and, once an official membership is in place, an election will be held to elect a Board of Directors of up to eight people. The Board will then work with the members to plan and implement the centre.

Selection
Where there is no direct or indirect involvement of a local community the selection of a known individual who has demonstrated ability, by carrying a similar project in the past, may also provide for a successful start-up.

This selection process can be carried out by anybody who is acting as the catalyst in the creation

of the centre. This may be the local library board or an elected official, such as an MLA or an MP. The selected individual would then be asked to create a community group and establish the centre.

In cases where CIAC has approached the community, the local volunteers may want to become members or they may decide to become associate members or be totally independent.

Appointment
A less desired start might be by the appointment of a paid leader, by some local organisation (this may or may not be a government organisation) as part of their responsibility for community development or awareness raising, to carry out the duties of setting up a centre. This may occur where the centre is being established in a location such as a school, library or community centre.

While this can be a very effective method of starting, it is more of a "top-down" approach than if the initiative comes from the community members them selves. But the closer to a local initiative the sponsors/initiators are - a local business improvement association or a local municipality - the less top-down will the approach be seen by the local community, and the more they will buy into and be committed to the project.

Where the initiative is not coming directly from the community, those developing the project may decide to become an associate member of CIAC rather than full members or they may prefer to be fully independent.

Project Leadership Qualities

Enthusiasm
The ability to be self-directed and self-motivated is a quality one cannot induce, and if it is not present in at least one of the key individuals in the project there will likely be very slow progress. True enthusiasm also includes the ability to transfer one's own passion for the project to others. This is not necessarily present in those with the ability to drive themselves, but it is essential if the project is to succeed.

People Skills
Community projects require the ability of the leader to not only inspire but also to reach out to all the individuals and groups in the community who may not be cohesive with each other, and who may well have their own agendas.

Indeed it is very often clear that the motivations of individuals in any community projects will tend to be very diverse and often contradictory. This requires the leader to besensitive to these and to be able to weld the group together in an alliance to achieve the particular goal of setting up the centre.

Good Management Skills
If the project is to succeed, it is essential that among the leadership should be someone with good management skills to manage the practical elements of the project, from the careful recording of decisions to the negotiation of funding agreements.

Technical Understanding
It is essential for someone in the lead group to have some knowledge of computers, and the services that will be available in the future centre.

Sharing the Workload

In order to avoid burnout and make the optimum use of the human resources available in any community, it is essential to organize working groups around the basic tasks that need to be done to set up a centre:

- fund-raising
- site selection
- acquisition of hardware and software
- membership communications
- financial planning and recording

Members may want to set up other work groups. The community in Broadview-Greenwood, for example, also set up a special needs working group and a health and wellness group.

CIAC has found that it is best to have about six to eight people on an interim board and to set up work groups for each set of tasks, with a board member responsible for each group to see that the tasks are being addressed.

It is also useful to have some periodic information meetings, where all the volunteers meet to keep updated about the overall progress of the project. This is especially successful when it is combined with a social event, however informal or impromptu.

Using the Community's Human Resources

Although many of the volunteers may be those people who have skills and knowledge in the computer field, experience has shown CIAC that other members of the community with no or little knowledge of computers also have extremely valuable contributions to make.

CIAC's first centre has members of the local board of directors who have little computer expertise, being for example, realtors, psychologists, writers and artists. These directors have been among the most active and committed to the centre.

Retired Canadians are a very valuable resource for community activities, having a lifetime of experience and more leisure time than most to contribute. We have also found that involving unemployed workers is also valuable to both the individual and the project.

The community should also make an effort to involve people with special needs, such as people with disabilities, in their interim boards and work groups. Some disabled members of the community in the first centre were involved from the very beginning of the project, and provided invaluable input into the design and operation of the centre.

STRUCTURE

There are three basic options for the local community in structuring its activities:

- CIAC membership
- Associate membership
- Independent operation

CIAC Membership

A community that decides it would prefer to set up a Centre through full membership in CIAC has to make certain basic undertakings:

- to accept the mission, aims and objectives of CIAC
- to act in accordance with CIAC's By-laws

This means that the structure is slightly more pre-determined:

- A Board of Directors (which must be elected by the membership within 6 months)
- A Contracted membership (who must sign a volunteer form contracting to provide a minimum of 20 hours a year of volunteer time and pay $5 annually)
- Notice and conduct of meetings must be as set out in the By-laws

Other than this, the centre is free to set up whatever committees it thinks desirable, and operate the Centre in whatever way it thinks appropriate.

In return for membership, the local Centre has certain rights and benefits:

- Its elected directors have the right, along with the directors of other centres in the region, to elect regional directors to the national board
- The Centre retains all funds raised by its members by whatever means - there is no transfer of funds from the local centre to the national body
- The local centre may receive funds and equipment raised or earned by the national board
- The national board will support local applications for funding by whatever means available to them
- participation in any national programs of revenue generation that the national board negotiates

Associate Membership

A community group may decide it wants to be even more autonomous than a local CIAC Centre but still retain a relationship with CIAC.

CIAC is in the process of adding the category of associate membership to its By-laws. This would mean that the structure at the local level would be entirely up to the local community. However associate membership would require that the group:

- agreed with the mission and objectives of CIAC
- was willing to pay a $50 annual membership fee to CIAC

In return the group would receive:

- assistance and advice from CIAC on setting up and operating the Centre based on experience of successful operations
- support from CIAC with applications for government funding or corporate donations
- copies of all research findings and other information relevant to the mission and objectives of the Centres.

Total Independence

Any group that wishes to be totally independent of CIAC is more than welcome to use any part of this implementation kit. In return CIAC would be interested in any information on successful strategies experienced by the group in setting up the Centre.

FUND-RAISING

Funding a centre requires an organized fund-raising strategy and a creative approach to finding sources of funding. In the CIAC By-laws fund-raising is a responsibility of all Directors, at both the national and local level. It can become the foremost activity for the volunteers and requires as much skill and experience as possible.

CIAC is a federally incorporated non-profit organization. It has not so far registered as a charity because members wished to reserve the right to lobby governments in relation to the organization's objectives. However, the Articles of Incorporation and the By-laws were written expressly to allow an application for charitable status to be made to Revenue Canada should members wish to do so at a later date. At the current time CIAC cannot issue a tax receipt for donations, but corporate donors can offset contributions against taxes through their PR costs.

A Fund-raising Strategy

The Fund-raising Committee

It helps if the volunteers on this work group have had previous experience of fund-raising, or have good contacts in the community, or have a knowledge of financial matters. Many retired people in the community may have skills that would be invaluable on this type of committee: bank managers, accountants, volunteer fund-raisers for other community projects, ex-politicians, small business people. If the fund-raising committee is lucky enough to have some of these volunteers, others can learn from them and become skilled at fund-raising in their turn.

People who are good at organizing events, such as political fund-raisers, or are good at communications, such as journalists, those who work in advertising or those who contribute to community newspapers are also particularly helpful on this work group.

Deciding a Target Amount

The fund-raising committee will need to work closely with the financial planning group to set a target for fund-raising that reflects the estimated budget for the centre. All directors need to be involved with the financial planning and the fund-raising activities.

The Fund-raising Plan

This needs to include:

- the identification of potential donors
- the most effective method for approaching them
- a financial plan for the centre (prepared by the financial planning group)
- an information kit that explains the aims of the centre and the advantages to donors (prepared by the marketing group)
- a list of any events planned to raise funds
- a timeline for achieving the target
- a list of responsibilities for the work group
- a cost-recovery/self-sufficiency plan for the longer term (again prepared by the financial planning group)

Sources of Funding

Government
Governments at all levels are cutting expenditures. Nevertheless some are still interesting in funding worthwhile projects that aid community development, job creation and training, especially in relation to the new information economy.

Approach all local elected representatives for information on available funding (these should be listed in the blue pages of the local telephone directory):

- Federal MPs
- MPPs/MLAs
- Regional councillors
- Municipal councillors
- School Board Trustees

The federal government has several possibilities for funding including:

- *SchoolNet Community Access Project*
  This comes under Industry Canada and currently provides funds for rural and remote areas or native reserves.
  Funding to a maximum of $30,00 per site must be matched dollar for dollar by other funding, including from other government levels and by "in kind" donations of equipment etc.
  Proposals must be submitted by May 31, 1995 for 1995 or by March 1996 for 1996
  For more information contact:
  Industry Canada
  Tel: 1-800-268-6608
  e.mail: comacaccess@istc.ca

- *Youth Service Canada Program*
  This is intended to provide young Canadians between 18 and 24 with experience of community service and job training.
  A CIAC Centre can provide these youth participants with valuable experience in both these areas.
  In return the youth participants can help staff the Centres.
  For more information contact:
  The local Canada Employment Centre

Provincial governments vary in the possibilities for funding this type of initiative. Although the exact names vary across provinces, the most obvious government departments to contact are:

- Ministries of Trade/Economic Development
- Ministries of Labour/Human Resources
- Ministries of Regional Development
- Ministries of Community Services
- Ministries of Education/Training
- Ministries of Information Technology/Highway (these do not exist in all provinces)

Regional/Municipal governments also have departments that have responsibilities and budgets for this type of project, including:

- Depts of Economic Development (may have some funding under the federal/provincial/ municipal infrastructure program, for example)
- Dept of Community Services (may have special funding for disabled access, for example)

The Private Sector
To link the Centre with the economic health of the community, it is well worth approaching:

- the local business Improvement association
- the local chamber of commerce/board of trade
- organizations such as Rotarians, Lion's clubs, United Way etc

These bodies may be able to provide information on local businesses that might be interested in donating to a worthwhile community initiative (especially one that is devoted to local economic development and job training and creation). Their members may also be interested in providing some entrepreneurial training for either any Youth Service participants or users of the Centre. They may also be able to make some direct contributions.

Among the most likely potential donors are:

- computer equipment manufacturers
- software developers
- telecom companies
- cable companies
- office equipment & furniture manufacturers

The members of the fund-raising group will need to use all their personal contacts in approaching potential donors. They will also need to provide a package that will convince prospective donors of the value of the work of the centre and the advantages that will accrue to the donor. This package would ideally have been prepared by the marketing/ PR/communications group.

An information kit should state clearly the advantages of donating funds or equipment to the Centre. For example, donated funds may be written off 100% in a company's public relations account. Donated equipment/software can be showcased and clients can get used to using those specific products. In addition, the Centre is educating potential consumers who might otherwise take much longer to become involved with the information highway. The Centre will also be helping the local workforce upgrade its skills.

FINANCIAL PLANNING

Good financial planning is essential:

- *in the short term* to provide potential donors with the comfort of a well planned project,
- *in the long term* to ensure the sustainability of the project.

This exercise should be undertaken by the financial planning group but must be communicated to all the local members.

A financial plan for the first three years needs to be worked out and this should include cash flow projections and a monthly budget. In order to do this, the project team will need to estimate the projected costs of running the Centre and projected revenues from all sources

Estimated Costs

These will need to include consideration of the following:

- rent & realty taxes
- insurance (for property, equipment & liability- including directors' liability)
- heating and lighting
- administrative costs (telephone/stationary/mail/courier/travel/etc)
- staffing (including benefits)
- repairs & maintenance
- bank charges
- membership/conference fees
- contingency

Estimated Revenue

This should include :

- membership fees (currently set for all CIAC members at $5 per annum)
- user fees (these can be set by the local board - in the first centre the cost is $5 for up to 3 hours tuition/use)

- cash donations from fund-raising
- dedicated cash funding from government
- donations of equipment/software
- donations of in-kind services (such as donation of free space etc)
- other business revenue (the centre may provide services to individual businesses or groups, or to government)

Monthly Cash Flow Projections

These match expected costs and revenues on a monthly basis and are essential to ensure that costs and revenues interact in a timely fashion and that the Centre does not experience a cash flow problem. They can be estimated for the first three years of operation and can be adjusted as actual cost and revenue figures become available.

Cost Recovery & Long Term Sustainability

While government grants and private sector donations will likely be necessary to enable the Centre to get off the ground, a longer term plan for cost recovery must be the ultimate goal of each centre. There are several sources of revenue that the Centre can generate for itself.

Membership Fees
While these will be modest, they can cover the costs of keeping members informed about the operation of the Centre.

If the Centre is an official member of CIAC, the membership fee will be set by the national Board, which will have representatives from all the regions. The fee is currently set at $5 per annum but may be changed in accordance with the wishes of the majority on the national Board.

User Fees
The user fees can be set by the local board and should reflect local realities. CIAC would require member centres to keep user fees as low as possible. A suggested amount is $5 for up to 3 hours of use of the Centre (which would include any tuition provided). For those few users who cannot even afford a small fee, such as street people or women in shelters, the Centre should set up outreach programs that would be free of charge.

Business Revenue
As the Centres become established, it is intended that they should act in a business capacity and provide services to the private and public sectors. They may provide specific training for employees, or they may provide a centre for interactive dissemination of government-to-public-to-government information, or they may provide business services on the information highway.

MARKETING/PR/COMMUNICATIONS

Given the financial restraints that the Centres must operate under, the best sources of publicity are those that cost nothing. The following is not an exhaustive list, but gives some suggestions for generating free publicity:

Through the Community's Federal/Provincial Member of Parliament

Members of Parliament have certain methods of communicating to their constituents that are free under their official frank. They may be willing to let the centre group use these to inform the local community about its services, or to ask for more volunteer members.

The "Householder"
This is a small brochure or tabloid that can be sent out to constituents three or four times a year. An MP may be willing for the group to write an article (photos can also be welcome) about the centre, which can appear in the next issue, or they may even be willing to devote a whole issue to the "information highway" and what the local community is doing about it.

Letters to Constituents
If the householder is not an option, an MP/MLA can also send letters to constituents and they may be willing to send one out informing the community about the centre and its services.

Community Newspapers

Most communities have a local community newspaper and these are always looking for some free copy. If no one in the group feels able to write an article, the editor of the newspaper may be willing to write one about the Centre, if given all the correct information.

Local/National Newspapers

There are three main ways of getting information about the Centre into print:

Attract the Attention of a Reporter
If the Centre is having a grand opening, or is providing a special service, or is attracting a lot of clients, it may be possible to persuade a reporter that it merits some column inches.

Write a Freelance Article
If anyone in the group is a professional writer/journalist or is willing to make an attempt, submit an article to the paper on behalf of the group. A human interest theme is often a good approach.

Write a Letter to the Editor
If all else fails, a letter to the editor, especially if it relates to an article or letter that has recently appeared in its pages, is worth a try. A letter to the editor can also result in someone on the paper becoming interested in the Centre, if a direct approach has failed. What it can also do is stimulate a dialogue about the information highway among the larger community.

Community TV

A Feature Program
If the group can persuade the local cable company to feature the Centre in one of its programs, this can help to publicize the Centre. There is some evidence that more and more people are tuning into community television programs in preference to commercial programming.

Using a Call-in Program
Community Cable often broadcasts call-in programs - either about specific issues or as part of a local politician's show. Use this to respond if the subject matter of a special feature is relevant, or call in to the politician and ask what he/she knows/is doing about the information highway and use the opportunity to explain about the Centre.

The Local Library

The local library is an effective community information centre and will usually allow groups to publicize their activities through flyers or notices.

Local Businesses

Local businesses may also be willing to put up a flyer, especially if they are in the computer sector. CIAC has found that computer stores are often swamped with callers who do not understand how to make their computer work once they get it home and out of the box, and are only too eager to help anyone who provides an instructional service on how a computer works.

The Centre can stimulate the local economy by providing a cooperative service for local businesses. They put the Centre's flyers in their stores and the Centre can advertise the places where computers/software and other services are to be found in the local community.

Communication With Members

It is important to keep the members informed. This will likely be in three ways:

Information Meetings
These are best if short and socially rewarding. They should be chaired relatively informally but one person from the PR work group needs to keep notes so that the members wishes/opinions can be incorporated into the decision-making of the Board.

Newsletter
This may need to be in print form, but the group may also wish to distribute it electronically to those who can receive it. Copies of sample newsletters are included in the Appendix.

Minutes of Meetings
It is important to keep accurate minutes of official meetings but this should not be excessive. A sample set of minutes is set out in the Appendix.

FORMING STRATEGIC ALLIANCES

Finding allies in the community is an important element in the success of the Centre. There are four main groups that the Centre team should approach as early as possible

OtherCommunity-based Information Highway Groups

If the community is lucky enough to have a freenet established in the area, make contact with this group as soon as possible. Freenets and CIACs have common goals and can work very effectively in cooperation with one another.

For the latest information about planned and operational freenets contact:

Garth Graham
Telecommunities Canada
e.mail: aa127@freenet.carleton.ca
tel: (613) 253-3497

Politicians

Politicians at all levels of government do have resources to help the communities they serve achieve economic development goals, and should be sympathetic to this type of project. They can provide information on funding sources, information outlets, and may even get involved with the project through a staff member, or even personal participation in some way.

Media

The media has certainly raised the consciousness of the public about the information highway, even if some coverage is over-hyped. Now the more thoughtful journalists are beginning to undertake a more balanced and in-depth view of the new information technologies.

The Centre team may be able to provide some insights for these journalists in return for some publicity about the Centre. Older journalists, who are still resistant to the new technologies and live in the area, may even be persuaded to use the Centre themselves.

Educational Sector

Local schools, colleges and universities may also provide support for the centre's mission. Some universities or colleges may even be interested in using the centre for a "sandwich" programs for its students or have space available for a location.

Adult or distance education programs may be of special interest to the Centre and vice versa. At the very least, sharing information about successful learning/teaching strategies will be of value and a closer and more fruitful relationship can develop as a result. The local library should be considered as part of the educational field.

Business

Business is an essential element to have on the side of the centre. Not only may they be persuaded to make donations of money or "in-kind" services but they can also provide important entrepreneurial support for Centre projects.

It is important to point out to local businesses that the centre is working to increase the skills not only of local workers but also local consumers. Even if businesses do not work directly in the information sector, the local multiplier effect can only enhance the local economy in general.

Community Groups

There are many types of local groups who could use the centre's services or provide support in a whole variety of ways. The following list is far from exhaustive and the local community group will no doubt be able to come up with many others:

Seniors Groups
The Centre may provide help to seniors who want to know more about information technology (SeniorNet, in the US, has found that once seniors get started they become very enthusiastic about this and it reduces the feelings of isolation and loneliness that many otherwise experience).

Seniors who have recently retired are also a valuable source of experienced volunteer help for the Centre.

Disabled Groups
These groups may also have members who are experienced and enthusiastic about information technology, and often they have valuable information about the solutions to the special problems of people with disabilities. In this way they can contribute to the Centre and their own needs in a positive way.

Women's Groups
Some women in the community are seriously disadvantaged in their possibility of access to information technologies. These groups include women in shelters and single low-income parents - especially teenage mothers. In urban centres immigrant women also have special needs.

It is good idea to keep in close touch with representatives of these groups, if possible involving them as volunteer members. The Centre will need to consider outreach programs for some of these special groups, and will need special insights from them to achieve this successfully.

Computer User Groups
There are many groups of computers users who could form a valuable resource for volunteers for the centre. They generally have very up-to-date knowledge of products and programs and where to get the best buys, and pragmatic skills they can offer users and other members.

LOCATING THE CENTRE

There are no hard and fast rules as to the best location for a centre. These can vary widely according to local conditions. There are several options to be considered:

- A store-front
- A community centre
- A library
- A school
- A workplace
- A community college or university
- A mobile centre

But finding the best site is affected by several factors:

- The type of community to be served
- The funds available
- The natural centre(s) of the community
- The size of building required
- The support services available
- The security available
- The amount of retrofitting (if any) required

The Type of Community to be Served

What is appropriate in one community may be totally inappropriate in another. This may not simply reflect a simple difference between urban and rural but may also reflect any ethnic or cultural characteristics of the community.

For example, in an urban community the selection of a storefront may be the best location but be totally inappropriate in a widespread rural area. While locating in a school may a natural location in a rural setting it may be the last choice in an urban stress area. A church hall might be a good location in a homogeneous rural area, it would likely be a disastrous choice in a multi-ethnic community.

The Funds Available

The cost of a location can vary from zero for a donated location to several thousand a month fora shopfront inner city location.

The problem of cost can be avoided if an official location such as a library or school is available at no cost – and is an acceptable location according to the other criteria. The advantage of a shared site is that it can reduce other costs as well as rent: security, heating, lighting and insurance, for example.

However, this will also depend on the degree of control over the site the community wants to exercise. If this is considered an important issue, it may be worthwhile raising more funds to get a more independent centre rather than settling for a shared site.

The Natural Centre(s) of the Community

The location does need to be as close as possible to the natural centre of the community. In some rural areas this may be difficult to determine. In this case it may be desirable to have several small centres linked electronically or a mobile centre that can travel around the community on a regular basis. There are obvious pros and cons to both of these scenarios but they may need to be considered if one central location is not the best option.

The Size of Building Required

This obviously relates to the size of the community and how many people are expected to use it. In practice there are some practical limits on size. At the smaller end there is a case can be made for a small room as a minimum size. Such a room, with at least two or three computers and related equipment, may be sufficient in a small rural community, where usage will be light and can be spread out over some time. However, in most cases two or three rooms are required with a minimum of 1000 square feet, and with good closet space, etc. This is needed to provide secure storage. The flagship centre is about 1500 square feet with a reception area, two small tutorial rooms, a larger seminar room and a small office. There is also a fairly large basement area for storage.

The need for separate rooms relates to the different courses of instruction that the centre's clients require. Multiple rooms can provide for teaching and personal usage without one impinging on the other. This depends largely on what services the local community decides as priority activities. Very basic instruction in the use of a computer can take place in one room. If clients want to experience multi-media programs as well, this would require a separate room.

The Support Services Available

If a shared site can also provide cleaning services, parking facilities, back-up personnel, and even social support services, such as personal, educational or career counselling, this is an added benefit. Another valuable support service is the natural presence of potential customers, such as sharing a library space, where people are constantly coming in and out.

The Security Available

A stand alone shopfront site may already have a security system installed - this was so in the flagship centre. If this is not the case, the installation of a security system is essential. The costs of insurance go down and the fear of interruption of service through theft or vandalism of equipment (and computer equipment is a hot item) is reduced.

If security is costly and/or difficult to install, a shared site, with a security system in place can be an attractive option.

The Amount of Retrofitting (if any) Required

If the centre is to be truly accessible to all in the community, it will need to be wheelchair accessible and have a washroom that is suitable for those with physical handicaps. In addition walls may need to be added or removed to suit the services required by the community. Electrical and telecommunication services may need to be updated or increased to accomodate computer equipment.

Where extensive retrofitting is required, it may be more costly to renovate an older site or one in poor condition than to consider a more modern site that may be more expensive but is a turnkey operation or a shared site that requires no retrofitting.

The question to ask is will retrofitting be too expensive in the short term (longer term savings on rent should also be considered), use up too many scarce resources such as money and volunteer time, and create too long a delay in opening?

Alternatively, the community may prefer the task of retrofitting. This can have advantages over and above cost considerations. Retrofitting can involve the community members more directly in the project and engender a sense of ownership in the Centre, especially for those members who do not have computer or fund-raising skills to offer.

EQUIPMENT

The equipment sought should ideally match the needs of the community and provide for a range of experiences as relevant to local needs.

Hardware

While some useful tuition can be accomplished on older machines, it is desirable to have some more up-to-date machines in the centre. An ideal list of possible hardware would include:

- 286/386 IBM type processors for basic instruction
- a dot matrix printer
- 486/Pentium IBM type processors for more advanced or up-to date programs
- a laser printer
- fax modems (higher speeds)
- CD rom player (x2 speedor better)
- a scanner (black and white and colour)
- a server plus LAN (if funding allows)
- television output card plus cable (NTSC)

Software

Specific software programs need to relate to client needs but should include:

- word processing
- database
- spreadsheet
- graphics
- desktop publishing
- multi-media package
- communications package

- presentation software
- organizer software

Office Equipment & Furniture

This should include:

- Computer tables or benches
- Chairs
- Desk for admin
- Bookcase for manuals/books/magazines
- Lockable filing cabinet for financial and other records
- Photocopier
- Fax machine
- Diskette storage cases

Other Equipment

The Centre should also consider investing in:

- A television (for instructional and other relevant videos)
- A microwave/ refrigerator (for staff meals)

Showcase Equipment

The Centre can also showcase other equipment on a temporary or more permanent basis. This can provide clients with experience of state-of-the-art computer equipment and programs and is also valuable to corporate donors.

In the flagship centre Rogers Cable is showcasing its Schoolink Service to the Internet.

It must be noted that CIAC does not sell computer products at its centres but can provide a list of local suppliers for clients who would like that information. This is in line with CIAC's objective to promote the local economy.

STAFFING

In making the Centre non-threatening to clients, it is important to staff the Centre with people who are welcoming to users and work well with each other. There are several options for staffing the Centre and it is likely that most Centres will use a combination of these options.

The Centre Coordinator

Duties
This is a key appointment as the coordinator must be able to perform a variety of tasks.

- to liaise with the local management board and carry out the policy decided
- to oversee the day-to-day operation of the Centre
- to manage other staff members
- to liaise with community and other groups
- to work on the business development of the Centre

Required Skills
The skills needed by the coordinator are the same as those needed for the project leadership:

- Enthusiasm
  For a coordinator to be successful he or she must be enthusiastic about the concept and the goals of the Centre and be able to enthuse others such as staff, volunteers, and the larger community
- People Skills
  The coordinator will need to be sensitive to the strengths and weaknesses of the members the staff and the users of the Centre and be able to motivate them to succeed.
- Management Skills
  The coordinator will need to be a good organizer and to cope with all the day-to-day demands of running a business
- Technical Knowledge
  If is necessary for the coordinator to have a good basic understanding of computers and programs and other elements of the Information Highway.

Other Staff

Any other staff who are employed full- or part-time at the Centre will preferably be knowledgeable about computers and computing and be trained in customer service and be able to pass on their knowledge to the users of the Centre and to other staff.

If the Centre is participating in the Youth Service Canada program, the young people involved as participants may need a great deal of help with work and teaching skills, even if they are knowledgeable about computer sand computing. CiAC has found that it is possible to trade help with training for use of computers or training in their use. This has worker well with professional trainers who lack computer skills.

Volunteers

One of the most valuable aspects of a community-based centre is that there will be reservoir of volunteers able to help in a variety of ways, from managing the accounts, to technical support, to helping out with teaching, to providing the community networking for outreach programmes or publicity and marketing.

Each Centre will have a list of its members and should also compile a volunteer list with details what each members can offer in the way of skills and expertise and the times when they are available to help. An example of volunteer forms is included in the Appendix .

CONTINUED COMMUNITY SUPPORT

If the project was community initiated and the project team has formed the strategic alliances discussed earlier, the chances are the project will be well grounded in the community. Where this has not happened or if the project team has become absorbed in the day-to-day problems of running the centre, the community can be involved more directly through a variety of means. The following are just a few suggestions:

Open Days at the Centre

It is a good idea to hold periodic open days/mornings/evenings when the community at large is invited to tour the centre and see what if has to offer. This can not only advertise the centre but may also produce new sponsors or members.

A Centre Booth at Community Events

A volunteer group of members or some of the staff (or a combination of both) might be set the task of organizing a portable booth that can be taken to community events, such as fetes, fairs or business trade fairs. This can explain the work of the centre and contain displays - laptop computers might be used to help with this.

Outreach Projects

The centre may need to be proactive in seeking out groups that can benefit from an outreach program of the Centre. Visits to Seniors' homes, women's shelters, local small business associations or any organizations of disabled people who are in the community can be a good way of making initial contact.

Competitions

The centre may think of sponsoring competitions that provide free training at the centre or other inexpensive rewards. A competition for the best computer art - with the entries on display at the centre is just one idea. The centre could join with the local chamber of commerce to organize an entrepreneurial competition on ideas for using the information highway to benefit the local economy.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

One of the more important issues for the last years of the 20th Century will be how successfully we induct our population into the new information technology era. The hardware and software are being developed and the communications links are being established. However, the one factor which is proving to be the most difficult is the human one.

Market analysts are attempting through trial programs to estimate the take-up of the new technology. Established wisdom would suggest it will follow the patterns for all new technical products, such as microwave ovens or cellular phones. However, the critical factor here is that we are discussing not just a new way to defrost chicken or to call friends, but rather a complete digitization of all our information systems. This change will affect the entire way we communicate, entertain and educate ourselves and even where we live and how we buy goods. In fact this could represent a major cultural change.

How do we ensure that Canada is not left behind in this move to a changed way of doing business and living our personal lives? We have argued that it is necessary to educate the entire population into an acceptance and skilled knowledge of the new technology and its possibilities. We suggest this is necessary, because simply targeting workers as they require retraining would be too restrictive. We need a Canadian society in which *everyone* is sophisticated in the new technology. This means we need to be inclusive in our induction programmes and so avoid the danger of a split society with some 'info-rich' and some 'info-poor'.

The needs analysis in Part Two of this report demonstrates that the danger of such a split is possible and we will need to work to avoid it for two reasons: one is that it would be inequitable; and the other it would be economically foolish. The skill base of a society arises from the totality of understanding of all its members, and investment in education has high economic returns to both the individual and to the collective.

In this report we have shown how we are moving to a new information technology based world, and we have looked at the population we will need to educate. In our research for this report, we came across many worthwhile initiatives that were attempting to address the issues we have identified in these conclusions.

Sadly, these initiatives were all too often operating in a vacuum. For example, on a trip to Alberta we found three different initiatives operating at the provincial, school board and community level that were largely, if not totally unaware of how they could have leveraged their effort and resources by cooperation with one another. Coming from outside, we were able to put these initiatives in touch with each other, hopefully to increase their individual successes.

As a result of our research, we have confirmed the need for community based information centres, and we have offered some practical suggestions for setting up such centres, stressing how they can be solidly based in their communities.

We hope that this will lead to the development of many such centres across Canada.

RECOMMENDATIONS

1. That there be established a programme to fund urban as well as rural and remote community information centres. This programme would be a 'seed' programme to initiate the local developments

2. That there be established a policy to support the establishment of community based centres that are solidly based in their local communities and reflect the local needs.

3. That the Canadian information technology industry be encouraged to support these centres and to help develop their use as showcases of new Canadian technology.

4. That Treasury Board, in conjunction with all other federal government departments, be requested to investigate how the the centres be used as places where government information and services can be accessed, especially by those with special needs.

5. That the Department of Human Resources be encouraged to establish a programme which provides for local participants in a special category of Youth Service Canada to act as staff for these centres where required.

6. That liaison with the Provinces be established to ensure the spread of centres throughout Canada.

7. That funding be established to support organisations working to meet the above recommendations.

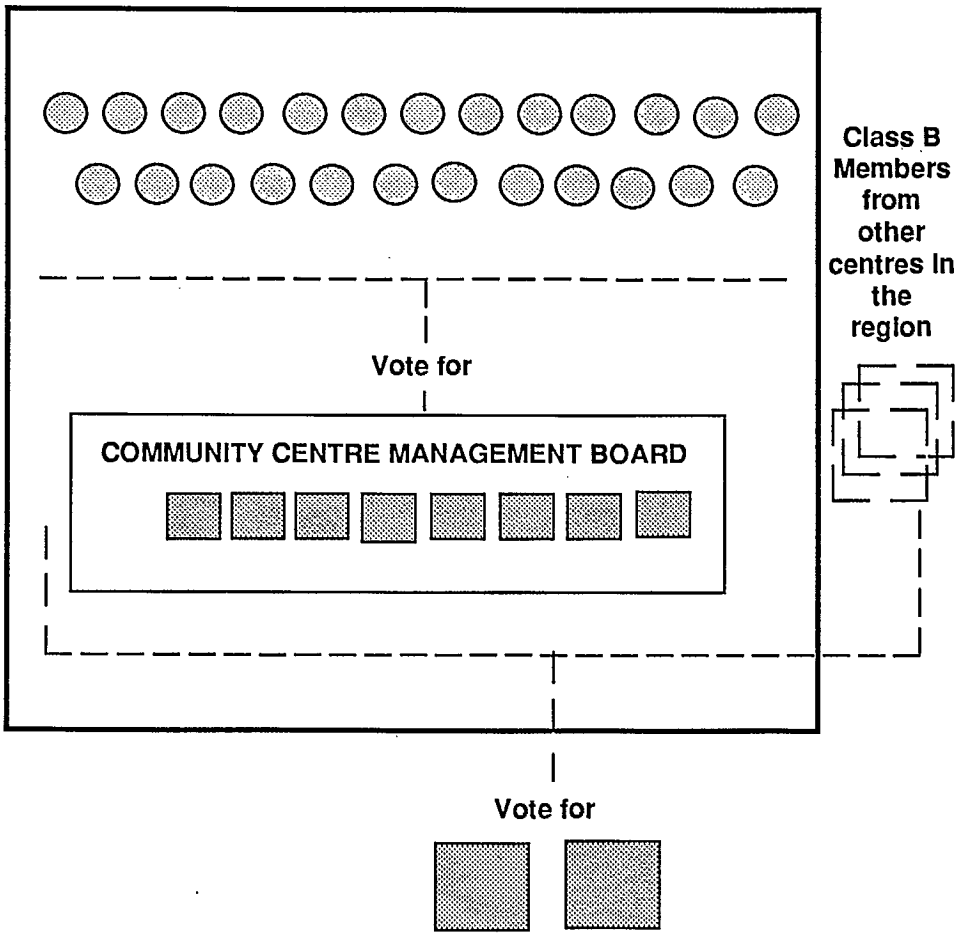
8. That further investigation be carried out to discover exactly what are the levels of computer and information technolgy awareness of Canadians and how they use this technolgy in work and at home.

9. That further investigation be carried out to research and evaluate other models being developed in other countries.

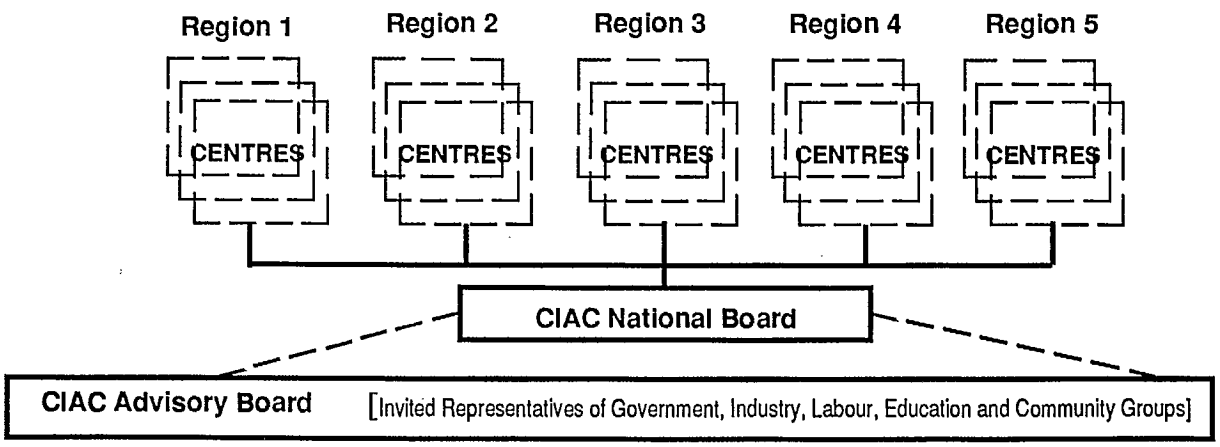
10. That a major conference on this subject be commissioned to draw together all those working in this field and with overseas representation to raise understanding and awareness of the problems of access and how they can be solved.

APPENDIX

CIAC ORGANIZATIONAL STRUCTURE



B. Overall Structure



SAMPLE NEWSLETTERS

CIACtion

Broadview-Greenwood

Vol 1 No 1

April 1994

The Broadview-Greenwood Community Information Access Centre Monthly Newsletter

Editor:
Pat Latham
Contributing Editors:
Grace Visconti
Liz Wilde
Robert Swarbrick
John Ogilvie

INTERIM WORKING GROUP SET UP

The response to Dennis Mills' Householder on the Information Highway led to an enthusiastic meeting of volunteers in his riding office one Saturday morning in February.

People from all ages and a variety of backgrounds and experience were keen to see a Community Information Access Centre in the riding.

An Interim Working Group was set up to see the dream realised. The IWG has now met three times and has formed several Planning Groups to get down to work in more detail.

There are currently ten planning groups:

- User Welcome
- Technical Equipment
- Skills Training
- Networks
- Infotech Issues
- Small Business
- Youth
- Seniors
- Special Needs
- Health & Wellness
- Art & Multi-Media Gallery

OUR FIRST COMPUTER SET-UP

Courtesy of Ray Micomonaco and Direct Net we now have our first computer set-up, complete with a modem, at its temporary location in Dennis Mills' riding office. The final pieces are arriving as we go to press. James Brown will be setting up the system and hopefully we will be on-line soon. So the next issue of this newsletter will be in both print and electronic format.

OUR THANKS TO ROMAN KOWALSKI

Those of you who have been in the riding office "lab" will know that Roman Kowalski has been using his own equipment to raise awareness of information technology in general and CIAC in particular.

Now that CIAC's equipment has begun to arrive, Roman has been able to reclaim his computer. Many thanks to Roman for keeping the project alive in those vital early stages.

$ OUR OWN BANK ACCOUNT $

CIAC now has its own bank account (and a nil balance at the moment!). But we can now accept money!!!!!!!!!!!!!!!!!!!!

Dennis Mills and Michael Raggett are both busy trying to get funds to fill it!

If you know of any rich angels.....

Planning Group News

Several of the planning groups have already been meeting regularly and have sent in their first reports. A brief account of those received to date are set out below.

If you have any questions or suggestions for a group or would like to join one, please contact one of the members direct or the Membership Records Committee.

If any group has identified equipment needs for any of their projects, please let the members of the Equipment Group know as soon as possible.

User Welcome Group Report

Current Members

Grace Visconti
Barry Andrews
Liz Wilde
Kathy Fernley

Questions and Responses in Brief

- How do we inform people about the Centre?

* *Have a flow chart at the door that shows what the Centre offers and a pocket version for them to take home.*

* *Use MP's householder.*

* *Design a community poster.*

- How do we greet people at the Centre?

* *Have a "psychological living room" - with coffee and baked goods (from volunteers) and a welcomer (staff or volunteer) to answer questions.*

* *Have easy instruction and friendly staff and signage.*

- How do we deal with casual, regular and irregular users and deal with overusers?

* *Have time limits on computers and enforce if there is a line-up*

* *Have suggestion box.*

* *Train staff/volunteers in vigilance.*

- How do we deal with access for people from other ridings?

* *Have a guest book for identification.*

Equipment Group Report

Current Members

Robert Swarbrick
Mark Heydar
James Brown
Dejan Sredojevic

Premises

- The storefront location we are currently considering on the Danforth is walk-in with wheelchair access.
- Rats, mice and cockroaches could be a problem.

Communications

- Our first connection will likely be to Toronto Freenet via a dedicated line to Ryerson University.
- Toronto Freenet is scheduled to go on-line by end of May. They have reserved a SUN micro for our use.
- We anticipate we will not pay access fees. They will also arrange limited access to INTERNEX.

Equipment

- This group is in communication with Ray Micomonaco of Direct Net and they are working on a required equipment list for the Centre.
- Direct Net has lent us a complete 486 system and this is being set up temporarily in Dennis Mills' riding office.

Special Needs Group Report

Current Members

John Ogilvie	Kenneth Koffer
Bawaani Durayrajah	Remy Dime

Questions and Responses in Brief

- How should we organize this area?

* *Need to identify special equipment/ groups and the proportion of stations dedicated to them:*

- *Visually impaired*
- *Hearing impaired*
- *Physically disabled*
- *Developmentally disabled*
- *Learning disabled*
- *Mentally disabled*

* *Use ergonomic (preventative) technology*

- What would be essential content?

* *Need to communicate with community organizations and individuals on existence of the Centre - e.g.:*

- *CNIB*
- *MTACL*
- *Consumer groups*

- What kind of skills would be needed in this area?

* *Need for small classes - scarcity of trainers.*

* *Need for staff trained in specific disabilities as well as "access technology"*

* *Should be included at inception - no second class citizens!*

* *Visually impaired are losing access because of increasing use of visual material.*

* *We need knowledge of interactions between special and mainstream technology (e.g. Braille and Windows).*

* *Need to contact inventors and manufacturers.*

* *Hands on experience is more useful than theoretical.*

Health & Wellness Group Report

Current Members

Grace Visconti	Liz Wilde
Barry Andrews	Kathy Fernley

- Have an outreach program to the medical community - doctors may want to come in. Have a video & CD library.
- Have information listed on-line about health issues - use Internet.
- Essential content should be defined by the community. Contact people for forums and have record of all forums in the library.
- Therapists, doctors, chiropractors, acupuncturists etc could come in to train staff on stress related issues dealing with computer "exposure". Set up an information directory of where members can get information.
- Use flyers, Internet (especially if we have our own BBS) and use ads in community newspapers and articles in the media to spread information about health problems beyond the confines of the Centre.
- The essential elements of this program would be:
  - interaction and information-spreading on preventative health issues.
  - listing of support groups for those with specific diseases.
  - educating people about computer effects and the electrical fields effects (i.e. the disservice effects.
  - bring people in to discuss the issues.
- Have a "laughter club night" once a month - prerequisite: everyone has to bring one joke or life experience.

Art Gallery Group Report

Current Members

Liz Wilde	Grace Visconti
Barry Andrews	Kathy Fernley

Functions

- Demonstrations of software products
- Projects involving small numbers of participants
- Presentation of work via coloured prints displayed at the Centre and a multimedia presentation that would run on the computer.
- Information on places where classes are offered e.g. colleges, Toronto Board of Education evening classes, Arts Schools etc.

Content

- Demonstrations and "mini lessons" involving painting, drawing, animation, pattern making, word processing and page layout.
- Digitizing or scanning of images and their use in paint programs or desktop publishing programs.
- Sound digitizer, microphone and CD or cassette player for recording and manipulating music, speech and sound effects in the computer.

Examples of Topics

- Help people set up a resume using word processing and page layout
- Create artistic images using computer tools as a paint box
- Creation of flyers, logos and text
- Use scans of photographs for a seniors' "memoirs" presentation - and combine with text and music.

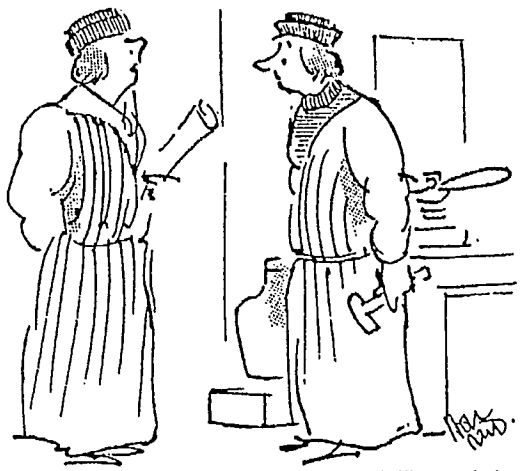
Staffing

- Need background in the visual arts and knowledge of or training in the use of programs
- Recruit students from colleges

Membership Records Group

Lito Javier and Jim Smith have kindly agreed to organize our membership and planning group lists and notify everyone of the time and place of our meetings.
Now that we have our first computer this should all be on-line soon.

Our thanks to all planning group rapporteurs who submitted their reports. They will all form part of the final Business Plan for the Centre.



'I don't want to hurry you Caxton, but we'd like to designate 1476 "Information Technology Year"'

If anyone is a cartoonist please let us know. or simply send in a cartoon. We need all the humour we can get.

CIACtion
Broadview Greenwood
Vol 1 No 2
May 1994
The Broadview-Greenwood Community Information Access Centre Monthly Newsletter

Editor:
Pat Latham
Contributing Editors:
Bawaani Durayrajah
James Brown

AGENDA FOR MEMBERS' MEETING
May 28, 1994

The Interim Board agreed the following agenda:

1. Funding & Structure Update
   Michael Raggett
   Questions & Answers
2. Location Update
   Bruce Murray & Michael Raggett
   Questions & Answers
3. Time Schedule
   Michael Raggett
   Questions & Answers
4. Strategic Plan
   Noel Desautels
   Planning Session
5. Working Groups
   Noel Desautels & Grace Visconti
   Planning Session
6. A.O.B.
7. Date of Next Meeting
8. Adjourn

FUNDING FROM YSC

On Friday, May 20th, Human Resources Minister Lloyd Axworthy and Secretary of State for Training and Youth, Ethel Blondin, announced the first wave of Youth Service Canada pilot projects - *including the Broadview-Greenwood CIAC.*

We will be allocated 10 participants to help set up and run Canada's first Community Information Access Centre.

Extracts from the press release:

"Youth Service Canada offers Canadians, aged 18 to 24, out of school and out of work, the opportunity to gain relevant skills and work experience through community service projects.

"The government will be watching these lead-site projects closely to see how the different elements work.

"With over 400,000 unemployed young people in Canada, many risk being sidelined in the job market through lack of skills or opportunity. Youth Service Canada is a bold experiment to see how governments, employers and communities can work together to give these young people a promising start in the job market."

A department official will be contacting us soon to help implement this project.

We are expected to be operational by June at the latest!!!!!!!!!!!!!!

Planning Group News

If you have any questions or suggestions for a group or would like to join one, please contact one of the members direct or Membership Secretary Lito Javier

Youth Group Report on YOUTH PROGRAMS

Current Members
Bawaani Durayrajah
Giselle Samaroo
Mary Armanious

What would be considered essential content?

- *Basic computer skills*
- *Basic Internet navigating skills*

What kinds of skills would be needed to help in this area?

- *Staff who have experience dealing with youth*
- *Staff must have exposure to the computing environment*
- *Encourage more youth involvement*
- *Initial training can be done in small groups*

What specially will be needed to attract young people to the Centre?

- *Contact local area school guidance officers as well as advertise in schools*
- *Contact community centres, youth facilities and religious institutions*
- *Convey and promote the importance of the use of computers and information technology in today's workforce*
- *Inform youth about the involvement of the Canadian National Youth Co-op with this Centre.*

What do we do to prevent possible overuse by this age group?

- *Implement time restrictions*
- *Down loading and playing of computer games must be prohibited*
- *Introduce a personal account system for a nominal fee*
- *Introduce a budget restriction for such an account*

CIACtion is your voice on information technology issues.
Articles, letters, reports and cartoons are all welcome.
The deadline is the 20th of each month.
Your submission may have to be edited for space reasons.

SOFTWARE:
Of Licences and Legalities and What is Free

© 1994 *James Brown*

I am decidedly not a lawyer so the outline of software licensing I am presenting is the result of observation and should not be mistaken for real legal advice. I am merely trying to define terms that I hear too frequently misused and point out that the result of those misconceptions may be damaging to businesses and reputations.

Software Pirating
When you give a copy of a program you bought and are using to a friend or colleague to use, you are breaking the law. Most people wouldn't walk out of a store carrying $500 worth of goods they didn't pay for but they may pirate software (copy it illegally) and send someone off with $500 worth of "hot" items.

Commercial Software Licenses
Commercial software is sold under a software license. By buying and using the software you are legally required to abide by the terms of that license. Licenses vary. Some state that the software can only run on a single machine. That means if you have two computers in your home or office you can only install this software on one machine and if you use it on both machines you are breaking the law. While private homes are rarely checked, the police and software companies do make an effort to go after businesses that use software illegally by violating the license it was sold under. *Do you know the licensing terms for all your software? If not, are you beginning to feel nervous?*

Educational Licenses
Some software is sold under an educational license so that students may buy their course software at a discount. If this is subsequently used for business purposes that is illegal, *even if it was used originally for education.* To use it for a business a copy must be bought under a different licensing arrangement.

Site Licenses
Some licenses allow you to run software at a particular location or site and so are known as site licences. If your business has several computers linked together in a local area network (LAN) and you use your site specific software on the network you are breaking the law.

Book Type Licenses
Other commercial software may have slightly different licensing rules. Borland, for instance, has a book-type license. These programs can be placed on more than one machine and used by more than one person if, and only if, a single copy of the program is running at any one time. It's like buying a book - you can lend it to a friend but only one of you can read it at a time even though more than one person has access to it. There's more.....

Shareware

A lot of software is licensed as shareware. You can find it in computer stores selling for $3-$10. You pay the store and it's yours right? Wrong! In fact the price you pay for those disks is merely a duplication fee. You can freely copy the contents and pass them on to whomever your heart desires but you must not make any changes to the contents. Even so, you are still not entitled to keep using the software because *shareware is not free.* It is a marketing idea that let's you try software for some time, usually a month, to see if you like it. You then have two options: either send in the registration fee or remove it from your computer. The registration fee is very often quite small compared to what you would pay in the store for brand-name products. Once the fee (which is usually sent to the author rather than the store) is paid, you are normally sent a coded number (which allows all the program's features to work properly) and a printed manual. This modified version falls into the normal commercial licensing arrangements. *If you continue to use shareware that you have not registered beyond the evaluation period you are breaking the law!*

Freeware

Now for the good news. *Some things are still free.* Software you do not have to pay for falls into three basic categories: demonstration and promotional programs (really just advertising); freeware; and public domain software. Demonstration and promotional programs simply give you a feel for the product so it's obvious why they are free.

Freeware is a term that covers software created by individuals or institutions that has been released for the public to use. Often when a programmer has a working version of a new program he may release the first version as freeware. That way the programmer gets feedback that can improve the final commercial version.

Freeware is sometimes provided by computer magazines who retain ownership but allow anyone to copy and use the program. It reminds you of the magazine every time you use it so it is good publicity.

One of the largest sources of freeware is from computer hackers who spend time solving problems and finding new solutions and will often give their results away. Pride usually calls for polishing and fixing up so the resulting program is often surprisingly good. Computer clubs often distribute collections of such goodies created by their members. Several organizations–e.g. the League for Programming Freedom (LPF), the Free Software Foundation (FSF) run by MIT–are trying to develop specific free products.

Public Domain Software is owned by everyone. One example of a good PD program is a communications program called KERMIT. The university where it was created gave it away to students and then released it into the public domain.

The Only Catch

How come, you ask, these things are not everywhere and how come the software companies are still in business? The answer is simple: you pay for free software by having to find it, learn how to set it up, and learn how to use it. Commercial software is usually easier to use, more people know of it and more books are written about it. Time is money so you have to make a choice. But, if you know the rules involved, your computing should be a happy, stress-free experience–at least in terms of licensing problems!

***BBS Shareware** in the next issue.....*

CIACtion

Broadview-Greenwood

Vol 1 No 3

June 1994

The Broadview-Greenwood Community Information Access Centre Monthly Newsletter

Editor:
Pat Latham
Contributing Editors:
James Brown
Grace Visconti

$ FUNDING UPDATE $

Following several phone calls and a meeting with Dennis Mills and Michael Raggett, Martin O' Neill, President of **Microcell 1-2-1,** has offered CIAC $10,000 and full telephone services, including long distance for using modems. We will be receiving a letter of confirmation from the company shortly.

Microcell 121 is a Canadian hi-tech company that is on the leading edge of communications technology. Martin is personally very supportive of the philosphy and concept of Community Information Access Centres.

There are other funding irons in the fire and Dennis and Michael are putting a high priority on securing more financial support for the Broadview-Greenwood CIAC.

These days, governments (and the private sector) help those who help themselves, so Members might like to start considering *exactly* how the B-G CIAC will generate some revenue of its own. This will be on the agenda of the next Members' Meeting.

AGENDA FOR MEMBERS' MEETING
June 25, 1994

1. Approval of Previous Minutes
2. The Privacy Issue - input to the Advisory Council on the Information Highway
3. Membership of CIAC and the Volunteer Contract
6. A.O.B.
7. Date of Next Meeting
8 Adjourn

✦ CONGRATULATIONS ✦

Bawaani Durayrajah has just completed a Diploma in Business Computer Systems at Seneca College with high honours. She managed to achieve the maximum marks possible: 4 out of 4 every time!

Michael Raggett has just been appointed an ex officio member of the *Access and Social Impacts Working Group of the Minister's Advisory Council on the Information Highway.* The Working Group's task is to provide information to the Main Council. As 70% of Canadians have expressed concern about **privacy,** the group will be focussing on this issue at their next meeting. *Michael would welcome your input on **privacy** at this meeting – or contact him before July 10.*

♥ GOOD LUCK ♥

On his exams to **James Brown** who has been helping many of us to access the Internet and trying to study at the same time!

Planning Group News

If you have any questions or suggestions for a group or would like to join one, please contact JIM SMITH - ACTING MEMBERSHIP SECRETARY

Occupational Health & Wellness Group

This planning group has come up with a series of suggestions for members to consider. If you have any comments please let them know by contacting a member of the group.

Liaising with the Medical Community

- We can contact the Ontario Health Association to see what needs have to be met.
- We can ask Dennis Mills to talk to the Health Ministry.
- We can use flyers to make direct contact with local doctors - Dr Rona and Dr Jaconello are just two who are well-known in the area.
- We could undertake projects with the medical community to help "teach" a program.
- We could have casual "wellness outings" with doctors or other health professionals.
- We could have a CIAC business card printed with phone & voice mail for approaching the medical community.

Outreach

- We should be proactive not reactive.
- We can send out volunteers with laptops to the homes of "shut-ins".

Beyond Technology

- We should broaden the focus of the Centre to include health concerns.
- This group is looking at a more "focussed" name for the Wellness Group.

Health Seminars

- We should have a large multi-purpose room for seminars.
- Seminars should include health and other issues such as stress management, computer phobia etc..

Health Programs

- We can have a program that illustrates a set of exercises.
- We can include interaction with nature i.e. "going off" the Centre grounds and getting involved in something like Outward Bound.

Ergonomics

- We should set up a model ergonomics station at the Centre.
- We can design ergonomics posters to hand out.

Database

- The Centre should have a database containing a "Did You Know?" file.

The Family

- We could have family days promoting wellness with the family.

more over page→ →→→→→

Multi-Media Library
• We should have a multi-media library with animation programs and CD Roms on anatomy and physiology.

Jobs & Health
• Include the LETS system (Local Employment & Trading System) – and there are other systems out there.
• Have resume writing to reduce the stress of job searching.

Positive Thinking
• We should have a different saying every day as an emotion booster.

Health Support Group
• We need to create a health support group in order to reduce stress. Actions speak louder than words or "nerves".

Laughter Group
• We should use laughter to keep people positive through casual interaction.

Independent Learning
• We should encourage independent learning and learning how to be independent– this reduces the stress of surviving on your own.

No-Smoking!
• EVERYONE AGREED THAT THE CIAC FACILITY SHOULD BE NON-SMOKING.

In Control
• The most important point the group came up with was HOW TO BE IN CONTROL OF YOUR LIFE. This is the mandate of the Health & Wellness Group.

Reporter – Grace Visconti

The motto of the Health & Wellness Group is:

Have control over your life
instead of
letting your life control you.

Be Proactive not Reactive

If <u>your</u> Planning Group has information that needs to be shared with all Members please send your report to the editor.

The Legalities of Shareware on a BBS

 James Brown

Often shareware packages are available free of charge from local computer Bulletin Board Systems (BBSs) so they are only a phone call away if you have a computer and a modem. But don't forget the legalities.....

BBSs are only distributors. If you paid to belong to a BBS that doesn't mean that everything you transfer from it to your computer is yours to keep and do with as you choose. You must abide by the rules set out in the licensing agreement that is included with the program.

Here's how to check up on the program's licensing agreement.

All software has some sort of licensing agreement - it won't just not be there. Take a few moments to read it, it could save you from a lawsuit or prosecution.

Commercial software generally comes with a printed instruction book or manual. The licensing agreement is normally found at the front or the very back of the book. It is standard issue.

In other types of software, all you usually get is a disk, or if you got it from another computer over the phone (called downloading), you don't even get that.

You will find a file with the licensing information. This is usually:

README,
READ.ME,
README.1st,
REGISTER,
REGISTER.DOC,
LICENCE.TXT or something similar.

Read that file by printing it on your printer or displaying it on your screen.

Remember it is a legal document and you agree to its terms and conditions by using the software even though you don't sign anything.

If there is no file similar to the above, then the information will probably be contained in the documentation for the program. This documentation will be another file, usually called:

MANUAL,
MANUAL.DOC or
MANUAL.TXT – or

it may have the same name as the program you are using.

For instance, if you have a program called DRAW, then you will have one file with the title:

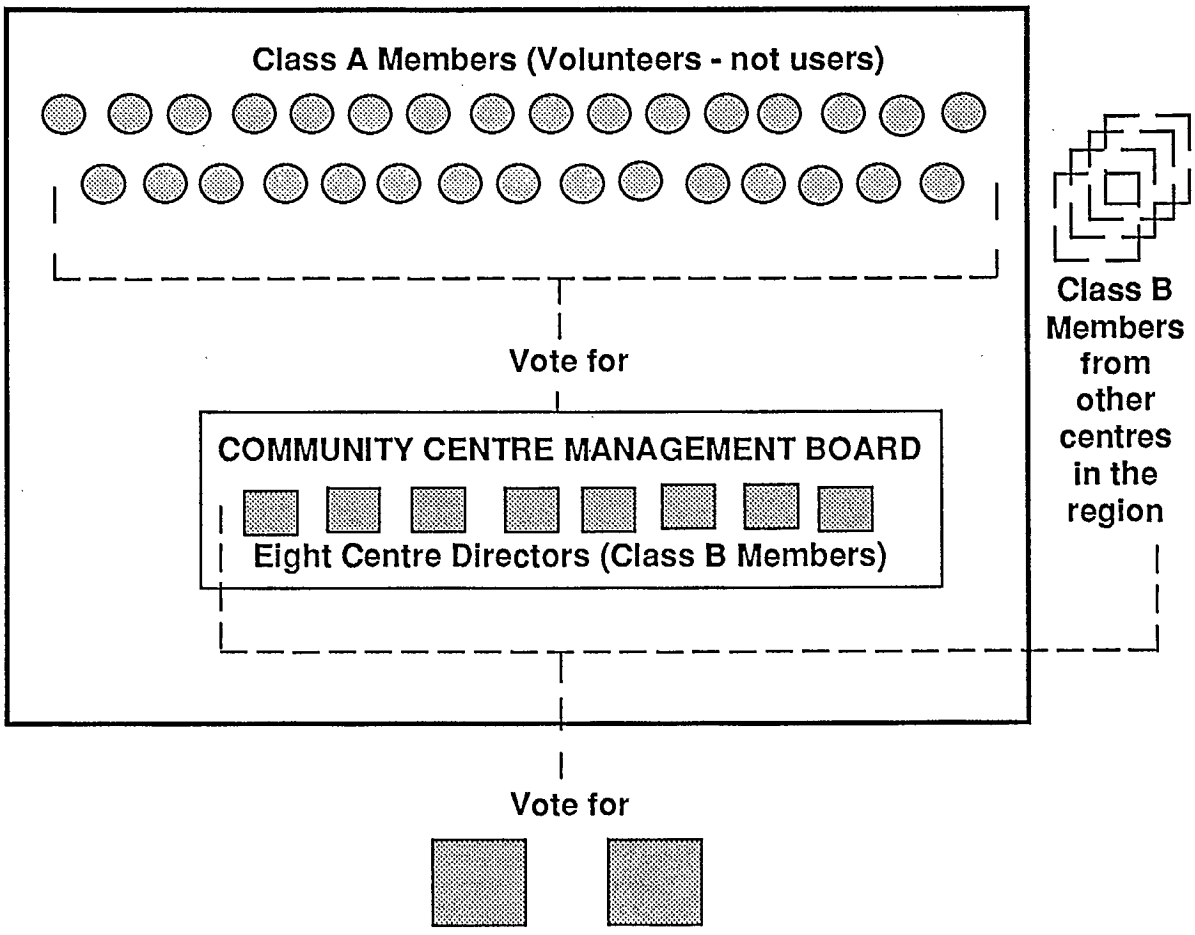
DRAW.EXE or
DRAW.COM or
DRAW.BAT

and there will be an information file called
DRAW.DOC (the DOC stands for document) or
DRAW.TXT (the TXT stands for text)
- the two terms are interchangeable.

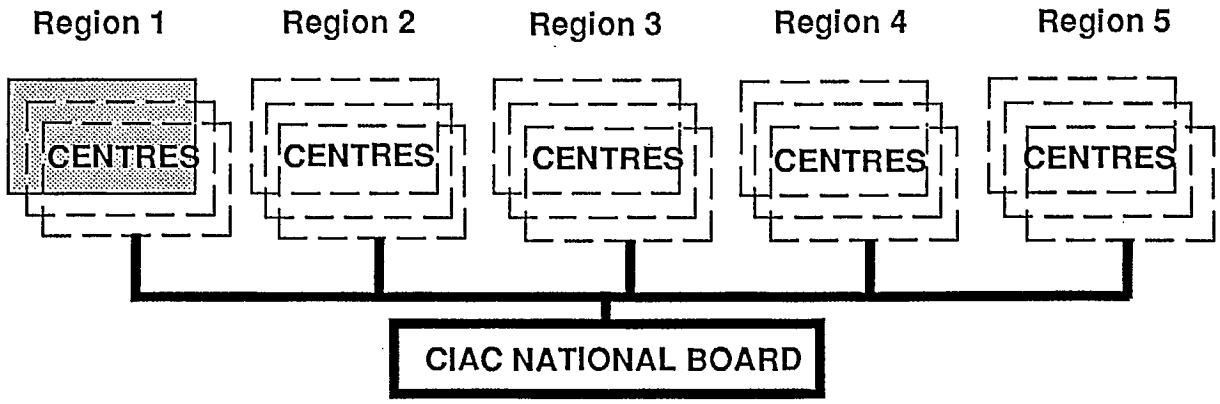
It is because of the presence of these legal documents and instructional files that the whole set of files in a shareware distribution disk must be copied completely and correctly. This allows the next person to go through the process of testing, deciding and registering. Failure to follow these agreements means YOU ARE BREAKING THE LAW.

CIAC'S CORPORATE STRUCTURE

A. Each Centre



B. Overall Structure



BARRIER FREE ACCESS

Ken Koffer, Michael Raggett and Pat Latham spent an informative afternoon at Access Place in Toronto. This is a Resource Centre on barrier free access for disabled Canadians.

One of our Members, Barouch Ghai, has some of his company's computer equipment on display there.

With the help of Judith Lytle, we were able to use their library to find out valuable details about making CIAC's first Centre in Broadview-Greenwood barrier-free.

Ken now has a wealth of information on such subjects as the required heights and widths of washrooms and equipment for disabled use etc etc.

Our goal is to make all CIACs barrier-free from day one.

FOR INTERNET USERS?

In Two Minds

I was witty and clever today
I told all my news and I aired all my views
Oh, I was witty and clever today.

You were stupid and boring today
Your facts were all wrong and you went on too long
God! You were stupid and boring today.

.comment

Overheard at a conference:

"You know, there could times when all this information may be too much of a good thing. Just imagine taking your girl friend to your favourite hotel and the manager calls up your details on the computer and says, 'We have put your wife's favourite flowers in the room sir.'" **No .comment**

Seen at a conference:

A sales video on the new Videoway interactive television cable service. The first segment shows a family watching television and the MAN has the remote control unit! **Aargh!**

Suffered at a conference:

An ear-piercing hum on the speaker's microphone that resisted all efforts to remove it. Why is it that these hi–tech conferences always have technical hitches? **Just testing?**

Editor

CIACtion is your voice on information technology issues.
Dreams, beefs, practical suggestions are all welcome!
The deadline is the 20th of each month.
Your submission may have to be edited into the space available.

CIACtion
Broadview Greenwood
Vol 1 No 4
July 1994
The Broadview-Greenwood Community Information Access Centre Monthly Newsletter

Editor:
Pat Latham
Contributing Editors:
Dave Davies
Liz Wilde

AGENDA FOR MEMBERS' MEETING
July 23, 1994

The Interim Board agreed the following agenda:

1. Welcome to new members
2. Approval of agenda
3. Approval of minutes
4. Matters arising not covered elsewhere
5. President's Report & Discussion
6. Working Group Reports
   - Small business
   - Operations
   - Arts/multi-media
   - Health
   - Communications
   - Special needs
   - Human resources
   - Technical & equipment
   - Youth
7. Party - Social Committee
8. Announcements
9. A.O.B.
10. Date of next meeting
11. Adjournment

THE NITTY-GRITTY

There are some issues that need resolving and members' input is being requested:

• **User fees**

We need to decide about these. How much? Are all users "equal" or should some pay more/less? Should there be some initial free time? What user identification should we adopt?

• **Smoking**

The Health Group has already recommended a smoke-free Centre - we need to take a decision on this.

•**Working Groups**

The Interim Board has resolved that "Working Groups" rather than "Committees" best reflects the spirit of the Centre.

Do we have the right groups to make the strategic inputs to the Interim (and soon the elected) Board that they will need to manage the Centre?

• **Policy for Corporate Donations**

Corporate funding is not easily come by - what conditions does the B-G Centre want to adopt (see President's Report p.5).

• **Generating Revenue**

Is our ultimate target to be totally financially self sufficient?

Or partially self-sufficient?

If so, over what time frame should this aim be achieved?

How should we generate revenue?

Planning Group News

If you have any questions or suggestions for a group or would like to join one, please contact JIM SMITH - ACTING MEMBERSHIP SECRETARY

Small Business Group

The chairman of this group, Dave Davies, has suggested the following guidelines for the group and is actively seeking interested members to participate in this very important group.

Committee Purpose

- Evaluate the information needs of small business within the B-G community.
- Determine what sectors are involved and what changes have taken place in terms of new technology and global competition.
- Promote awareness in price/performance gains from the use of new technology equipment and services.
- Facilitate new employment opportunities within the community resulting from the implementation and new uses of information technology.

Target Market

- Local suppliers/trades
- Independent retail outlets
- Home and storefront professional services

Objectives

- Determine the current state of the community's use of technology.
- Gauge future requirements and relative use within the community (compared to other communities with similar business profile).
- Maximise economic growth through innovative uses of information technology within the community, through more equal access to relevant information.
- Maximise the use of available technology that the small business community may not otherwise be aware of.
- Determine specific requirements that the business community would find feasible and determine solutions with an emphasis on solutions available within the local community.
- Facilitate business affiliations towards common goals (networking).

Strategy

Requirements analysis

- Start with the CIAC group
- Determine what small business groups are represented within CIAC
- Create/refine a questionnaire for use within the group
- Determine what solutions are already in effect (e.g. merchants' associations, professional associations etc)
- Determine "key users" within the group and/or within the community that can represent a community small business group's needs
- Gather general and specific sources of information
- utilize CIAC BBSs to determine offered and required services

more over page→ →→→→→

By July 23/94

- Review meetings with CIAC small business group members to determine:
  - * initial business areas to focus on
  - * initial questions/sources of information
  - * key users within the group for relevant business sectors
  - * members within the group that source information available to relevant business sectors
- Issue questionnaire internally at the meeting
- Obtain feedback on questions/approach

By August 6/94

- Review initial responses
- List information needs/services available
- Determine potential use of CIAC and community services
- Draft feasibility study of initial project(s) that would meet the community's requirements (who would benefit/initial funding/ongoing revenue etc)

Initial Priorities

- Prior to a formal meeting with the CIAC small business group and before hearing from the small business community, the priorities are as follows:

Lower priority

* businesses that are comfortable with their solutions now and in the future
* businesses that have already achieved a high rate of automation

Medium priority

* businesses that would use services/ purchase equipment if they could see that the cost and time involved were warranted

Higher priority

* businesses that are starting to suffer due to better organized/ informed/automated competition (e.g. Walmart vs. retail outlets carrying similar merchandise; private restaurants)
* businesses that are receptive to and are in a position to benefit from community-based services to meet their collective needs

Reporter: Dave Davies

If <u>your</u> Planning Group has a report please send it to the editor (fax hard copy 705-484-1622 or use modem) so that it can be shared with all members.

Arts and Multi-Media Group

Purpose of the Group

• To ensure that artistic applications of the computer are well represented. Clients should be provided with an overview of computer applications in the area of graphics, visual arts, animation, desktop publishing and multi-media presentations.

• To create a friendly and inspiring atmos[phere at the centre by being involved in the final interior decor. Hopefully, we can provide a moveable mural or series of large canvasses, expressing our theme of "Communication Across Canada". There should be an exhibit space set aside for temporary display of work created at the Centre.

• The Atrs Group can provide flyers, a logo etc to help promote the Centre.

Target Market

• Those who are interested in learning about visual applications of the computer: students who are contemplating a career in animation, desktop publishing or muti-media.

• Clients who wish to design a resume.

• Children with a desire to learn about animation

• Business people interested in creating a flyer.

Needs of the Target Market

• To have access to the latest software and equipment, be given demonstrations and lessons on how to use it.

Goals and Objectives

Since visual integration is so important today in the new multi-media technology, it is important to provide training for those interested in acquiring skills. Creating images that can be integrated with text, then transported on the Network is relevant. By setting up current software - hopefully on more than one platform - and affording hardware (such as a scanner, digitizer and colour printer) we can realize these aims.

Primary aim

Begin with small group classes comprised of demonstrations and hands-on training. Expand to include sound and music as the need arises.

Further possibilities

The arts group could provide instructional videos for the Centre, to be available for individual work.

The Centre decor

The arts group will propose colour schemes and designs appropriate for the relaxed environment we would like to create. With approval, this would be accomplished for the opening.

A multi-media presentation can be part of the Centre's information and welcoming desk. Computer-created images and animations, set to music, can be displayed, along with announcements of classes offered, special events etc.

How to Realize Goals

By acquiring suitable equipment, beginning with small groups and expanding as the need grows.

Priorities

• Atmosphere of the Centre itself - to ensure a stress-free and pleasant environment

• To use the Centre itself as an example of artistic integration

Reporter: Liz Wilde

PRESIDENT'S REPORT

Finance

We have been busy making presentations and sending out promotional packages on CIAC. Now that we are nationally incorporated, potential donors are becoming much more receptive. Rogers Cable have now promised $10,000 and a meeting has been arranged for next week with Bell to discuss further support at the national level. Our Treasurer, Jim Nesbitt of Coopers & Lybrand, is approaching his contacts in the chartered banks and other companies on CIAC's behalf.

Location

We have received an offer from Royal Trust which is not satisfactory (too expensive and of limited duration) so a counter offer is currently being prepared.

Equipment

Detailed configuration descriptions have been prepared and are being forwarded by Adam Bardach to all possible sources, many of whom have already been contacted and have promised support.

Membership

I have been told that applications (and some Board nomination forms) have been rolling in. Thank you for such a supportive response. If you need a package, they are available at this meeting. If you have not already sent in your application, please do so as soon as possible. Membership cards and copies of the By-laws will be sent out to registered members over the next few weeks.

Other

Other Centres

Without any promotion of CIAC I have been contacted with regard to the possibility of setting up other Centres across the country. This interest is extremely encouraging.

Corporate Funding Conditions for the B-G Centre

At the last meeting it was requested that some thought be put to what represents acceptable conditions for funding for the B-G Centre. Having discussed this with several members, it seems to me we need to establish a working group to make some recommendations to the Members and the Board.

Youth Service Canada Participants' Applications

If you want to make an application or you know of someone else who does, please send them to :

Michael Raggett
CIAC
89 Colborne Street East
Suite 201
Orillia, ON, L3V 1T8

SAMPLE MINUTES

CIAC Interim Board of Directors

Minutes of Meeting # 1

April 30,1994 4p.m.
at
98 Lesmount Avenue
Toronto

Attending:
Chair: Gordon Kennedy

Robert Swarbrick	Noel Desautels
Bawaani Durayrajah	Michael Raggett
Kenneth Koffer	Pat Latham

Absent with notification of meeting:

Roman Kowalczuk	Grace Visconti

Main Purpose of Meeting:

To examine Articles of Incorporation, Constitution and By-laws and carry out day-to-day operations that will result in the successful and timely opening of the B-G CIAC.

Motions:

Motion 1
BE IT RESOLVED THAT Michael Raggett assume the position of President and in that capacity act as the official representative of CIAC.

Passed with the following abstentions: Michael Raggett, Pat Latham

Motion 2
BE IT RESOLVED THAT all Members of CIAC must immediately disclose any potential conflict of interest prior to entering into a working arrangement with CIAC and, further, must abstain from voting on such matters.

Passed Unanimously

Motion 3
BE IT RESOLVED THAT any Member or Group of Members, who develop(s) intellectual property, or donates a product or service and offers that intellectual property, product or service to CIAC shall be required to agree unconditionally to grant CIAC all rights and privileges associated with the said property, product or service free of any fees and obligations and with the understanding that CIAC may continue to use the property, product or service for as long as it deems fit.

Passed Unanimously

Motion 4
BE IT RESOLVED THAT it is the policy of CIAC that all equipment and software belonging to, on loan to, donated to, or otherwise in the possession of CIAC cannot be lent out or otherwise removed from the location designated by CIAC.

Passed Unanimously

Motion 5
BE IT RESOLVED THAT Lito Javier be confirmed as membership Secretary for CIAC.

Passed Unanimously

Motion 5
BE IT RESOLVED THAT, on behalf of CIAC, The Board accepts the kind offer of Direct Net of Ottawa to lend CIAC the following equipment:

1-Mid-Tower IBM clone PC with:
-486 33mhz local bus
-8MG RAM
-230 Hard Drive
-Cirrus Logic Video Card 2MB local bus
-Local bus IDE controller card
1-External Fax/Modem 14.4KB
1-VGA interlaced Monitor (cable defective)
1-Keyboard
to be located temporarily in 469 Danforth Avenue;

AND BE IT ALSO RESOLVED THAT the Equipment Planning Group would be responsible for the set-up of this equipment and FURTHER THAT it be used for the initial purpose of providing the members of CIAC with internal electronic communications and FURTHER THAT the Equipment Planning Group be asked to provide training in its use for CIAC Members.

Passed Unanimously

Date of Next CIAC Interim Board Meeting:

Monday, May 16, 1994 (7:00 p.m.)
It was agreed that all Meetings of the CIAC Interim Board will be open to all Members of CIAC. [As space is limited, please call in advance if you wish to attend the next meeting as a courtesy to our host.]

Proposed Agenda of Next CIAC Interim Board Meeting:

1. Approval of previous minutes.
2. Further define Articles of Incorporation, Constitution, and By-laws for recommendation to Members at the Members' Meeting on May 28, 1994.
3. Fund-raising and financial status of CIAC.
4. AOB.

Adjournment:
Meeting adjourned at 7:15 p.m.

Approved at meeting of Monday, May 16

Signed Gordon M. Kennedy

Gordon Kennedy, Chair

CIAC Interim Board of Directors

Minutes of Meeting # 2

May 16, 1994 7 p.m.
at
98 Lesmount Avenue
Toronto

Attending:
Acting Chair: Michael Raggett, President
Robert Swarbrick Noel Desautels
Bawaani Durayrajah Kenneth Koffer
Grace Visconti Roman Kowalczuk
Pat Latham

Apologies: Chair Gordon Kennedy (family illness)

Also present: Jim Smith, Mark Mantzoutsos

Minutes of Previous Meeting:

RESOLVED: to approve the minutes of meeting of April 30.
Moved: Ken Koffer *Seconded:* Bob Swarbrick
Passed

Reported:

a) Constitution and By-laws
The President reported that federal funding would require incorporation as a national body and that this required constitution and By-laws that provided for a national structure with regional representation.

b) Fundraising
The President reported that there were currently four possible sources of funding for CIAC:

i) CIAC was still under consideration as a project for the Canadian Youth Service Corps and an announcement was expected soon.

ii) he had had meetings with officials from the Dept of Industry and that they were supportive of the project and that there was a good chance of receiving funding from that source provided CIAC was incorporated as a national body. More meetings would be occurring in the coming week.

iii) once government funding had been secured, corporate fundraising was likely to be easier and that Dennis Mills was already actively seeking corporate donations on behalf of CIAC and that he and Dennis would continue to work on this as a priority.

iv) Adam Bardach, who was formerly CEO of Teleglobe, was spearheading an equipment acquisition team in Ottawa and we should be able to acquire sufficient equipment for the start-up of the Centre but we must have a location before we could begin to receive this.

The Business Plan

It was decided that the original draft of the plan had served its purpose to attract initial funding and that what was needed now was a Strategic Plan for the Centre. This item would be included on the agenda for the next Members' meeting.

Agenda for the Members' Meeting of May 28th, 1994

The Board approved the following agenda and format:

1. Funding & Structure Update - Michael Raggett
   Questions & Answers

2. Location update - Michael Raggett & Bruce Murray
   Questions & Answers

3. Time Schedule - Michael Raggett
   Questions & Answers

4. Strategic Plan - Noel Desautels
   Planning Session

5. Working Groups - Noel Desautels & Grace Visconti
   Planning Session

6. A.O.B.

7. Date of Next Meeting

8. Adjournment

Date & Place of Next Board Meeting

Monday June 6, 1994 - 7 p.m. @ 98 Lesmount Avenue

Adjournment

The meeting adjourned at 9.30 p.m.

Gordon M Kennedy

SAMPLE VOLUNTEER FORMS

CIAC

Community Information Access Centres of Canada

VOLUNTEER CONTRACT

(Name) _____ of

(Address) _____

(Tel. Res.) _____ (Tel. Bus.) _____ (Fax) _____

Contracts with

Community Information Access Centre

To donate twenty-four hours per year of volunteer work *(excluding attendance at any member, committee or board meetings of the Centre)* to the above named Centre, to abide by the By-laws of Community Information Access Centres of Canada and the rules of the above named centre, and to pay an annual Membership Fee of

$5.00

Date..... Signature .....

If at any time a Member is unable to fulfil the obligations of this contract due to prolonged illness, family emergencies or extended absence due to employment requirements, they should inform the Membership Secretary so that the Community Centre Management Board can temporarily release them from obligation without prejudicing their Membership.

Membership in CIAC is non-transferable

Office use only

.....

Membership Secretary

Membership Fee enclosed ☐ ☐

CIAC
Community Information Access Centres of Canada
Broadview-Greenwood Centre

Volunteer Form

Name:

Address:

Post Code: **Tel/ Home:** **Tel/Work:**

Fax: **e. mail:**

I can help in the following areas *(please specify particular skills/expertise):*

A - Computers and Computing

B - Renovation Skills

C - Other

My best times for helping are *(please circle):*

Sunday Monday Tuesday Wednesday Thursday Friday Saturday

Morning Lunchtime Early Afternoon Late Afternoon Evening

I would like help from the Centre in the following areas *(please specify):*