THE CANADIAN INFORMATION HIGHWAY DEBATE AND THE EXPERIENCE OF PUBLIC ACCESS IN RURAL COMMUNITIES, 1993-1999

By

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Abstract

In the early 1990's the federal government undertook an information policy initiative that is now referred to as the Canadian Information Highway debate. Underlying the debate was the growing presence of the Internet as a new global medium of communications. The government wanted to create a strategic plan for developing an "Information Highway" infrastructure. The debate consisted of a series of policy development activities that gathered ideas and input about how the government should develop the Information Highway.

The provision of "public access" services for the Information Highway was one of the dominant concerns expressed by many groups during the debate. How was "access" going to be defined and what did it mean for communities?

This thesis frames the complex policy development dynamics of the Information Highway debate and links the outcome to subsequent impacts upon the experience of "public access" in rural communities from 1993 – 1999. Specific attention is focused on how the federal government gathered information policy input during the debate; how advocacy groups expressed the need for a broader undertstanding of "public access;" how SchoolNet and the Community Access Program (CAP) were eventually piloted and implemented in the province of Nova Scotia; and what the early analysis of CAP sites has indicated about the strengths and weaknesses of the federal government's original access policy.

In the final analysis, this thesis provides a deeper understanding and awareness about how communications technologies and issues of public access continually develop with respect to very specific needs and interests.

Abbreviations List

ASTED	l'Association pour l'avancement des sciences et des techniques de la documentation
BCLA	British Columbia Library Association
C\CEN	Centre for Community and Enterprise Networking
CANARIE	Canadian Network for the Advancement of Research, Industry, and Education
CAP	Community Access Program
CATA	Canadian Advanced Technology Alliance
CEED	Centre for Entrepreneurship, Education and Development
CLC	Canadian Labour Congress
CLA	Canadian Library Association
CPI	Canadian Coalition for Public Information
CRTC	Canadian Radio-Television and Telecommunications Commission
CUFTA	Canada-U.S. Free Trade Agreement
DIPCII	Developing Information Policies for a Canadian Information Infrastructure
DOC	Department of Communications (Canadian Government)
EDnet	Education Wide Area Network
EHS	Electronic Highway System
EPSSG	Electronic Public Space Steering Group
FCC	Federal Communications Commission
FIS	Faculty of Information Studies (University of Toronto)
G7	Group of Seven Industrialized Countries
GATT	General Agreement on Trade and Tariffs

GII	Global information infrastructure
GUI	Graphical User Interface
HRDC	Human Resources Development Canada
IC	Industry Canada (Canadian Government)
IHAB	Information Highways Applications Branch
IHAC	Information Highway Advisory Council
IHWG	Information Highway Working Group
IITF	Information Infrastructure Task Force
INTERCOM	International Committee on Management
IP	Intellectual Property
IPIRG	Internet Public Interest Research Group
IPRP	Information Policy Research Project
ISP	Internet Service Provider
ISTC	Industry Science and Technology Canada
ITAC	Information Technology Association Conference
ITU	International Telecommunication Union
MOA	Memorandum of Agreement
MT&T	Maritime Telephone and Telegraph
NAFTA	North American Free Trade Agreement
NGOs	Non-governmental organizations
NII	National Information Infrastructure
NPM	New Public Management
NPTN	National Public Telecomputing Network

NSCAC	Nova Scotia Community Access Committee
NSPL	Nova Scotia Provincial Library
OLA	Ontario Library Association
ONIP	Ontario Network Infrastructure Program
P-IHAC	Public Information Highway Advisory Council
PIAC	Public Interest Advocacy Centre
PWGSC	Public Works and Government Services Canada
RWG	Regional Working Groups
SITT	Spectrum Information Technology and Telecommunications
SWSDA	South West Shore Development Authority
TC	Telecommunities Canada
TSS	Technology and Science Secretariat
TWU	Telecommunications Workers Union
UCCB	University College of Cape Breton
WiNS	Wire Nova Scotia
WTO	World Trade Organization

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Chapter One – Introduction

In 1995 the Canadian federal government formally initiated a public access initative called the Community Access Program (CAP) to "provide rural communities with affordable public access to the Internet" and to help "create new and exciting opportunities for growth and job" (Canada, Industry Canada, March 9, 1995, <u>What is Community Access?</u>).

From late 1993, community access pilots had been conducted within another access program called SchoolNet. The goal of CAP was to provide cost-shared funding to a designated community CAP organization within a rural community to staff and equip a facility with computer hardware and communications software. This facility would in turn provide affordable services for individual users to access online information and utilize the Internet for communications purposes. As noted above, the government also saw the CAP initiative as a vehicle to create jobs and economic growth in rural areas. In this respect, later research analysis would discover that CAP was developed with very specific needs and interests in mind, some of which had nothing to do with users at CAP sites. Looking back over the time period when CAP was created, Gurstein (2002) has observed:

> Canada has become one of the most connected countries in the world. It has done so by creating an environment that favours private investment and promoting public initiatives to enhance communications infrastructure, with emphasis on Internet access in schools and communities (M. Gurstein, personal communication, July 23, 2002).

This process of "promoting public initiatives" occurred as a result of an information policy consultation process that is now more commonly referred to as the "Canadian Information Highway debate." Underlying this debate is the growing presence of the Internet as a new global

medium of communications and its perceived value and role for enhancing economic development opportunities and job creation in Canada.

With the election of a new Liberal government in November 1993, a political goal was to have Canada become a world leader in the use of Internet based communications technology. This political vision was first outlined in the government's Speech from the Throne in January 1994 when the new government promised to devise a strategic plan to develop and implement a "Canadian Information Highway" (Angus & Mckie, 1994, p. 3). The strategy and implementation plan was to be coordinated by the Department of Industry Science and Technology Canada (ISTC). A key component of this plan had to do with "access" services to the "Information Highway." The government's strategy undertook a number of initiatives to conduct policy studies, hold focus group discussions, develop interim reports and support workshop discussion activities to gather policy ideas and input. At the time of the 1997 Speech from the Throne, the federal government announced the "Connecting Canadians" initiative with the goal of providing access initiatives that would make Canada the most connected nation in the world by the year 2000. However, the Information Highway debate reflected many differing perspectives on what "access" should mean.

One of the first public "access" initiatives that the new Liberal government undertook was the creation of SchoolNet in late 1993 (Appendix A, 1993, November, p. 104). Its primary purpose was to provide schools with online educational resources for teachers and students. In order to accomplish this, schools also needed "connectivity" support. ISTC felt that if such connectivity was provided, it would also have to be publicly accessible. Thus it was within the SchoolNet initiative that the CAP access pilots emerged and later became an official government initiative by 1995.

For SchoolNet and CAP, "access" was simply the means by which a school or another community location could technically "connect" by a designated personal computer (or network of computers) to a telephone line via the support of an Internet Service Provider (ISP). Through an ISP, users could access a multitude of information sources stored on servers around the world. These networks function under an operational protocol now referred to as the World Wide Web (WWW).

The WWW had been developed in 1990 by Tim Berners-Lee and Robert Cailliau (Slevin, 2000) and was introduced to North America in 1991. By 1993 the WWW had been further enhanced with a graphical user interface (GUI) called Mosaic, that allowed users to navigate the WWW via a hypertext medium of pointing and clicking on text and/or graphics. Since 1993 further enhancements have been built upon this original interface (e.g. Netscape™ and Internet Explorer™). But as Margolis and Resnick (2000) point out, it was by 1993 that "the Internet had entered the mainstream of popular Western culture" (p. 42). By 1995 the WWW became the dominant means by which individuals could access various forms of online information (Zakon, 1999). As these various technologies developed in the early nineties, public concerns arose about the nature and provision of online public access services.

For public access via the CAP initiative, the government recognized that there was a "need for analysis to identify how gender, age, and other social factors [created] differences in participating in and benefiting from the Information Highway" (Information Highway Advisory Council Canada [IHAC Canada], 1996, p. 24). To this end, ISTC saw CAP as a "prototype for how these access questions might be resolved" (p.24). Yet, none of this analysis was carried out publicly by either ISTC or its later reorganized and renamed department Industy Canada (IC). In 2002, community informatics researcher Michael Gurstein (2002) pointed out that:

approximately $500 Million has been spent on the Community Access Program - no and let me repeat NO money was spent on publicly accessible systematic "analysis" or research and I gather virtually none was spent on internal analysis either (M. Gurstein, personal communication, March 9, 2002).

Gurstein's observation provides an insight into what unfolded with regard to the CAP initiative. Given the large investment that the federal government has invested in such a program, why hasn't such an analysis been undertaken? For example, had CAP delivered on the government's overriding expectation that it would create jobs and make the country more internationally competitive? Early, but limited CAP site analysis (Pfiester and Colle, 2000, October 31; Deveau & Winstanley, 2000; LibraryNet, 1999, January 12) have all shed light on issues gleaned from early CAP site experiences up to 1999.

Issues such as the need for better long-term sustainability funding for CAP sites, provision of information architecture guidelines for CAP web sites, the need for paid staff to train and orient users and deliver information literacy programs were some of the many issues identified as critical operational needs at a variety of CAP sites. I believe that all these needs ultimately had their root cause in the policy development process that unfolded during the Information Highway debate. This thesis will, therefore, address two overarching questions concerning CAP and the nature of policymaking: What were the policymaking dynamics that unfolded prior to, during and after the Information Highway debate that led to the creation of CAP? How did the outcome of these dynamics impact upon the early implementation experiences of CAP organizations and, more specifically, upon CAP site supervisors and users within Nova Scotian rural communities? These questions will address the specific time period of late 1993 when SchoolNet and community access pilots were established, through 1995 when CAP became an official program initiative, up to 1999 when an analysis of CAP sites was

undertaken in selected areas of the country. No one document has yet profiled the complex

dynamics of the Canadian Information Highway debate and linked its policy outcomes to the

actual experiences of public access in rural communities between 1993 and 1999. By offering

such a profile, I will provide a deeper understanding and awareness of how communications

technologies and issues of public access continually develop with respect to very specific needs

and interests.

> Melody (1990) has observed:
>
> Policy makers in seemingly unrelated areas may be unaware of the information and communication implications of the policy options they are considering. … authorities seldom go looking for public interest considerations. To a significant degree, only the research itself will expose the breadth of key policy decisions that affect public information and communication opportunities and uses (p.36).

This thesis will expose how the federal government was primarily concerned with creating

public access policy that would address the technical "connectivity" and regulatory requirements

for ensuring universal access to the Internet at a reasonable cost. The government rationale for

providing such access was to make Canada the most connected country in the world. This in

itself was an admirable task. However, as my analysis will indicate, various advocacy groups

suggested that, besides providing "connectivity," broader notions of "access" were required,

namely the creation of a "national access strategy" to monitor best practices for the delivery of

services such as information literacy training and support and technical coordination.

Furthermore, affordable and equitable access for public institutions such as schools and libraries

had to be considered.

In hindsight, the "information highway" metaphor was perhaps not the best one to be

used by government. "Highway" reflects an older medium that is static, local and linear, whereas

the Internet is a web-based medium that is global in scope, multi-directional and non-traditional

in its communications approach. The traditional communications model of the paternalistic

public service operator (be it a broadcaster or telephone service) or beneficent national public

interest regulator (e.g., the Canadian Radio-television Telecommunications Commission [CRTC]

) appears less relevant in light of the Internet. In addressing potential opportunities that the

Internet offered Canadians, the government engaged both traditional regulatory methods and

appointed new bodies to propose new information and communications policy directions.

Methodology

This thesis consists of five components: the first is a detailed sequence of events

(Appendix A) that reflects the public record of activities, workshops and reports surrounding the

Information Highway policy debate (1993 – 2000). This appendix component provides crucial

chronological information of critical policymaking events. It was researched and developed in

order to discover which advocacy groups, provincial and federal government departments,

regulatory bodies, task forces, and academic groups participated in the debate and offered

recommendations. Appendix A was researched by identifying many cross-references within

articles, books, electronic sources, as well as online conference reports, archived email

references, and personal communications that refer to specific events, meetings, dates and

locations of specific consultations that took place during the Information Highway debate. The

appendix also incorporates specific activities that occurred in Nova Scotia and these help analyze

the thesis questions. Thus the research in the appendix comprehensively identifies the key public

policy stakeholder activities and discussions that frame the Canadian Information Highway

debate. No prior compilation has been organized in this fashion. Apart from its use in this thesis,

Appendix A provides opportunities for future analysis of information policy development activities in Canada.

The second component describes how specific public interest advocacy groups articulated their concerns and ideas for public access. In this regard, I draw upon the conceptual framework created by Cheryl Buchwald (2000) to present the overall context regarding where various groups were situated amongst other institutional and regulatory perspectives that framed the Information Highway debate. I expand upon Buchwald's (2000) framework by first identifying all the specific public advocacy groups that participated in the debate. I then focus on three particular advocacy groups that made a significant contribution to the debate: Canada's Coalition for Public Information (CPI), the Canadian Library Association (CLA), and the Alliance for a Connected Canada.

The third component of this enquiry is an exploration of the issues and discussions undertaken by key individuals. I have identified persons who either participated in the implementation of CAP in Nova Scotia (Appendix B.1) or were involved in national information policy discussions (Appendix B.2). I designed an interviewee consent form and obtained ethics approval for conducting interviews from the Dalhousie University Social Science and Humanities Human Research Ethics Board (Appendix C.1 & Appendix C.2). I conducted taped interviews with these individuals to obtain further insights about the Information Highway debate as well as clarification when required. I integrate these individual's observations primarily in Chapters Five and Six.

The fourth component of this thesis reflects how CAP came to be implemented in Nova Scotia, as well as how various CAP site analysis shed light on the manner in which individual CAP sites experienced CAP in its early stages. The fifth component (the conclusions) draws

attention to what I have concluded for future considerations in information policy development

for public access in the digital era.

>Slevin (2000) has observed:

>Unlike media such as newspapers, radio and television, the history of the internet is only just beginning to be written. Most accounts of its development hardly progress beyond the construction of time-lines setting out important events (p. 27).

This reality exists concerning public access to the Internet in Canada. My thesis progresses

beyond a time-line to create an historical analysis that uncovers a very complex web of activities

that occurred during the Information Highway debate. With regard to access issues, Slevin

(2000) has further observed,

>Internet use is always situated within intersecting sets of rules and resources and reflects features of the social system as whole. The institutional arrangements within which internet use is situated are thus always socially stratified, involving hierarchical relations of power between individuals and organizations (p. 67).

This thesis confirms that various "hierarchical relations of power" were embedded in how public

access was perceived and treated within the Canadian Information Highway debate. The

Canadian Information Highway public policy debate was a continuation of the developments and

thinking that had risen in earlier reflections about the "Information Economy" and the

"Information Age" during the 1970's and 1980's. I discovered that it was during the 1990's that

various perspectives concerning "public access" became more intense because the Information

Highway was seen as playing a more prominent role in industrial, social, and economic policy

and planning (Clement, Moll & Shade, 1998). As for the "institutional arrangements" to which

Slevin refers, the Information Highway debate in Canada set a stage where the dominant players

were the following:

• A publicly regulated telecommunications sector that was reacting to technological change as well as to competitive threats and opportunities that were arising in the early-to-mid nineties. These realities would ultimately deregulate the telecommunications industry, open their sector to the flow of transnational investment capital and create a digitized global infrastructure (Babe, 1998).

• A new federal government that was attempting to adjust national communications policies and respond to rapid technological changes. The government was addressing these challenges within an environment of severe budgetary cutbacks, while attempting to put a positive public message forward about preparing Canadians to be internationally competitive in order to address new economic opportunities for job creation.

• Government personnel who were often over committed and preoccupied with budgetary cutbacks and departmental changes. These cutbacks tended to turn their attention inward, to meeting the needs of their deputy or branch heads and/or their colleagues, rather than addressing the needs of citizens.

• Public interest advocacy groups (16 groups have been identified in this enquiry) that were attempting to make sense of the shifting social, economic and political dynamics concerning technological change and how it was affecting "public access" concerns – groups with very meagre financial and personnel resources to support their lobbying efforts.

In the final analysis, these "players" interacted in a drama that I have titled: "The Canadian Information Highway debate and the Experience of Public Access in Rural Communities, 1993 - 1999."

Chapter overviews

In this thesis, Chapter Two "Philosophical considerations on the role of public management of new technologies in society," provides a brief overview of the broad insights provided by Daniel Bell (1973) and Ursula Franklin (1990) on the role of technology in social change. Their observations provide a socio-philosophical lens through which I consider the policy development issues that arose in the Information Highway policy debate. I also draw upon the more specific observations of Adams (1998) and recent reflections by Peekhaus (2002), to provide further contextual understanding of concerns related to changing public management philosophy during the nineties.

In Chapter Three, "Canada's experience of public access: a brief historical overview," I draw upon the reflections of Bernard Ostry (1978) to provide a brief overview of how the Canadian government traditionally addressed technological change and public access policy issues.

Chapter Four, "Events preceding the Information Highway debate: The vision of an Electronic Highway System (EHS) and the Ostry report," demonstrates how the federal government encouraged the development of an EHS by commissioning a strategic policy-planning document by Bernard Ostry (1994) and subsequenlty creating the Information Highway Advisory Council (IHAC Canada).

Chapter Five, "The dynamics of the policy community during the information highway debate" relates to how public policy input was provided to the federal government. To understand the dynamics of the debate, I have identified and positioned the various advocacy groups that were involved, based on a further elaboration of the theoretical framework developed by Cheryl Cowan Buchwald (2000). I focus specifically on the advocacy efforts of Canada's

Coalition for Public Information (CPI) and the Canadian Library Association (CLA) in advocating a broader understanding of what "public access" should entail. I also consider the reactions of advocacy groups to IHAC Canada's final report and recommendations, and the subsequent creation of the Alliance for Connected Canada.

Chapter Six, "Public access initiatives: Free-nets, SchoolNet and CAP" outlines how the federal government began to address "access" needs before it had a public access policy in place. I present an overview of further policy developments and activities that were occurring in Nova Scotia, developments and activities that made the province receptive to conducting access pilots and, later, full implementation of the CAP initiative.

In Chapter Seven, "CAP site experiences," I consider various studies that analyzed the experiences of CAP organizations in Canada up to 1999. These studies identified a variety of issues and challenges that CAP sites were facing in their efforts to provide public "access."

Chapter Eight, "Conclusions," reviews how my enquiry discovered the line of impact from the policy development dynamics of Canadian Information Highway debate to CAP sites supervisors' and users' experiences of "public access." I conclude that if CAP is to remain viable in rural communities, federal (and provincial) policy makers will need to revisit the concerns that were expressed by advocacy groups during the Information Highway debate.

Chapter Two – Philosophical considerations on the public management role of new technologies in society

Throughout the 1990's, a great deal of interest and public discussion unfolded about the nature of access to information and how such access would impact citizen participation, economic development and job creation in the digital era. The evolution of digital networked environments reflected the accelerating process referred to as the information-driven "global economy" or the "post-industrial society" (Stalder, 1998, p. 4). A seminal work that provides an important analysis of technology's role in society and its impact upon social change is Daniel Bell's The Coming of Post-Industrial Society: A Venture in Social Forecasting (Bell, 1973). For Bell, "what a post-industrial transformation means is the enhancement of instrumental powers, powers over nature, and powers even over people" (Bell, 1973, p. xii). Bell predicted the emergence of a society where industrial manufacturing would be superceded by a service-oriented economy, driven by the rise of "information" as a commodity where, ultimately, knowledge and information would become crucial variables in such a society. Bell further claims that such a society would be technically supported by a combination of telecommunications and computer-based technologies. This would eventually call for the development of an information and knowledge sector that would stratify the very nature of the workforce in very significant ways. However,

> Bell did not see the post-industrial society as primarily relying on the market mechanism, what he called "an economising" mode of thought, but rather as employing a diverse set of control mechanisms to deal with the rapidly increasing social complexity (Siochrú, 1997, p. 1).

Bell's analysis has often been interpreted as being based on a form of technological or technocratic determinism. On the contrary, "his book was primarily concerned with changing

patterns of social relations in modern society" (Siochrú, 1997, p. 1). Various reflections and criticisms had emerged over the nature of the technocratic model that he envisioned, one that essentially guided societal management by applying a dominant technical and economic orientation to information access. This orientation would shape the context of the Canadian Information Highway debate.

Scientist and humanitarian Ursula Franklin, in her 1989 CBC Massey Lectures, provides a critical and cautionary perspective on Bell's insights concerning the human and social dimensions of technology in society. She observes that technology is more than the sum of hardware and software (Franklin, 1990, p. 3). It is a system that involves organization, procedures and symbols, and most of all a managerial "practice" which manifests a particular value system. Franklin also supports Lewis Mumford's thesis that technology has reflected the organization of work and of people through various civilizations (Mumford, 1962). She goes beyond Mumford's and Bell's analyses, expressing the need "to examine the new social class of experts, as well as the changing nature of community and constituency that has been brought about by technological systems" (Franklin, 1990, p. 3). Shortly after Franklin wrote these words, information policy development and public access concerns took centre stage in Canada when the Liberal government initiated an extensive information policy consultation process in early 1994. The initiative focused on developing an information policy that would stimulate the economy, reinforce Canadian cultural identity and ensure universal access at an affordable cost (Raboy, 1996, p. 62). However, as I will outline below, these "consultation" processes would reflect Franklin's insight and observation that "political systems in most of today's real world of technology are not structured to allow public debate and public input at the point of planning technological enterprises of national scope" (Franklin, 1990, p. 64). For example, within

technical settings many decisions are made that incorporate political biases and priorities that do

not need to be articulated at first glance, but become evident only when plans and designs are

executed and in use. The implication of this for Franklin is that technology is rapidly changing

the notion about the obligations of a government to its citizens and that often "political decisions

are addressed as technical questions in terms and in places that are inaccessible to ordinary

citizens" (p. 69). For example, with the introduction of the WWW in 1991, earlier computer-

technologies had evolved to connect users through new globally coordinated digital and analog

telecommunication systems. In Canada, as in many countries, this evolution in protocol

development and communications technologies affected how domestic telecommunication

service infrastructures operated and raised concerns about how the federal government should

regulate such infrastructures to ensure public access within new digital networked environments.

This evolution presented a unique set of challenges to policy makers as they attempted to address

concerns for deregulatory changes in telecommunications and broadcasting while at the same

time addressing new multi-directional communications strategies such as those available via the

Internet. Could the Internet be regulated nationally in the same way as the more traditional

broadcast and telecommunications technologies? What were the national risks if such

technologies were simply left unfettered and allowed to be implemented wherever needs arose?

In this regard, Slevin (2000) has observed:

> New kinds of risk feature as both unacknowledged conditions and unintended
> consequences in the process of connecting the local and the global by means of modern
> communication technology…While authorities such as government and management
> teams remain influential, they become decentred and dependent on a broader system of
> authority being enacted from a multiplicity of sources (pp. 13 - 18).

This insight is evident in the Information Highway debate in Canada, specifically in how the

federal government created a dependency on a "broader system of authority" in order to

construct an information policy based on input from a "multiplicity of sources." Such a policy-making dynamic creates though, in Franklin's (1990) view, a question for "ordinary citizens," namely who represents the "public interest" as government attempts to seek input from "broader systems of authority" (p. 69)? The government's approach to seek new policy input was conducted within a new public service management philosophy.

Adams (1998) draws attention to this public service management philosophy, one that the federal civil service was practicing by the early to mid-nineties. Adams maintains that such a philosophy reflected a "shift in the vision and values that public servants had" (p. 5).

> The concept of public good has been replaced by public interests (in the plural). The idea that government exists to serve the collective best interests of its citizens has been replaced by the idea that government exists to mediate the interests of different groups of customers. "Citizens" with rights have been replaced by "customers" with wants and needs (p. 6).

This shift in management practice became known as the "New Public Management" (NPM) (Adams, 1998, p. 6; Thomas, 1996). Embedded within the philosophy of NPM was "the conceptualization of information as a commodity, the identification of revenue generation as a businesslike activity, and technology as the key to performance, whatever the problem" (Adams, 1998, p. 6). The conceptualization of information as a commodity (versus a public good) reflected a belief in the free market system "as a means of allocating resources in society," while the public good perspective was "based upon the assumption that both democracy and capitalism require equal access to information to ensure individuals have equal opportunity when making political and economic choices" (Peekhaus, 2002, p. 15). Peekhaus observes:

> Perhaps the one most contentious realm of conflict between the two views stems from the idea of access. As a commodity it is expected that individuals pay for access, which motivates producers of information to continue their work. However, proponents of universal access argue that as people gain access, the benefits to everyone increase [Clement & Shade, 1996; 2000]. There is also concern that in terms of intellectual

freedom, the commodification of information could lead to control of and access to ideas by corporations [Schrader, 1998] (2002, p. 16).

Thus, the emerging NPM reflected a shift away from the predominant public sector paradigm of hierarchies and processes to a critical assessment of the size and organizational structure of the public sector, espousing the necessity to achieve cost-effective policy outcomes focused on efficiency, productivity and results (p. 5 - 7). Peekhaus observes further:

> One of the central canons of NPM is that governments, although still responsible for setting policy and facilitating funding, are not required to operate the organizational structures that produce the services (2002, p. 10).

In Canada, such NPM practices were reflected in public-owned agencies such as the Canadian Network for the Advancement of Research, Industry, and Education (CANARIE), which assumed government functions, but operated at arm's length from the government. The implications of this shift to NPM practices for government departments was also felt between 1993 and 1995 when, under a new Liberal government, departments such as Industry Science and Technology Canada (ISTC), Consumer and Corporate Affairs and the Department of Communications (DOC) would gradually all disappear. With such changes the overall communications policy responsibilities for telecommunications and broadcasting were moved to the newly formed IC department, while culture and heritage were merged into a new department called Canadian Heritage. These departmental reorganizations created significant challenges for advocacy groups that wished to provide policy input to federal government departments. Such reorganizational dynamics also reflected the philosophical orientation that was taking shape in the early nineties within the federal government. They also provided context for the launch of the Canadian Information Highway debate by the Liberal government in 1993.

Before I consider in more detail the dynamics of the Information Highway debate, it is

important to present a brief historical overview of Canada's experience in information and

communications policy development.

Chapter Three – Canada's experience of public access: A brief historical overview

Within a Canadian context, technology and communications have played a significant role in social change, economic development and nation building, creating both positive and negative impacts (Raboy, 1996; Ostry, 1978). Two well known Canadian theorists, Harold Innis (1894-1952) and Marshall McLuhan (1911-1980) have provided important perspectives on the transformative power of communications technologies (de Kerckhove & Jeffery, 1995). Further, George Grant (1986) has provided penetrating and critical reflections on the nature of technology and its impact on issues of justice in civil society.

Historically, "public access" in Canada meant providing an infrastructure to create postal and national railway services, as well as shipping and seaway services. The provision of telegraph services would become a part of this "public access" infrastructure, as would the delivery of electrification services to rural communities.

As early as 1907, Canada was recognized as being a world leader in the development of new electronic technologies. As Ostry (1978) points out, it was at this time that Canada was named to the Administrative Council of the International Telegraphic Union (ITU) in Geneva (p. 43). The Canadian government also encouraged the work of Guglielmo Marconi with subsidies to support his innovative communication experiments (p. 43). However, as technological driven innovations evolved, specifically in radio broadcasting after World War I, concerns relating to access included the country's communications infrastructure. These concerns became evident during the advent of radio that "gradually opened official eyes to the importance of culture in the nation's life, to the dangers of continentalism and to the potential jurisdictional conflict between the federal government and the provinces" (p. 43).

By 1919, Canada's first radio station was operating, (XWA now CIQC) in Montreal. Canada entered into and signed the International Radio Telegraph Convention. The federal government established the Radio Act in 1927 to address concerns that were emerging over growing non-regulated commercial radio broadcasting developments. By the 1930s, public advocacy groups such as the Canadian Radio League pressured the federal government to regulate and establish public ownership, to regulate national content and to support both official languages in the founding of a national broadcasting system. Thus, by 1936, to address these concerns, Canada's first Broadcasting Act was passed creating the Canadian Broadcasting Corporation (CBC). Subsequently, in 1939 the National Film Board (NFB) was established to create wartime documentaries. It was during the 1920s through to the mid-1940s, that a whole host of national cultural volunteer agencies and societies were set-up in Canada. It became evident that the technologies of radio, film and television played a critical role in creating and shaping many new "community constituencies" across the country. Further, the role of telephone communications became important in linking various communities. As Melody (1990) points out

> [n]ear-universal service was eventually obtained by the establishment of municipal companies, co-operatives, small private companies, and in Canada, provincial [regulated] companies (p.24).

By the end of World War II, Canada had emerged on the global scene with a new sense of independence and confidence, with an expanding and innovative communications network, stimulating a new sense of nationalism that was to grow in global recognition. This sense of national pride was reflected strongly in the country's centennial celebrations of 1967.

A new Broadcasting Act was legislated in 1968. This Act established the CRTC which replaced the Board of Broadcast Governors and which had explicit regulatory authority to establish national policy in Broadcasting and Telecommunications. The CRTC became the

vehicle in which public and commercial concerns could be aired and policy input provided

towards the shaping of public policies aimed at maintaining a regulated national broadcasting

and telecommunications system in Canada.

Canada's broadcasting and telecommunications system was ultimately the outcome of

cooperation between the public and private sectors, an outcome compromised between idealism

and pragmatism and balanced "between national identity and continentalist market forces"

(CRTC, 1995, May 19, p. 28). However, by the early 1990s, emerging communications

technologies, combined with growing deregulatory pressures significantly impacted Canada's

traditional approach to addressing information and communications concerns through

conventional regulatory bodies such as the CRTC.

By the time the WWW protocol had been introduced in 1991, the Canadian government

had already put into effect a new Broadcasting Act (Appendix A, 1991, p. 100) and had indicated

that new information technologies would soon influence how broadcasting systems would

function in the country (Canada, Department of Justice Canada, 1991, February 1). A new

Telecommunications Act came into effect in 1993 (Canada, Department of Justice Canada, 1993,

June 23). By this time, there was growing confusion amongst federal government departments

about how to address issues of new information technologies and their impact on traditional

media and the regulatory systems that oversaw such operations.

Two federal departments, Industry, Science and Technology and DOC whose

responsibilities often overlapped, were already concerned with communications network

infrastructure, with an aim to supporting industry and university-based research. DOC,

established in 1969 to oversee the development of communication technologies was, by 1980

also responsible for the way in which such technologies affected cultural content and monitored

the cultural implication of various communications technology. However, as Edward Comor's

(1991) research has pointed out, by the beginning of the 1990's, significant issues were brewing

within DOC. Comor states,

> [C]onfidential interviews with DOC officials [conducted from November 1989 to March
> 1990] reveal the absence of a detailed vision of Canada's culture and communications
> future (Comor, 1991).

Thus, just as the information highway debate was about to begin in Canada, the pace of

technological change was disabling public management to a point where many in government

believed that it was best to leave it up to the private sector to adapt to and take advantage of the

rapidly changing environment (Comor, 1991). Further, due to the sheer size and diverse mandate

of DOC, the coordination of any kind of long-term coherent national culture and

communications policy was practically unachievable. In addition, growing budgetary constraints

severely limited the time available for critical reflection and long-term policy planning in the

interest of all Canadian citizens.

It is important to point out that as early as 1987 Lesser and Hall had observed that, at a

national level, policy directions with regard to the emerging information economy were "small

and fragmented" (Lesser & Hall, 1987, p. 138). They reasoned that it was because "the

traditional form of government organization and policy formulation [works] along vertical sector

lines, whereas the information sector is a horizontal one which cuts across these traditional

vertical lines" (p. 138). This observation concerning the dynamics of formulating information

policy was a critical, namely that such a policy could only be created "from a multiplicity of

sources" (Selvin, 2000, p. 18) rather than from within one government department. Lesser and

Hall's (1987) analysis further determined that new information technologies would have a

significant impact on regional development. They concluded that the federal government needed

to develop a national information policy framework in which to fit regional economic

development policies (p.138). This rationale emerged when the Liberal party won the federal

election in 1993 on a platform of making Canada more internationally competitive through a

strong communications infrastructure.

In order to provide a further backdrop and context to understanding the Information

Highway debate, the following chapter offers an overview of the events immediately preceding

the Canadian Information Highway debate.

Chapter Four – Events preceding the Information Highway debate: The vision of an Electronic Highway System (EHS) and the Ostry Report

When the new Broadcasting Act of 1991 came into force, Michael Wilson, became Minister of ISTC. His department convened a Network Organization Conference (Appendix A, 1991, April, p. 101) that, at its conclusion, was given a mandate to establish plans for the creation of a national high-speed network. CANARIE was assigned the task of establishing working groups to foster greater cooperation between research and industrial sectors and to coordinate the proposed network's plan (Silva & Cartwright, 1992, p. 4). While ISTC was proceeding with this plan, the CRTC announced a deregulatory decision called Telecom Decision 92-12: Competition in the Provision of Public Long Distance Voice Telephone Services and Related Resale and Sharing Issues (CRTC, June 12,1992), (Appendix A, 1992, June, p. 101). This decision permitted full-scale competition in public long distance telecommunications, allowing free entry for facilities based carriers and the interconnection of their networks with those of federally regulated telephone companies. This decision opened Canadian telecommunications markets to global telecommunications services and companies, as well as to local companies who wanted to access carrier facilities for the purposes of providing long distance telecommunications services (which would eventually include Internet access services). While these developments were unfolding, the DOC was working on a new policy statement to address other technology issues. The DOC considered whether new communications technologies could be regulated in a manner similar to the old ones (e.g; radio and television)? A policy entitled: New Media New Choices, was released by the DOC in December 1992 at a National Summit on Information Policy in Ottawa (Appendix A, 1992, December, p. 102). This

summit was sponsored by the DOC in a cooperative effort with several national organizations

such as the Canadian Library Association, the National Research Council's Canada Institute for

Scientific and Technical Information, l'Association pour l'avancement des sciences et des

techniques de la documentation (ASTED) and the Information Technology Association of

Canada. The Summit was the first of its kind and gathered over 240 participants to discuss access

to information and economic benefits from the information revolution. Summit participants

attempted to answer the new privacy, access, and copyright questions that had arisen in the wake

of blurring regulatory boundaries in various new media applications. The Summit was motivated

by earlier policy review initiatives that took place in Ontario with the publication of the

Telecommunications: Enabling Ontario's Future document, a.k.a. The Report of the Advisory

Committee on a Telecommunications Strategy for the Province of Ontario (Briggs, 1993,

January 16).

After releasing New Media, New Choices (1992), Communications Minister Beatty

reiterated a set of privacy principles for telecommunications users, and announced the creation of

a Telecommunications Privacy Protection Agency. Thus, at that time, these efforts on the part of

the federal government demonstrated that the government wished to engage the public in a

discussion of issues of public access, albeit informed by a narrow telecommunications services

bias.

In February, 1993, twenty-four hours after the United States President, Bill Clinton,

announced his government's National Information Initiative (NII), Perrin Beatty spoke in

Vancouver at the INTERCOM '93 conference (Appendix A, 1993, February, p. 103). He

outlined the government's vision of an "electronic highway system" (EHS) for Canada (Ostry,

1994, On February 23, 1993).

In August 1993, the first international conference on Community networks was held at Carleton University, hosted by the National Capital FreeNet in Ottawa and co-sponsored by ISTC and the Science Council of Canada (Appendix A, 1993, August, p. 103). This conference created further awareness on the rapid development and the excitement that was evolving within community-based "Free-nets" and the public access services they were providing. Free-nets had arisen in the late eighties in the United States and early nineties in Canada to provide free or affordable access to online networks for individuals. The access criteria depended on an individual's own financial resources (e.g., employed, unemployed, student, senior, etc.). Many Free-nets were run by knowledgeable groups of volunteers who had purchased hardware and developed software to facilitate online access via a modem dial-up service. A number of Free-nets, such as the National Capital FreeNet in Ottawa, as well as the Chebucto Community Net in Halifax, were often partnered and supported by other institutions such as universities and public libraries.

By October of 1993, a lobby consortium consisting of the major provincially regulated telephone companies called the Stentor Alliance (representing the provincial telephone companies affiliated with Bell Canada), released its vision statement on what the Alliance thought an EHS would look like for their industry. Entitled The Information Highway - Canada's Road to Economic and Social Renewal (1993), it called for the creation of a

> "network of many networks," owned and operated by different service providers, offering connections to a variety of services, applications, and content sources. This electronic infrastructure will stimulate economic activity, create jobs, and improve productivity (Ostiguy, 1995, The Stentor Vision and Beacon Initiative; Stentor Alliance, 1993, October, The Information Highway What is it?).

However, as Gutstein (1999) points out, Stentor also defined content creators as:

> independent film and television producers, production houses, as well as private and public broadcaster. By excluding community networks from content creation, their work

as information providers was marginalized (p. 271).

Stentor reflected the telecommunications industry's traditional "non-dialogic" technical bias

(Slevin, 2000, p. 184) inherent in the commercial sector regarding the generation and distribution

of "content." Information was provided by independent producers and companies, not citizens

residing in communities. This perception on the part of the commercial sector did not

acknowledge that the internet would be a fundamentally different participatory kind of

communication medium. In this regard Slevin (2000) observed:

> As long as mass communication predominantly involves a one-way flow of messages
> from large-scale producers of symbolic forms to 'situated local communities,' the
> reciprocity and interdependency between producers and receivers is relatively simple.
> Yet the internet involved a two-way flow of messages. Moreover, while the transmission
> of such messages via the internet may involve large-scale communication organizations,
> the production of content does not (p. 206).

For Slevin, information technology permeates all forms of organization and the attitudes of

organizations towards the use and role of technology in organizational change will not only

reshape organizational realities but also create arrangements that are "double-edged, for they also

have a range of unintended consequences and a range of new uncertainties resulting from them"

(p. 132). Thus, what consequences and new uncertainties would result from the impact of

technological change upon public access in Canada? The Information Highway debate attempted

to address this impact, but while doing so, ISTC took steps to initiate access pilots first and ask

questions later.

Following Stentor's vision statement of what an EHS would look like for their industry

sector, the Public Works Department and Government Services Canada released their own policy

discussion paper concerning "access," entitled Access Canada Initiative (1993), (Appendix A,

1993, November, p. 104). This paper proposed a network development with three phases (Public

Works and Government Services Canada, 1993, November 22, Executive Summary):

- Phase 1: A common infrastructure for administrative system for the federal
  government
- Phase 2: A common infrastructure for program delivery
- Phase 3: A national information systems utility

This initiative was released just after a federal election. In a brief but critical time in 1993, the nine-year reign of the Conservative government was handed over to the leadership of Kim Campbell. She called a federal election to be held on November 4th. Her five-month reign fell to the Liberals, under Jean Chretien (Appendix A, 1993, November, p. 104). The Liberals had stated in their "Liberal Plan for Canada," (more commonly known as "The Red Book") that " [i]n the economy of the 1990's, it is the information and knowledge-based industries that are providing the foundation for jobs and economic growth" (Smith & Barnard, 1994, November 9). This perspective focused on addressing the infrastructure requirements that would support such industries. This was found in the previous Conservative government's plan for developing an EHS.

During that same month of November, the Canadian Coalition for Public Information (CPI) was formed as a result of a number of discussions undertaken by the Ontario Library Association (OLA). The OLA's earlier provincial consultation process revealed concerns about how an EHS should take shape in Canada. As Hoffman points out, initially CPI was "an arm" of the OLA, but after an annual general meeting of the OLA, where "people had come from all over the country to this meeting…a motion had come from the floor that CPI not be restricted to Ontario…so it [CPI] became a national organization after [its'] first meeting" (L. Hoffman, personal communication, March 4, 2002). CPI's membership included "organizational and private citizen representatives from both the public and private sectors: libraries, the information industry, the Ontario government, the labour movement, and Free-net organizations" (McDowell

& Buchwald, 1997, August, <u>Internal Coalition Dynamics</u>). Over 300 organizations and

individuals eventually joined CPI. It's mission focused on ensuring

> that the developing information infrastructure in Canada serves the public interest,
> focuses on human communication, and provides universal access to information. (Smith
> & Barnard, 1994, November 9, <u>4.4 Public Expectations of the Information Highway</u>).

Thus, within a few months several key factors and events occurred. Community based

Free-nets began to articulate their values and aspirations for public access; the Stentor Alliance

presented its own view of the role of industry in providing access services; the federal

government released a document outlining its vision of access and a new public advocacy group

(CPI) was formed to address the public concerns about universal access to information. With a

newly elected federal government, the stage was now set for the Canadian Information Highway

policy debate to begin.

The Ostry Report

When the Liberal party came into power in November 1993, the Canadian electorate had

expressed its dissatisfaction over the previous Conservative government's approach to

international trade agreements (e.g., NAFTA) and the implementation of new taxation

regulations (e.g., the Goods and Services Tax). However, when the Liberal Party took power,

initiatives such as the EHS did not so much change from the original intention of the previous

government, rather the new government sought a new policy development process for the EHS

by commissioning a strategic policy planning document from an experienced public servant.

Bernard Ostry was a professional historian and had served in many senior government capacities,

notably as a deputy minister at DOC, where he had served Minister Jeanne Sauvé under the

Trudeau government. Thus, under the leadership of Jean Chretien, John Manley, as newly

appointed Minister for ISTC, asked Ostry to write a policy position paper on the EHS for the

new government's consideration.

While Ostry was writing his position paper, Manley's department began to conduct a

series of independent focus group studies across Canada

> to identify and assess policy issues relating to services in a convergence environment, and access and affordability to networks for users of computer and information networks (Angus and McKie, 1994, p. 4).

The results of these studies appeared in May 1994 during the Information Highway debate

(Appendix A, 1994, May, p. 107).

Ostry delivered his report in February of 1994, entitled: <u>The Electronic Connection - An

Essential Key to Canadians' Survival</u> (Appendix A, 1994, February, pp. 105-106). In his

executive summary, Ostry outlined the context and purpose of his report:

> The goal is to provide an enabling policy to encourage private investment, speed the work and development of new services, and ensure that high-speed networks such as CANARIE, CA*net and others connect with other networks in Canada and the world. The government's policy concerns are to ensure that the education and learning needs of all Canadians are met, that knowledge and skills can be acquired in a flexible and cost-effective manner as learners access the vast array of services the EHS will make possible (Ostry, 1994, <u>Purpose of Work</u>).

Ostry's report also shed light on the machinations and inter-departmental turf-wars that had

taken place in previous attempts to direct information and communications policy. For example,

Ostry drew attention to a study that the National Advisory Board on Science and Technology had

undertaken in 1992 to count the number of expert studies that had been initiated over a ten-year

period concerning the provision of a national electronic highway communication's system. Over

40 reports and 600 recommendations had been made, but "[n]ot one led to action" (1994,

<u>Broadcasting – obesession of late afternoon</u>).

> If one wants a Canadian highway, it can only happen now if it is seen to serve the profound needs of a public dependent on access to a revitalized education, training

culture for its survival. It can only be pieced together intelligently by a private sector familiar with melding public and commercial interests. It will only grow if the public access is universal to quality products of value in the information marketplace – which is as international as national today…. And it should start to function simultaneously top-down and bottom-up (1994, Recommendations).

Thus, Ostry envisioned a collaborative process, driven by government policy and the private sector that would support "bottom-up" initiatives. His first indication that a community-based public access dimension might be possible in implementing an EHS came in his recommendation:

An exploratory task force is needed to discover whether the system should be community-based while at the same time it serves individuals. And there has to be a task force on how to use the system in a thrifty way, through well-organized services, economy in personnel and procurement, and ultimately in reduced costs in delivering many federal and provincial services (1994, Recommendations).

However, other than recommending the establishment of tightly focused, high-level task forces working with short timelines (eight months to draft recommendations), Ostry did not recommend a place for public input to the government's EHS plan. He envisaged that the task force's assessment and recommendations would "be in the PMO's office within twenty-four months, leaving three years of pilots, testing and implementation" (p. 35). Thus, he concluded:

If the task forces are successful in their early diligent efforts this will lead to a variety of pilots, prototypes of hardware and software, monitored experiments with applications, new alliances, etc. that will make their final recommendations the most advanced in the world and restore Canada's leadership in the whole field of telecommunications and social/cultural policy (1994, Recommendations).

This vision motivated the federal government's vision of the Information Highway throughout the rest of the nineties.

The Information Highway Advisory Council Canada is appointed

Ostry's report set the course for beginning the formal Information Highway policy debate in Canada. A policy framework had already become evident when the new Liberal government

presented its first Speech from the Throne on January 18, 1994 (Appendix A, 1994, January, p.

105). It had highlighted the Information Highway as a key priority of the new government. Later

the same government announced three key policy objectives that it saw as central to the

development of this highway: "to create jobs in Canada through innovation and investment, to

ensure universal access at reasonable cost, and to reinforce Canadian sovereignty and cultural

identity" (Angus & Mckie, 1994, p. 4). For the government these objectives would be reached

through a commitment to four operating principles, which would encourage

- an interconnected and interoperable network of networks
- collaborative public and private sector development
- competition in facilities, products and services
- privacy protection and network security (p. 4).

The concept of a "network of networks" that had been expressed by the Stentor Alliance

(Stentor, 1993, October) prior to the federal election now found its way into the new

government's official policy intentions.

As Minister of ISTC, John Manley was instructed to establish a tri-committee of senior

ministers (Manley, Jon Gerrard, the Minister for the Secretary of State [Science, Research and

Development] and Michel Dupuy, Minister of Canadian Heritage). The tri-committee in turn

announced the formation of IHAC Canada, a twenty-nine-member body to provide policy input

to the federal government's vision of creating an Information Highway (Appendix A, 1994,

March, p. 106). Besides the three key policy objectives and the four guiding principles listed

above, the government also

> set out 15 issues – ranging from competition to culture, from access to learning and
> research and development – on which it sought Council's advice (Information Highway
> Advisory Council, 1995, p. vii; Appendix D).

A fifth guiding principle was also added "lifelong learning as a key design element in Canada's Information Highway" (p. vii).

The establishment of IHAC Canada was a direct response to Ostry's recommendations (Appendix A, 1994, February, pp. 105-106), namely charging a task force to develop and propose guidelines for public policy for the creation of a Canadian Information Highway.

No public hearings or input was required by IHAC Canada other than the formulation of five Working Groups that covered broad areas of interest: Competitiveness and Job Creation; Canadian Content and Culture; Access and Social Impacts; Learning and Training; and Research and Development, Applications and Market Development. These working groups were each assigned questions from the government's 15 public policy issues that were designed as questions to guide input to IHAC Canada's stated objectives (Appendix D). IHAC Canada was in fifteen months to report back with its conclusions to the federal government.

Within the 15 public policy issue questions that were to direct the IHAC Canada's thinking, the first four questions reflected specific private sector concerns and priorities that the federal government wanted IHAC Canada to address. This mirrored an inherent bias and priority towards addressing the concerns of the commercial sector first in creating the Information Highway infrastructure.

Concerns were soon expressed by a number of public interest advocacy groups that no official representative from the cultural sector had been appointed to IHAC Canada's advisory board nor were there any plans for receiving broader public input to IHAC Canada's deliberations. As McDowell and Buchwald (1997) point out, it was due to these concerns that in October of 1994 the federal government requested that the CRTC conduct public hearings. These hearings were

> to gather information and seek input, provide critical analysis and report to Government on a number of matters, as they relate to the Commission's area of responsibility, respecting the development of content and competition policies for new communications technologies and services that will comprise the "information highway." It is the Government's intention that this report complement the ongoing work of the Information Highway Advisory Council created by the Government, and assist the Government in determining its policy framework for telecommunications and broadcasting (CRTC, p. 1, 1995, May 19; Appendix A, 1994, October, p. 109).

The CRTC, however, was not considered a particularly accessible forum for public interest groups. Being a regulatory body, substantial legal resources were often required to attend hearings and develop recommended changes, even though the government often assisted non-profit groups with such costs. Nevertheless, for advocacy groups, other than IHAC Canada, the CRTC appeared to be the only "public" avenue available to provide policy input to the Information Highway debate.

Earlier CRTC regulatory activities

The government's decision to have the CRTC address public input concerns relating to the Information Highway had also fuelled by earlier regulatory developments. Specifically, Telecom Decision 92-12 (CRTC, 1992, June 12) led to the deregulation of the telecommunications sector in Canada. Shortly after that decision, the CRTC initiated a further review of its own regulatory framework, issuing a Telecom Public Notice 92-73 (Appendix A, 1992, December, p. 103) asking interested parties to make interventions stating whether the Commission's historical form of regulation was still appropriate and "what alternative frameworks might be proposed; how the regulatory process might be streamlined." Such a request allowed for input "by groups other than telephone companies and larger users" (McDowell & Buchwald, 1997, August, Liberalization and New Legislation).While that specific review was underway, a new Telecommunications Act was proclaimed in November 1993

(Appendix A, 1993, November, p. 105) in which the regulatory principle of providing universal

access at an affordable cost had been established. This principle later became a focal point in

IHAC Canada's deliberations.

When the CRTC finally completed the review of its regulatory framework in September

1994, issuing <u>CRTC Decision 94 – 19</u> (CRTC, 1994; Appendix A, 1994, September, p. 108), it

concluded that the way telecommunication services were traditionally provided in Canada was

about to change

> in ways that outpace the ability of regulators to recognize and define, let alone control. [Consequently, in a competitive world, what] ultimately emerges will be determined by the demands of users and the willingness of suppliers to take risks. The role of the Commission should be to ensure that the right economic and technical conditions for open access are in place (CRTC, 1994, p. 33).

Thus, the CRTC recognized that traditional regulatory methods were no longer working

in light of the speed in which new information and communications technologies were evolving

and being implemented on a global scale. This reflection was understandable and, in terms of

new principles that would guide the "right economic and technical conditions for open access,"

the CRTC proposed that action was required to "reduce subsidies through a program that would

move prices closer to their real costs (CRTC, 1995, May 19, p. 15). This created concerns

amongst advocacy groups seeking affordable and equitable access to the Information Highway

for educational and related institutions such as public libraries.

No sooner had the CRTC completed and submitted its review of the regulatory

framework for telecommunications than the federal government requested the Commission to

conduct public hearings on matters relating to the Information Highway (CRTC, 1995, May 19,

p. 1). By this time there had been a great deal of thinking concerning a new regulatory pricing

environment for telecommunications services. Thus, with the formation of IHAC Canada in

March 1994 and a call for CRTC to conduct public hearings in October 1994, the Information

Highway policy debate was fully underway.

The CRTC reported its findings from its public hearings in May 1995 (CRTC, 1995, May

19) and IHAC submitted its recommendations in September 1995 (IHAC Canada, 1995,

September). To provide a context for the outcomes from these hearings it is important to

consider the dynamics of the policy community that provided input to both the IHAC Canada

and CRTC deliberations.

Chapter Five - The dynamics of the policy community during the Information Highway debate

On the surface, the Canadian Information Highway debate was about how to respond to rapid global technological change in communications services and to create policy directions to address national challenges for the provision of public access services. However, the debate was not a logical progression towards an agreed upon goal. The debate (Appendix A) can best be understood as a web of interrelational activities amongst public interest advocacy groups, industry based organizations, government agencies and regulatory bodies and various other departments. Many of these activities impacted on specific policy formulations. However, the policies and subsequent actions taken by the government did not mean full agreement on the part of all those who participated.

To assist in identifying the various public interest advocacy groups that were involved in the Information Highway debate, I use McDowell and Buchwald's definition of such groups as organizations not "directly tied to any business or industrial interests [that provided] input into and responses to the work of the Information Highway Advisory Council" (McDowell & Cowan Buchwald, 1997, p. 709). I position the advocacy groups that were involved in the debate within the theoretical framework developed by Cheryl Cowan Buchwald (2000). Her model views the structure of the policy development community through two lenses. The first, the "Information Highway Policy Community," which identifies two spheres of influence surrounding the debate (Figure 1).

Figure 1 - The Information Highway Policy Community
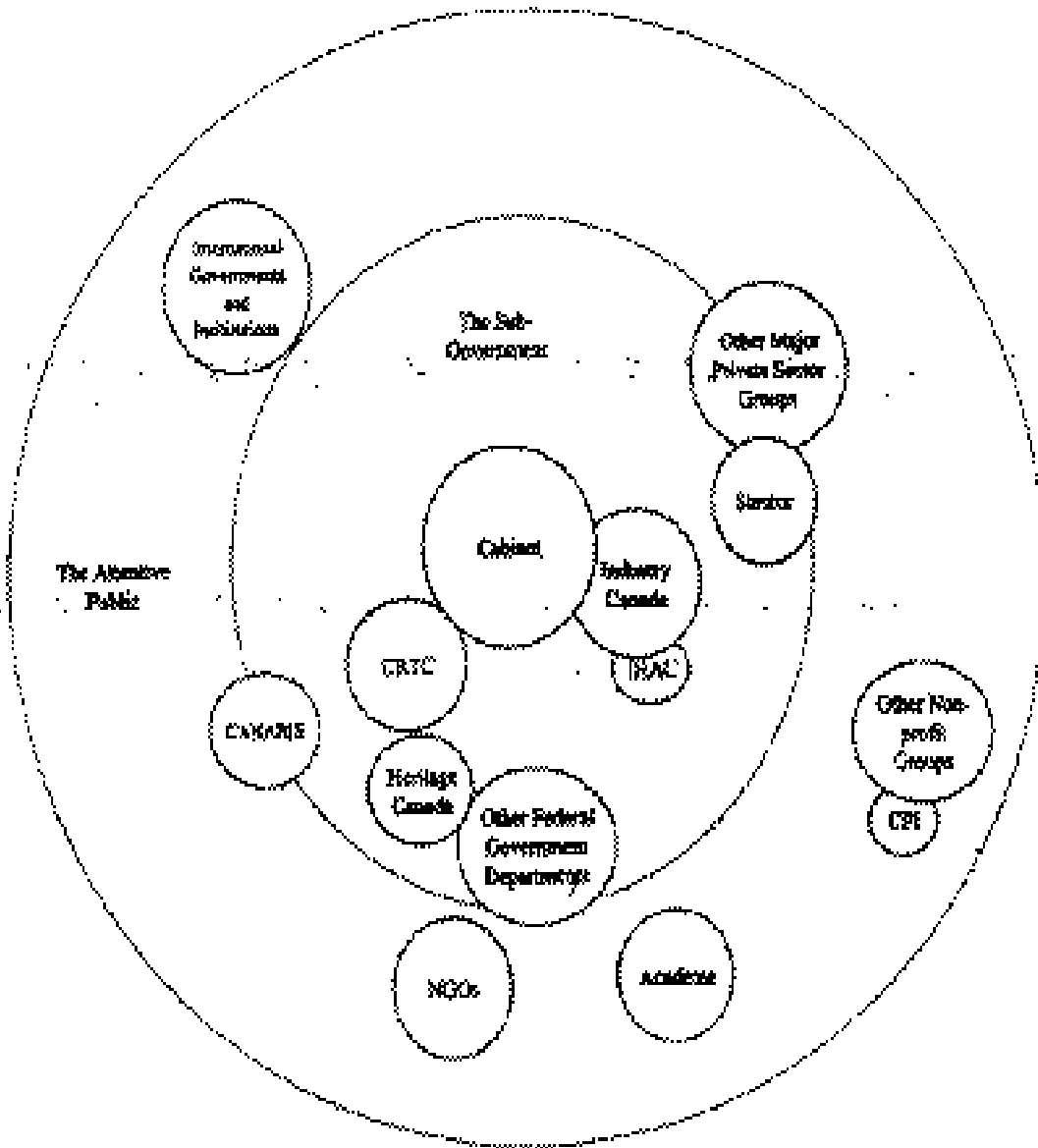
(From Cowan Burshwald, 1960, p. 137)

"The Attentive Public" sphere is where advocacy groups reside (under CPI and "other non-profit groups"). "The Sub-Government" circle consists of all those groups either directly affiliated with government and/or commercial interests that are considered more influential than the public, regarding policy input to government decision-making. To identify the range of specific

advocacy groups, I have enlarged Cowan Buchwald's "Other Non-Profit Groups" into a more

detailed diagram called "Advocacy Groups" (Figure 2). Here, I identify all the public interest

advocacy groups that participated in the Canadian Information Highway debate.

Figure 2 - Advocacy Groups
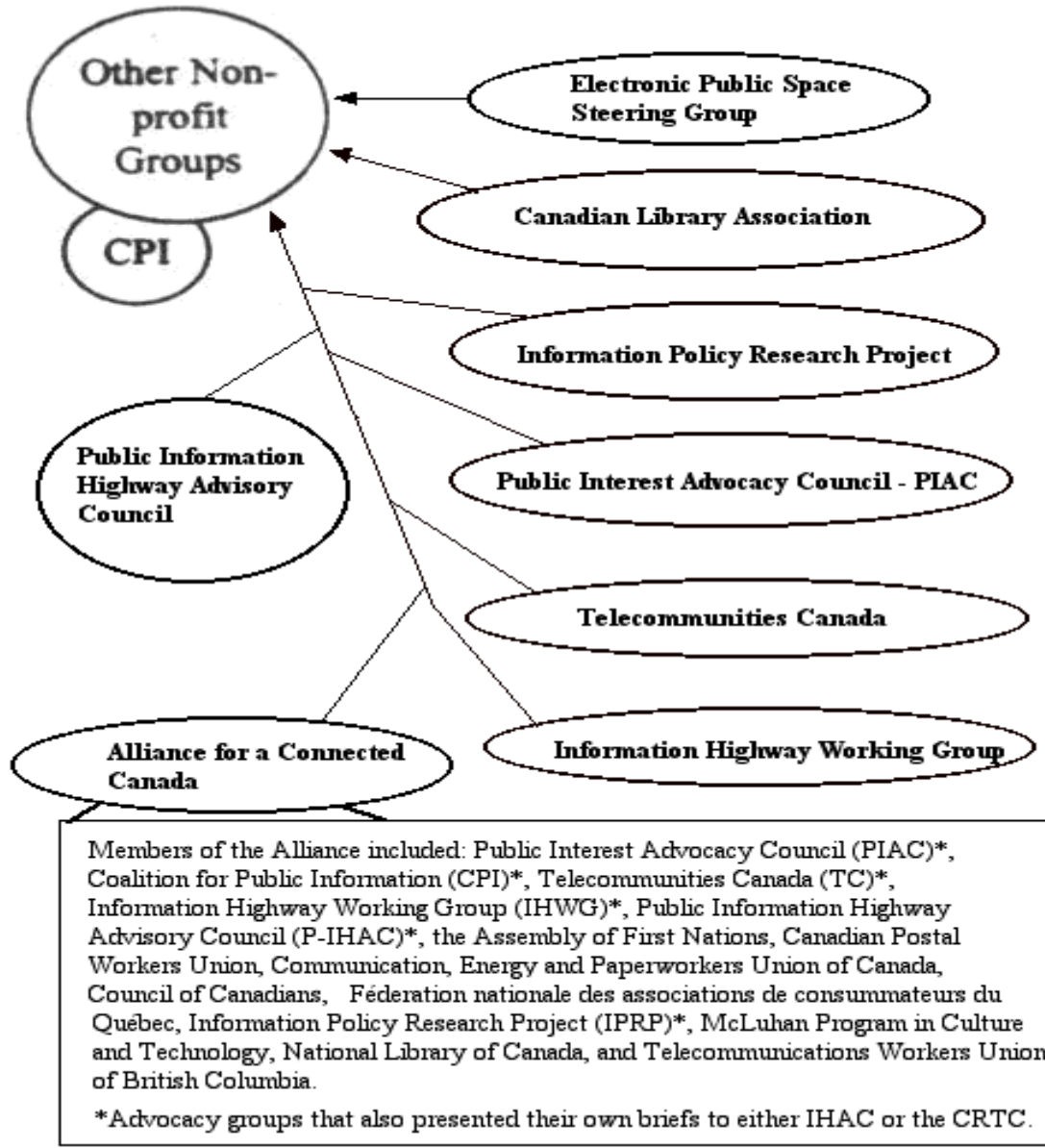
CPI became a member of the Alliance for a Connected Canada during the second round of IHAC

Canada deliberations. I will offer further detail below (p. 46-55) on the nature of these advocacy

groups with a specific focus on the work of the CPI, CLA and the Alliance for a Connected Canada.

The second lens though which Cowan Buchwald views the Information Highway debate is the "Environment-Event Network" (Figure 3). In this network environment, Cowan Buchwald positions the various policy development processes that unfolded around and within government during the Information Highway debate. Advocacy groups are located in two positions: the Alliance for a Connected Canada in the upper right under "Public interest group pressures to consult widely."

The remaining advocacy groups are located in the centre under "Strong industry lobby, weak public interest groups lobby." Cowan Buchwald's diagrams (Figures 1 and Figure 3) were adapted and based on insights she developed from Kingdon (1984), Coleman and Skogstad (1990) and Pross's policy analysis (1992).

Figure 3 - Environment-Event Network

US
NII proposal

International
market agenda

Telecom
policy reform

Industry
pressure

Speech from the Throne
1994
(introducing information
highway discussion)

G of C cutbacks
to bureaucracy

Public interest
group pressure to
consult widely

Announces IHAC

CRTC decision Telecom
Regulatory Framework

IHAC
consultations

Requests assistance from
CRTC

Extensive inter-
departmental
consultation

CRTC Convergence
Hearing

Strong industry
lobby; weak public
interest group t lobby

CRTC Telecom
Decision Rate
Rebalancing

IHAC
Recommendations
Report

G of C
Department work
groups

Conflict leads to
consensus

Memorandum to
Cabinet

Legend

Policy event

Environment

Market-oriented
policy; public interest
groups disappointed

G of C Policy
"Building the
Information Society"

G of C= Government of Canada
CRTC- Canadian Radio-television and Telecommunications Commission
IHAC- Information Highway Advisory Council

(From Cowan Buchwald, 2000, p. 133)

Cowan Buchwald's Environment-Event network model (Figure 3) demonstrates Coleman's and Skogstad's observation concerning the dynamic roles that institutions play as a major consideration in public policy making in Canada:

> The structural (i.e. institutional) characteristics of sectoral-level organizations, whether these be state agencies or societal actors, constrain the options available to policymakers and reinforce particular values and beliefs in the policy process... Sectoral institutions are organized into policy communities of state actors and other organized interests and together they shape public policy (Coleman & Skogstad, 1990, p. 312).

Pross on the other hand describes the policy community dynamic as:

> consisting of two segments: the sub-government and the attentive public. The sub-government is the policy-making body of government agencies and institutionalized interest groups including the minister in charge, senior officials, and representatives from a few interest groups and other affected agencies. The attentive public is a less clearly defined segment of players who attempt to influence policies but are not regular participants in the process (Pross, 1992, p. 120).

Cowan Buchwald (2000) also refers to Kingdon's (1984) observation that policy making activities involve a kind of "organized anarchy" involving three streams of processes – problems, policies, and politics – that often develop independently,

> When a problem is in the process of being coupled with a proposal, the choice of proposal may depend heavily on the accepted definition of the problem…Policy formulation takes place in what Kingdon refers to as the "policy primeval soup" (Cowan Buchwald, 2000, p. 136).

As Figure 1 indicates, the reality of the "policy primeval soup" also exists within government itself, with some departments playing a larger role than others in policy development and subsequently having more influence. With regard to the Information Highway debate, ISTC had the most dominant and influential policymaking role. Through the creation of IHAC Canada and the subsequent request for the CRTC to hold public hearings, ISTC had created a "policy

window" that would "[increase] the probability" that an information policy would eventually "advance to the decision agenda level" (Cowan Buchwald, 2000, p. 136).

Cowan Buchwald's (2000) conceptual models identify and separate participating organizations into three predominant groupings: the federal government, the private sector, and public interest groups. This grouping reflects Slevin's (2000) observation concerning the "hierarchical relations of power." These relations coalesced around the question: How should government define and provide "access services" for all Canadians on the Information Highway?

Advocacy groups face challenges in providing policy input

Advocacy groups faced the challenge of finding a way to provide policy input into the hierarchical decision-making processes that ISTC had established with IHAC Canada and the CRTC for the Information Highway debate. How else could this process have been managed? The essential issue for advocacy groups was that the definition of the policy development objectives were stacked in favor of the federal government's own agenda. ISTC had already established the key policy objectives and operating principles. Thus, for advocacy groups, the basic question was how "public access" was ultimately going to be defined. A second question was, how such access would be implemented. A further question could also be posited: access to what? Would the official channels for policy input allow for the expression of various concerns, perspectives and take them under advisement in creating a strategy for the Information Highway?

On a functional level, throughout the whole debate the objective of the government was to establish a process for policy analysis based on its own set of objectives and guiding principles, to weed out and validate specific policy proposals and recommendations that would

support the objectives and principles, to facilitate the legislative process and then to implement

the policies in the form of specific programs and services. However, in the eyes of some critics,

this process also established a new orientation for government where

> [t]he concept of public good [was] replaced by public interests (in the plural). The idea
> that government exists to serve the collective best interest of its citizens [had] been
> replaced by the idea that government exists to mediate the interests of different groups of
> customers. "Citizens" with rights [were] replaced by "customers" with wants and needs
> (Adams, 1998, p. 6).

Adams's observation reflects a perspective implicit in the debate, that the new federal

government wanted to demonstrate it was in control of an Information Highway strategy. As

Adams (1998) further points out, this would lead Canada in a specific policy development

direction for the provision of telecommunications services,

> [r]egardless of the political party in power federally and the power given by the 1993
> Telecommunications Act to the Cabinet to direct policy, Canada has continued to move
> away from the model of telecom-munications carriers as public utilities existing to serve
> the public good in favor of the model of privately owned carriers serving the shareholder
> (p.11).

The tone of the Information Highway debate was established with an explicit agenda being

promoted by the new Liberal government that was not unlike the previous Conservative

government, promoting a

> commitment to a globally oriented, privately developed, market-based regulatory
> framework [that was throwing] into question the entire nationalistic
> communications/public service policy framework of the past several decades. As the new
> infrastructure [was] being established, an entirely new policy framework [was being
> developed] as well (Lewis, Smith & Massey, 1998, p. 1).

Lesser & Hall (1987) had noted out that Canada's information policy framework seemed unable

to address rapid evolving global communications network technologies at a national level and

they felt this would have significant regional economic development implications if the matter

wasn't addressed. Some critics, such as Winseck (1998), saw the policy pressures to build a new

Information Highway infrastructure as being oriented to serving first and foremost the interests

of transnational capital, supported by new international trade regimes at the expense of domestic

control (p. 275). Yet, how was the federal government going to create and build a new

information infrastructure if private capital was not utilized? Raising more revenues through

taxation to undertake the initiative was unacceptable to a newly elected government, especially at

a time of severe budgetary restraint.

Adams (1998) noted another important factor that influenced the policy development

process during the debate, the seemingly continuous reorganization of various departmental

responsibilities. This in turn created a working environment where

> the first preoccupation of civil servants [was] meeting the needs of fellow civil servants
> and of politicians rather than the needs of Canadian citizens outside the
> government…Inaccessible, over committed staff do not constitute a successful
> environment for consultation…Within this continuously moving machine, staff are
> engaged in jockeying for position over those programs perceived to be most politically
> acceptable and thus worthy of funding, examples being electronic information and the
> information highway/new media programs (Adams, 1998,
> p. 5).

This reality could be explained as a symptom of a new government taking power. But these

changing dynamics had a significant effect upon the way in which advocacy groups would be

able to provide policy input to the federal government. For example, Stan Skrzeszewski, who

was Executive Director of CPI in 1994, felt that the organizational climates of many federal

departments left advocacy groups confused. He stated, "from the outside you never really know

who's making the decisions. You can spend a lot of time lobbying the wrong group" (Cowan

Buchwald, 2000, p. 140).

Thus, as political parties in power changed, as federal departments began to be

reorganized, as IHAC Canada and CRTC were assigned duties, as advocacy groups attempted to

provide policy input and industry groups to make specific policy recommendations, the

Information Highway debate became a process whereby government appeared to mediate

differing policy perspectives. In the meantime, various other government departments (federal

and provincial), as well as federal crown agencies (e.g., CANARIE) also recommended their

own national priorities. All this activity created substantial hopes for some, while for others it

caused much frustration.

Advocacy groups and the public interest.

Advocacy groups were faced with a double-edged challenge in providing policy input.

How could they respond to the changing deregulatory role of telecommunications carriage

services in its meeting the access needs of Canadian citizens while gaining an understanding of

the government's objective of "ensuring universal access at a reasonable cost." By late 1993, the

government's view of this objective was clear. Under the coordination of ISTC the government

started a program entitled "SchoolNet – Plugging Kids into the World" (Appendix A, 1993,

November, p. 104) that was aimed at addressing perceived information and "connectivity" needs

within schools and communities across Canada. This project began before any information

policy strategies had been proposed or developed by IHAC Canada or the CRTC concerning

"universal access at a reasonable cost." In many ways, the project reflected the fact that

technological change was outpacing the ability of regulators to keep up. Not everything could be

put on hold till policy-makers made up their minds about what kind of "access" would be

provided. For the government, talk would continue, but action needed to be taken. Canada was to

play host and promote itself at the then G7 Summit in Halifax in June of 1995, under the main

theme of "The Information Society." (Appendix A, 1995, June, p. 112). Because of the Summit,

there was a perception within ISTC that this event would provide an opportunity for Canada to

brand itself as a world leader in "connecting" its citizens to the "Information Highway."

Once IHAC Canada was launched numerous advocacy groups had made their presence

and concerns known to the Council (Figure 2) and to other sources of policy input (Figure 3).

Two independent bodies not associated exclusively with academic expert environments,

consumer groups, labour or provincial perspectives were CPI and CLA. These represented the

most stable comprehensive organizations for this enquiry into the issues and concerns for

"universal access at a reasonable cost" that ultimately impacted upon CAP organizations in rural

communities in Nova Scotia. A third advocacy group, the Alliance for a Connected Canada is

discussed below (p. 55) as it pertains to the second round of IHAC deliberations that began in

May 1996.

The CPI

CPI made a presentation to IHAC Canada's Access and Social Impact Working Group in

November 1994, entitled <u>Towards a Public Policy on Universal Access and Participation for the</u>

<u>Information Infrastructure</u> (Canada's Coalition for Public Information [CPI], 1994, December;

Appendix A, 1994, December, p. 109). It proposed that

> the Government of Canada must develop a national vision based on a commitment to
> universal access to the information infrastructure. This vision must be supported by a
> national information access plan with a representative public body to oversee its
> implementation. The vision should be based on universal access and participation (CPI,
> 1994, December, <u>A National Vision</u>).

In many ways, CPI's proposal harkened back to the development of electrification services in the

1920s and 1930s. Thus, CPI was not asking the federal government for any special precedents,

but was emphasizing that the federal government should ensure a technical infrastructure for the

Information Highway to encourage participation, communications and interaction. The report

further stated:

> [t]he right of access and participation will be enabled through single-party, digital access
> lines and electronic access from the home, school, library and places of work and
> governance to interactive communications, government services, public information
> databases, commercial services and global connectivity (1994, December, Universal
> Access and Participation).

CPI was attempting to broaden notions that "access" was only about creating connectivity for

online business environments or for the distribution of goods and services. CPI was also

presenting a more detailed holistic perspective to "access" by outlining four primary principles

that it felt were necessary if universal access and participation were to become a reality:

> • Equitable Access and Ubiquity.
> • Pluralism of Expression and Intellectual Freedom
> • The Right to Privacy
> • Intellectual Property and Copyright (CPI, 1994, December, Primary Principles).

The most notable recommendation that influenced IHAC Canada's deliberations was "Equitable

Access and Ubiquity." CPI proposed that

> [n]etwork access costs for public funded information providers such as libraries,
> educational organizations, government entities and for non-profit groups should be stable,
> predictable and not distance sensitive. Access should be on a flat-rate basis (1994,
> December, Equitable Access and Ubiquity).

CPI also recommended to IHAC Canada that the federal government establish a National Access

Board that would evaluate progress and develop strategies to achieve universal access and

participation for all Canadians (1994, December, National Access Board). In the eyes of CPI

such a board would consist of representatives from government, industry and non-profit sectors,

"attached to the CRTC or CANARIE, but it must be noted that neither of these bodies are fully

representative of Canadian society" (1994, December). CPI's reference for the need of a

representative body reflecting "Canadian society" went to the heart of CPI's concerns, mainly

that the Information Highway debate was being perceived as an exclusive club of industry

interests (Stentor Alliance) promoting a market-driven agenda. Hoffman (2002) reiterates the

concern that the whole Information Highway policy debate was focused too much on the

"hardware," when broader issues needed to be considered such as best practices and various

approaches to providing access (L. Hoffman, personal communication, March 4, 2002).

At the time of its presentation to IHAC Canada in December 1994, CPI had begun its

public consultation process across Canada. It would prepare a document, Future-Knowledge:

The Report. A public policy framework for the information highway, that it presented to the

CRTC public hearings in April (CPI, 1995, April 3; Appendix A, 1995, April, p. 112). Besides

repeating concerns that were outlined in its first presentation to IHAC Canada, the report favored

a competitive model in the development of the information highway. But concerns were

expressed about ensuring a "level playing field for all participants" and that government should

initiate "capital spending on the creation of publicly accessible information networks" (1995,

April 3, Social Impacts #8). This was the first indication from an advocacy group as to how the

"information highway" should be funded.

The CLA

CLA co-sponsored the first National Summit on Information Policy in 1992 (Appendix

A, 1992, December, p. 102), and worked closely with the former DOC. CLA also organized,

with the support of the Federal Treasury Board, the first national "Information Rights Week" in

June 1994 aimed at focusing public attention on information and telecommunications policy

issues. At that time, the CLA released a public document that it had developed addressing

concerns about public access in the "Information Society" entitled: Information and

Telecommunication Access Principles Position Statement (Appendix A, 1994, June, p. 108).

This document drew on the thinking that had evolved within the Ontario Library Association

(1990) deliberations for developing an information policy and strategy for the province of

Ontario (Appendix A, 1990, September, p. 100).

> CLA outlined five key rights or "access principles" to IHAC Canada:
>
> • Literacy.
> • Universal, equitable, and affordable access.
> • The right to communicate.
> • Public space on the telecommunications networks.
> • Privacy (Adams, 1998, p. 3).

It also outlined twelve key issues. Within those issues, three specific concerns about access were

noted:

> •Access means more than just providing a link to the information highway. The link must be free or at very low cost…
>
> •The concept of access must also be broadened to include the provision of content representing a wide range of perspectives and voices…Libraries, Free-nets and community organizations must be assisted in making community information available. There is real danger that the only content on the information highway will be that which is commercially profitable…
>
> •Providing information in digital form does not make it widely available unless an entire infrastructure for public access is created and supported. The statutory requirements of government to distribute information cannot be met unless the public can also access the information. Libraries, along with Free-nets and other community organizations, are logical public access points (CPI, 1994, December 15, Information Highway Issues, #5, #6, #9).

The outline of these specific concerns broadened the debate considerably by stating that IHAC

Canada must consider one of two options in making recommendations to the federal

government: to reinforce a market-driven top-down approach to information policy, or to

encourage broad participation in addressing access to community information, government

information and basic connectivity to the Internet. CLA stressed that current government action

was being heavily weighted in favor of the first option, pointing out that

> [t]he Information Highway Advisory Council must strongly urge the federal government
> to hold public hearings on future policy options. This must not be a token effort such as
> the cross-Canada focus groups conducted by Industry Canada consultants…Small
> organizations such as the Public Interest Advocacy Centre and the Consumers
> Association of Canada have been pitted against the resources of the Stentor group and the
> cable companies…Public consultations require public education and public resources
> (CPI, 1994, December 15, Options).

CLA's above reference to "Industry Canada" actually refers to ISTC at that time. ISTC was in

the process of being reorganized and it would be renamed into Industry Canada (IC). The new

departmental name become official on March 29th 1995. CLA's above reference to "a token

effort" on the part of the government, was with regard to the aforementioned policy study

released in May 1994 entitled Canada's Information Highway: Services, Access and

Affordability (Angus & McKie, 1994, May). This study was commissioned shortly after the

Liberal Party came to power in November 1993. The report's recommendations were based on

interviews with and contributions from 30 opinion leaders from organizations perceived to have

a stake in the information highway, supplemented by discussions with focus groups involving

another 150 persons in 10 cities across the country.

CLA concluded its presentation with eight specific references, two of which specifically

concerned public access:

> •[t]he federal government must establish pilot projects to demonstrate the importance of
> libraries as public access points for the information highway…

> •The federal government must work with provincial and territorial governments in
> establishing mechanisms to support broad public access to the information highway
> through libraries, Free-nets and other community organizations, as well as through home
> and office access (CPI, 1994, December 15, Recommendations #4, #6).

In stating this, CLA indicated awareness of the SchoolNet program and community access pilots

that were initiated in the midst of the formal Information Highway debate. In expressing the

importance of the role of public libraries in the provision of universal access, CLA also made a

critical contribution to the Information Highway debate, bringing to the fore the role that

libraries could play in the government's access initiatives. This raised awareness of the need for

"access" to mean more than just "connectivity."

IHAC Canada issues progress reports

IHAC Canada issued its first progress report eight months after its formation in

November 1994. The report was entitled Canada's Information Highway: Building Canada's

Information and Communications Infrastructure Providing New Dimensions for Learning,

Creativity and Entrepreneurship (IHAC Canada, 1994). It outlined the fifteen public policy

issues that the federal government wanted IHAC Canada to address, what questions were being

considered by which working group and the individuals involved (Appendix D; IHAC Canada

1994, pp. 22-26). The report explicitly stated that the Advisory Council had reached a consensus

on

> the principle of universal access at affordable cost, set out in telecommunications
> legislation, [as] an appropriate basis for its work. It recognizes that access and
> affordability will have to be considered by a number of its working groups…Universal
> access to Canada's Information Highway is twofold: access to transport/network services
> and to information/content services (p. 18).

This statement acknowledged that in IHAC Canada's view, the nature of "access" should be

defined and guided by what had been proclaimed in the Telecommunications Act of 1993 and

had been a guiding policy objective for the government, namely "ensuring universal access at a

reasonable cost" (p. 1). However, did "affordable" and "reasonable" mean the same? Thus, the

working group on Access and Social Impacts sought to answer two specific questions: How should universal access and basic services be defined? And: What pricing mechanisms should be in place (p.19)? To answer these questions, they would be guided by "recent CRTC decisions" (p.19). Thus, IHAC Canada's deliberations were being primarily guided by the "regulatory environment" that supported telecommunications services, tariff and pricing structures, and various technical matters, rather than the broader "public access" concerns expressed by CPI, CLA and other advocacy groups. IHAC released another progress report in January 1995 entitled Access, Affordability and Universal Service on the Canadian Information Highway, (IHAC Canada, 1995, January; Appendix A, 1995, January, p. 110). This report was designed "...to promote public awareness about the issues of access, affordability and universal service on the Information Highway and to encourage public comment" (IHAC Canada, 1995, p. 1). The report revealed, for the first time, deliberations concerning some form of community access to the Information Highway that would also address issues of affordability. The report stated that

> There will be a need for low or no-cost access centres in every community. Affordable community access could be made available in a variety of locations such as schools, libraries, shopping malls, airports or other transportation terminals (p. 18).

This statement demonstrated the influence that CPI and CLA had made in their earlier presentation to the Access and Social Impact Working Group.

The IHAC Canada "expert study" on issues of access and affordability was undertaken and released in May, 1995 as Affordable and Equitable Access to the Information Highway (Gilbert, Hepburn & Henter, 1995). This study concluded with over thirty recommendations, including an acknowledgement of the need for community access to the Information Highway. In particular, the study recognized "positive developments" in the initiatives of "community and school networks" that were becoming part of a "developing infrastructure" (p. 48). The report

stated that the role of public libraries in such an infrastructure also needed "particular attention"

(p.48). However, while acknowledging individual access needs and the possible role that the

public library system could play in the provision of such access, this study recommended that

"public policy should reply upon the marketplace in the provision of information services" and

government should play "an ombudsman function in case of malfunctions in the marketplace" (p.

53). Such a recommendation heightened concerns amongst many advocacy groups. If

"information services" were just perceived by those in the private sector as being sold to

consumers, how would this affect the provision of information services between public libraries

and their patrons? Clement and Shade (1996) pointed out that there were different conceptual

understandings about what "universal access" actually meant. They observed

> [g]enerally, industry representatives define access as elimination of barriers, so that they
> can deliver services which will provide profits and market share. Government
> representatives see themselves as facilitators rather than members of an official body
> which could and should set universal access goals…the public interest sector has been
> attempting to provide a broader vision of society and democracy, and the promotion of
> universal access as a public good…(1996, <u>I. Introduction: From POTS to PANS</u>).

Public advocacy groups saw themselves as part of the "public interest sector" where access in a

networked information infrastructure is multifaceted, encompassing "an overlapping mixture of

technical, economic and social infrastructures," infrastructures which required a broad national

access strategy that recognized a need for "public places" on the Information Highway (Clement

& Shade, 1996, <u>Conclusion</u>). However, at a time of severe budgetary restraint, advocacy

concerns did not address how such an access strategy would be funded on the long term.

CRTC and IHAC Canada and the Alliance for a Connected Canada

In May 1995, after seven months of deliberations, the CRTC released its response to the government's earlier call for public hearings on issues relating to the Information Highway. Entitled Competition and Culture on Canada's Information Highway: Managing the Realities of Transition, proposed a set of "transition rules that were designed to quickly remove barriers that could prevent new service providers from competing effectively" (CRTC, 1995, p. 7; Appendix A, 1995, May, p. 112). These rules further responded to concerns about "affordable access," recognizing that some form of "subsidies and the adoption of co-operative approaches by governments and distributors in building communications infrastructure and developing public access to essential communications services, particularly in remote and underserved areas" would be needed (p. 8). In a chapter devoted to "Public Places in a Digital World" the CRTC also recognized input from advocacy groups who emphasized the importance of providing:

•at least one access point to the [I]nformation [H]ighway in each community…[and]

•that programs that provide access point within each community, and from which Canadians can dial up various information highway services at minimal or no charge, are an important focus of governmental strategy in moving towards universal access (p. 43).

Further, in considering advocacy group concerns about equitable access for community based services and institutions, the report also stated that it might be "desirable that telecommunications service tariffs discriminate in favor of educational or health service entities" (p. 45).

When IHAC Canada presented its final report and recommendations to the federal government in September 1995, entitled Connection Community Content: The Challenge of the Information Highway. Final Report of the Information Highway Advisory Council (IHAC

Canada, 1995; Appendix A, 1995, September, p. 113) advocacy groups expressed dismay that

most of the report's recommendations "demonstrated a preference for addressing the needs of

the private sector" (McDowell & Cowan Buchwald, 1997, p. 713). "Response to public

proposals for universal access were answered with recommendations for 'reasonable cost' access

and services" (p. 713). However, these recommendations were what the government had asked

for all along. However, IHAC Canada had not provided a definition of what a "reasonable cost"

should be nor provided any formula as to how such costs could be shared between individuals

and organizations or between the federal and provincial governments. Further, IHAC Canada had

"recommended that consumer demand should determine the definition of 'essential services' and

concluded that few services would be identified as essential" (1997, p. 713) on the Information

Highway.

Two members of the IHAC Canada Advisory Council expressed dissatisfaction with

IHAC Canada's final recommendations: Rob Hiebert, President of the Telecommunications

Workers Union (TWU) and Jean-Claude Parrot, the Executive Vice-President of the Canadian

Labour Congress (CLC). Both expressed frustration over IHAC Canada's recommendations to

let the marketplace decide the success of the new information economy, noting that IHAC

Canada's report did not satisfactorily address a range of social impact issues (p. 714). Parrot's

dissenting viewpoint was attached within IHAC Canada's final document as a "Minority Report"

(IHAC Canada, 1995, p. 215). Such concerns, as McDowell & Buchwald have noted, may have

reflected an "over-representation of private industry on IHAC Canada, which may be linked to

the removal of cultural functions from Industry Canada, resulted in industry-centric proposal

outcomes" (1997, August, Institutions, Open Consultation and Technical Convergence). This

reference to the "removal of cultural functions" refers to the aforementioned break-up of DOC

and the assignment of cultural responsibilities to Heritage Canada whereas issues of

telecommunications and access concerns were assigned to the newly formed department of

Industry Canada.

The outpouring of dissatisfaction concerning IHAC Canada's final report, caused the

formation of a new public interest advocacy group, formed in November 1995 called the

Alliance for a Connected Canada (Appendix A, 1995, November, p. 114). Andrew Reddick,

spokesperson for the Public Interest Advocacy Centre (PIAC), stated, "There's been a lot of hype

about the possibilities. Now we'd like to talk about the concrete steps that have to be taken to

meet Canadians' needs in the development of the Information Highway" (Alliance for a

Connected Canada, 1995, November 8, Canadians Form a National Alliance). In the two years of

policy debate concerning the Information Highway, it appeared to the Alliance that the metaphor

of "Information Highway" was inhibiting a broader vision of "public access" as multi-directional

and dynamic.

The Alliance for a Connected Canada represented a loose network of labour and

consumer based organizations (Figure 2), some of which had previously been involved in

information policy issues (e.g., CPI, the Council of Canadians, the National Library of Canada,

the Public Interest Advocacy Centre, the Information Highway Working Group,

Telecommunities Canada, etc.) while other groups were newly involved in such policy issues

(e.g., the Telecommunications Workers Union, Assembly of First Nations, the Canadian Postal

Workers Union, etc.).

As outlined in its first newsletter, the purpose of the Alliance was to bring people

together to:

     • Develop and present policies that represent the views of
       Canadians and the formation of communication policies;

• Promote public understanding, vigorous and open debate about
  our communications policies;
• Influence the design and evolution of networks and services
  based on values of social equity and equality of opportunity
  (Alliance for a Connected Canada, 1996, March 15, <u>News Bits</u>).

The Alliance, however, was faced with a number of resource constraints that impacted its communications and consultation patterns. McDowell and Buchwald (1997, August) observed that the Alliance lacked a budget and "communications [had] to take place informally, through encounters during irregular trips" or through "electronic computer communications". Thus, the Alliance had to depend "on the regional activities and communications roles of members to identify key issues or to disseminate information" (<u>Internal Coalition Dynamics</u>). Even with this fragile organizational arrangement, the Alliance called for a second round of IHAC Canada deliberations to "put people before profits" (McDowell & Cowan Buchwald, 1997, p. 716). The lobbying efforts of Alliance contributed to the government's decision in May 1996 to create a second IHAC Canada round with new terms of reference (Appendix A, p. 116). Although commissioned by IC, the next round of deliberations by IHAC Canada were expanded to include other federal departments such as Human Resource Development Canada (HRDC), Canadian Heritage, Public Works and Government Services Canada, Treasury Board, and Justice Canada. Participation by these government departments was seen as having potential for introducing broader perspectives.

Shortly after the second round of IHAC Canada was announced, the government released its own progress report and response to the earlier recommendations that had been put forward in IHAC Canada's last report (McDowell & Cowan Buchwald, 1997, p. 716). <u>Building the Information Society: Moving Canada into the 21st Century</u> signified that the government would move quickly with a series of policy goals and initiatives to "facilitate Canada's transition to an

information society and knowledge economy" (IHAC Canada, 1996, p. 1; Appendix A, 1996,

May, p. 116). McDowell and Cowan Buchwald (1997) pointed out that the government's

strategy ultimately depended "to an increasing extent on the private sector" (1997, p. 717). Yet,

how was Government to pay for this infrastructure if it could not encourage and partner with the

private sector? Raising taxes to generate more revenues to support the infrastructure was

untenable to a government that was about to go the election polls within the year. CPI's

aforementioned submission to the CRTC Future-knowledge: The report. A public policy

framework for the information highway (1995, April 3) did recommend two options for the

federal government to consider in raising funds to support an access infrastructure across Canada

– either require telecommunications and cable television companies to "pay a one-time levy for

the establishment of a public interest foundation whose mandate [would] be to support efforts

which ensure universal access to the information highway" or create a "universal service fund,

based on a customer premise tax, a tax included in the price of appliances designed for net use"

(1995, April 3, Training, Development and Research Foundation #5). Neither of these

suggestions were taken into consideration by the federal government.

IHAC Canada's aforementioned report (1995, September) conveyed a message of

economic salvation through the application of communications technology to prepare Canadians

to be more globally competitive. Otherwise, it was felt that

> [f]ailure to seize the opportunity of using Canada's Information Highway [would] result
> in reduced competitiveness and the loss of high-growth knowledge industries and high-
> quality jobs. The social costs in terms of lost job opportunities will be enormous. Our
> national cultural dialogue will languish and our governments [would] be less able to keep
> up with the rapidly changing realities of the electronic age (IHAC Canada, 1996, p. 3).

Although no evidence was provided in the report to support the above rationale - to be fair these

implications of "reduced competitiveness" and related "social costs" were in the realm of the

unknown. The report reflected the new public management practices whereby governance was

defined primarily as the delivery of groups of services to "clients" (versus citizens), stating that

the Government of Canada through the Treasury Board Secretariat would "continue to accelerate

the conversion to electronic commerce as the preferred means for the government to conduct its

business, internally and with external clients (IHAC Canada, 1996, p. 17)." Nevertheless, the

report did provide some hope for advocacy groups within the chapter entitled "Realizing the

Economic and Social Benefits for all Canadians," where it stated it would seek to develop a

"national strategy for access to essential services" (p. 24). To this end, the government appeared

willing to seek greater consultation with advocacy groups "about what forms and modalities they

would like to encourage in the development of advanced communications and information

services" (McDowell & Cowan Buchwald, 1997, p. 717).

The government's inclination to seek broader support and input over the period 1996 and

1997 occurred with a series of three workshops that were held under the auspices of the

Information Policy Research Project (IPRP) at the University of Toronto's Faculty of

Information Studies (FIS). These workshops were held to consider the challenges involved in

defining and implementing a national access strategy (Appendix A, 1996, March, p. 115).

Occurring in March 1996, February 1997, and November 1997, the workshops were "mainly

funded by the federal ministries of Industry, Heritage and Human Resources Development, with

their representatives participating in the discussions as observers" (Clement, Moll & Shade,

1998, Part II: Towards a National Access Strategy).

Clement, Moll and Shade (1998) pointed out that it became apparent by the end of the

workshops that universal access as an essential service "would change over time" and "tensions

and potential co-operation between market forces, government, and citizens would only be

resolved with the balanced combination of economic and legislative support, and equitable

representative governance" (Part II: Towards a National Access Strategy). Valuable suggestions

for information policy had emerged from the workshop discussions and reports and "it was

hoped that some of the recommendations would become part of the promised national access

strategy (Part II: Towards a National Access Strategy).

When IHAC Canada released its second and last official report, Preparing Canada for a

Digital World (Canada, 1997, September; Appendix A, 1997, September, p. 118), it proposed a

number of recommendations, namely that a national access strategy be developed to ensure

affordable access for all Canadians to essential communications services by the end of 1997

(IHAC Canada, 1997). Advocacy groups were encouraged that many of the recommendations

issued in IHAC Canada's second report "echoed the recommendations emanating from the

February 1997 Universal Access workshop and the interventions of public interest groups"

(Clement, Moll & Shade, 1998, Information Highway Advisory Council Final Report).

Although the Alliance for a Connected Canada played an important role in pressuring the

government to conduct a second round of IHAC Canada deliberations and participated in the

Universal Access workshop series, the Alliance itself

> proved too diverse, unfocused and under-resourced to last for long. Its major contribution
> was a unified response to the second round of IHAC deliberations that reiterated the need
> to make access, affordability and employment the communications policy priority, and to
> allow the public access to the debate (Clement, Moll & Shade, 1998, Alliance for a
> Connected Canada).

With the release of the final report of IHAC Canada in September 1997, the Information

Highway debate formally concluded. However, the public advocacy work of CPI, CLA, the

Alliance for a Connected Canada and numerous other advocacy groups and workshop activities

continued to pressure government for a more open public debate on issues relating to access on

the Information Highway. These activities created a broader public awareness and understanding

about the values of social equity and equality of opportunity in the digital era. These activities

also demonstrated the reality that Canada's Information Highway debate and its outcomes

occurred within a range of perspectives and agendas that shaped an innovative national

information and communications policy. In the following chapters, I will outline how ISTC's

early piloting of SchoolNet and CAP reflected the government's "access" service assumptions

that were implicit in the Information Highway debate and how these assumptions impacted

significantly upon the actual operational experiences of access within many CAP settings.

Chapter Six – Public access initiatives: Free-nets, SchoolNet and CAP

While IHAC Canada and the CRTC had been undertaking their deliberations throughout 1994 and into 1995, the concerns raised by advocacy groups outlined in the previous chapter were supported by many in the Free-net movement. Some in the movement felt the Information Highway policy review process was more about supporting the status quo in traditional broadcast media and serving the connectivity needs of the telecommunications industry in Canada, than about recognizing that the multi-directional nature of the Internet would require a broader understanding and vision for "access" services. In the words of Garth Graham, a founding member of the National Capital Free Net in Ottawa,

> [w]hat has been visible so far in the Information Highway Advisory Council policy discussions, and in the CRTC consultation process, is not a national vision. It's a defense of public/private distinctions of thestatus quo. It's essentially supporting the mass media model that is being pushed by the telecommunications industry - just enough upstream bandwidth to let us click on the "buy" icon (Graham, 1995, January 26, The Future of Community Networks).

For Graham the Information Highway debate did not allow room for public participation. His stance reflected the operational philosophy of the Free-net movement which encouraged citizen participation, mutual support and aid. Graham concluded that the perception of the Information Highway as just "every citizen gaining access to cyberspace via an Internet email address" would also depend on what citizens "do when they get there" (p.1). Such a visionary philosophy of seeing citizens as active in civic affairs and politically attentive was idealistic. But was this realistic? Margolis and Resnick (2000) would observe that

> [f]ar from revolutionizing the conduct of politics and civic affairs in the real world…the Internet tends to reflect and reinforce patterns of behaviour of that world…Moreover, as in the real world, most people who use the Internet have less interest in participating in political and civic affairs than they have in following sports, seeking entertainment, pursuing hobbies, shopping, or gathering information about a variety of subjects. While

the Internet may still have the potential to greatly enrich our public life, thus far that potential has not been realized (Margolis & Resnick, 2000, p. vii).

Ultimately, access services such as CAP challenged the way in which Free-nets would fit in the matrix of access services within communities. For example, Graham and Shade state that CAP,

however beneficial to rural connectivity and federal experience of community networking it turns out to be, [CAP] is a unilateral, internal, and top-down initiative. It is not an endorsement of grassroots citizen initiatives that are characterized by self-generated, community-based action that is somehow unregulated, and beyond control. (Graham & Shade, 1996, p. 6)

Brian Campbell has noted critically that Free-nets,

were viewed explicitly in the beginning as a threat to establishing commercial ISP's until their lack of resources made it clear that a public commons could not be developed to compete with the commercial sector (personal communication, March 3, 2002).

I believe it was precisely because of this perception that Free-nets were perceived as too "unregulated," that their political ethos encouraged political change (and opinions) in ways that made local MPs uncomfortable and defensive. Thus, Free-nets were deemed "beyond control." And as valuable as Free-nets may have initially been perceived by those within the movement, many Free-nets would also face a massive change in user perceptions about online services and activities. For example, within a six year period, from 1994 to 2000, Canadians' access to Internet services grew at a phenomenal rate. In 1994 Statistics Canada conducted a study that considered the use of computer technology and Internet access by Canadian citizens in their homes. The study found that,

25% of households (2.6 million) have a home computer, a 10% increase from 1986. However, only one in three (34%) were equipped with a modem. Households in the highest income group were five times more likely to have a home computer (46%) than those in the lowest income group (9%) (Clement & Shade, 1996, Income and class-based access).

By 2000 Statistics Canada issued another report indicating how quickly the Internet had become

part of the Canadian communications fabric.

> An estimated 13 million people, or 53% of those aged 15 and over, used the Internet in 2000. A further 27% of non-users expressed an interest in becoming users. For lower-income non-users cost was the major barrier, while at the high end of the income scale the barrier was lack of time. Almost every teenager (9 out of 10) reported using the Internet at least once in the previous 12 months (Statistics Canada, 2002).

Within six years, Canadians of all ages had made a significant transition to using the Internet as a communication medium. This was the result of numerous overlapping socio-economic and cultural dynamics - from the accessibility of moderately priced computer hardware and communications software, to burgeoning new ISP services; from a transition to a wider acceptance within the mainstream culture of the use and visibility of the Internet as a new communications medium within a wide range of personal, professional and institutional uses.

Although continuing to be useful for specific segments of the populace, by 2000 Free-nets were no longer popular for the vast majority of people who had moved their connectivity services over to commercial providers. These people choose faster speeds and other service enhancements that their original Free-net service was unable to deliver. Ironically, rather than being a threat to commercial providers, Free-nets had in fact trained and exposed thousands of early users to the Internet, so much so that those same users became subscribers to commercial ISP services, allowing such services to quickly become recognized because the market had already been prepared by Free-nets. The commercial providers or the federal government never acknowledged this development. The speed of technology enhancements and the lack of financial resources overran the Free-net movement's best aspirations. The marketplace ultimately repositioned the role of Free-nets to the outer edges of the communities where they now reside. Many of the surviving Free-nets continue to offer a unique non-profit ISP service, but a service no longer at the center of the community where they started out.

Public management of the federal government's access initiatives

While the Information Highway debate was unfolding, the federal government's public management of access initiatives were coordinated by Industry Canada. By the time IHAC Canada was established (1994) and the CRTC had begun its public hearings (1995), the federal government was already taking action to address what it perceived as "access" needs. This action began within the Science Promotion and Academic Affairs Branch of the ISTC, with the creation of a program to increase awareness of science and technology within the public schools through the application of telecommunications and online information services. As mentioned earlier, this program was called "SchoolNet - Plugging Kids into the World," officially announced in November of 1993. It was described as a program that provided, "Canadian educators, librarians and students with valuable electronic learning tools and services and [encouraged] the development of information technology skills" (Canada, Industry Canada, 1995, March 9, What is SchoolNet). One of the initial principles within the SchoolNet program was that it had to provide "public access." Thus, the community access dimension emerged within the SchoolNet program, and later became a separate initiative in 1995 called the Community Access Program (CAP).

Due to budget cutbacks across the civil service and the perceived notion by senior government officials that access projects were better aligned to telecommunications, the responsibilities for the newly announced SchoolNet program were moved when ISTC was reorganized to create the new department of Industry Canada (IC). SchoolNet was moved into a branch of IC called the Spectrum, Information Technology and Telecommunications (SITT) group. The aforementioned Science Promotion and Academic Affairs Branch that had started SchoolNet was placed under SITT and became a new office called the Information Highways

Application Branch (IHAB), (D. Hull, personal communication, March 18, 2002). IHAB coordinated the various implementation strategies for SchoolNet and CAP, as well as other access programs that developed when the government announced its "Connecting Canadians" initiative in the September 1997 Speech from the Throne.

When SchoolNet began pilots in late 1993 and early 1994, the goal was to connect 300 schools, but this was later exceeded with "more than 4000 schools accessing SchoolNet services during the 1993/94 year" (Cresson & Bangemann, 1996, July, Educational Network and Services). By March 1999, IC claimed that SchoolNet linked all of Canada s schools and public libraries to the Information Highway (Appendix E).

SchoolNet and CAP initiatives were the first concrete indication that "access" in the federal government's frame of reference was to be understood as "connectivity" to the Internet. An initial $17 million dollars was committed to launch SchoolNet (this included CAP, which was defined as an "access project" before it officially became a "program" in 1995).

However, critics soon voiced concerns about SchoolNet over issues of sustainability. For example, how were the technology and network connections to be paid for and upgraded in the long term? The federal government's announcement of SchoolNet did not address this concern. Further, when online data collection occurred, questions were raised concerning privacy rights of students and teachers within schools (CBC Wired Classroom, Interviews with Marita Moll, n.d.).

CAP funding and organizational arrangements

By the spring of 1995 (when IHAC Canada and CRTC released their earlier reports), IC established a four year phase-in program for the provision of public access services (1995 - 99). The program included a further $22 million for SchoolNet and CAP in order to provide up to

1,500 rural communities with access to the information highway (Graham, 1995, May 6,

SchoolNet Community Access Project; Appendix A, 1995, March, p. 111). CAP was considered

an official program rather than a "project." Even within a climate of severe budgetary constraint,

the government found the financial resources to move quickly on its access implementation

plan, with or without an official information policy to support it. The government conducted an

explicit campaign to "debate" information policy even though it had already decided to begin

access pilots in schools via the SchoolNet initiative in November of 1993. SchooNet and CAP

were described as initiatives

> [t]o help provide rural communities with affordable public access to the Internet, as well as the skills to use it effectively, a national network of community access sites would be established to help create new and exciting opportunities for growth and jobs (Canada, Industry Canada, 1995, March 9, What is Community Access?).

Communities obtained access by entering a competitive application process to "establish and

operate public access sites in low cost public locations, such as schools and libraries, to serve as

Information Highway on ramps" (What is Community Access?). The federal government aimed

to establish up to 300 centres across Canada annually for three years. But as the IHAB statistics

indicate, this actually expanded to over 1067 centres being established annually over three years

(Appendix F). The government's implementation plans for SchoolNet and CAP outlined:

> [i]n 1995, 1996 and 1997, annual competitions will be held to select rural community access sites. Winners will be selected by an independent review process administered by CANARIE Inc. (The Canadian Network for the Advancement of Research, Industry and Education), and involving individuals with extensive experience in community affairs, business and social development, electronic networking and education. …The SchoolNet Community Access Project is a joint endeavor of the federal, provincial and territorial governments. At the federal level the program will be managed by Industry Canada and Human Resources Development Canada (Canada, Industry Canada, 1995, March 9, Selection Process).

Contrary to this statement, SchoolNet from 1995 through 1997, was a "joint endeavour"

in name only. The initiative was fully coordinated and funded by IC with moral support only

from interested provinces, such as Nova Scotia. But no Memoranda of Agreement (MOA) were

signed with the province until 1999.

The objectives that the federal government established in 1995 to implement the

SchoolNet and CAP were multifaceted, with an aim to:

- • [obtain] more affordable access for rural communities;
- • raise awareness about the potential for creating jobs and growth through the use of online technology;
- • stimulate the development of new electronic learning tools and services by and for rural communities;
- • provide Internet training facilities for local entrepreneurs, employees, educators and students and others interested in improving their information management and networking skills.
- • stimulate the electronic delivery of government and other services and obtain feedback from citizens about how they would like these presented (Canada, Industry Canada, 1995, March 9, Program Objectives).

It sounded exciting and full of promise but, as later evidenced, providing "access" in rural

communities would create significant challenges for CAP site supervisors and users. Although

the SchooNet and CAP initiatives were originally intended to provide rural and more remote

access to the Internet for purposes of economic development, over time it was observed that the

government objectives became more a "numbers and funding game" having less to with public

access and more to do with "how many communities are connected…so that we could tell the

world that all Canadians are connected" (S. Skrzeszewski, personal communication, March 8,

2002). This attitude reflects the earlier observations by Melody (1996) about a climate of

"infatuation at the highest levels" on the part of national and international policy-makers

concerning which country would be fully connected the fastest. As chairperson of CPI,

Skrzeszewski poignantly emphasized that in "1994 and 1995 IHAC and CAP were driven by

idealism…but by 1998 the focus was on the numbers" (S. Skrzeszewski, personal communication, March 8, 2002). Why did this operational shift in attitude occur?

The Liberal Party won another federal election in June of 1997 (Appendix A, 1997, June, p. 118) and it had a new mandate to accelerate the course it had already established. Thus, as the new government they were able to state in its September 1997 Throne Speech that Canada would not only become the most connected nation in the world by the year 2000, but the government would also provide an additional $260 million dollars over three years to continue to fund such initiatives as SchoolNet, CAP, the advanced networking activities of CANARIE and other access initiatives (Appendix A, September 21st, 1997, pp. 118-119). CANARIE in fact received the largest piece of the allocated budget to link various universities across the country. CANARIE was to administer the review process for competitive applications and make funding recommendations for SchooNet and CAP. A National Community Access Advisory Board was established, chaired by the President of CANARIE. However, at least one Board member felt that the Board's work was more of a rubber-stamp process, that meetings were held and Board members were "talked at" versus having an opportunity to discuss "broader access concerns" (L. Hoffman, personal communication, March 4, 2002). Based on the government's new budgetary allocations and its implementation objectives, the Advisory Board had its work cut out for it. Further talk and debate was not what the government wanted; it wanted action.

CAP pilots begin in Nova Scotia

In early 1994, three provinces (Nova Scotia, New Brunswick and Manitoba) were approached to pilot community access sites (B. Hart, personal communication, February 12, 2002). Nova Scotia was ripe to participate in such pilots. In early 1993 the Nova Scotia

Department of Education established, in partnership with a non-profit body, NovaKnowledge, an

innovative computer-recycling program whereby old computers were refurbished, upgraded and

provided to schools in need of such equipment. It was within this program that the first initial

combined SchoolNet and CAP pilot projects were established in early 1994 (B. Hart, personal

communication, February 12, 2002). A small provincial committee was established, consisting of

representatives of the Department of Education, the Nova Scotia Community College, the local

phone company Maritime Telegraph and Telephone (MT&T) and the Nova Scotia School

Boards. This committee in turn invited School Boards in the province to apply for federal

funding for related equipment and access costs. Out of this, five public access sites were

established within Nova Scotia schools.

The federal government pilot organizers decided that if access sites could work in

schools, such sites might be beneficial in other community locations (D. Hull, personal

communication, March 18, 2002). This decision was not based on any formal evaluations.

Nevertheless, by June of 1994, over 3200 schools in Canada were connected to the Internet. By

November, the federal government announced that it would assist up to 1,000 communities to

connect to the Information Highway (IHAC Canada, 1995, p. 12). However, other than providing

funding for specific connectivity services to the Internet for schools and communities, no federal

government policy gave direction as to how the program would support broader access needs or

how it would be supported on the long-term.

Looking at this time period of the mid-1990s, Melody (1996) points out that in public

information policy around the world there was a climate of "infatuation at the highest levels of

national and international policy-making" that in essence had turned into a "competition to see

who [could] make the most visionary and thereby unrealistic and unsupportable claims of

potential societal benefits" (Melody, 1996, p. 243). He further observed that

> [e]stimates of specific costs and benefits [were] rarely found; and substantive policy
> directions that [were] backed up by operational plans, actual resource allocations and
> budgets [were] almost non-existent (p. 243).

This was the case in Canada as well when the SchoolNet and CAP pilot programs began. In 1993

and 1994, operational plans were implemented before any "substantive policy directions" had

been provided or actual "resource allocations and budgets" assigned.

Full CAP implementation in Nova Scotia

Once CAP became an official initiative, school and community access applications were

coordinated and recommended to the National Advisory Board by the regional offices of IC.

These regional offices encouraged applications through public awareness workshops in various

regions of Nova Scotia (B. Hart, personal communication, February 12, 2002). In February 1999

this process changed when a MOA was signed with the province that allowed applications to be

reviewed and accepted by the Nova Scotia Technology and Science Secretariat (TSS). The TSS

in turn cost-shared a portion of the funding arrangements for the CAP program (J. Stanley,

personal communication, October 5, 2001).

When the CAP initiative began, the National Advisory Board reviewed the applications

and made its recommendations for funding directly to the minister of IC. Doug Hull, a senior

official within IC at that time, stated that the Board

> was established as soon as the program moved from a pilot stage to full fledged
> implementation based on an open call for proposals, which initially was in the rural areas
> only. A key feature of the Board's operation was that its reports to the Minister, including
> the recommended CAP site list recommendations for program improvement, were
> published through a press release as soon as the Minister had made his decisions. In the
> total life of the program there was no variation between the recommended lists and the

decisions (D. Hull, personal communication, March 1, 2002).

Hull's observation clearly shows how closely the Minister of IC was involved in approving recommended CAP site applications from the Advisory Board. This reveals the priority that the program's access strategy had for the government. Nova Scotia was one of the first provinces to be involved with the federal government's access initiatives.

By the mid-1990s, the network infrastructure in Nova Scotia began to be upgraded through an agreement reached among the Nova Scotia Government and the federal government, the Nova Scotia Department of Education and Culture and the phone company, Maritime Tel & Tel, to establish an Education Wide Area Network (EDnet). EDnet provided Internet connections to facilities, including community college campuses, public libraries, museums, government offices, school board offices and public schools. The EDnet infrastructure arrangement provided a funding formula that allowed the same Internet access costs anywhere in the province to be secured for a specific period of time. This funding formula addressed one of the provincial government's main concerns for equitable access across the province. This initiative followed the recommendations of an earlier policy study in January 1994 when the Nova Scotia Department of Transportation and Communications requested proposals from qualified consultants to develop an Action Plan for the advancement of an Electronic Highway for Nova Scotia. A consortium of firms, led by NGL Nordicity Group Ltd., undertook a Nova Scotia electronic highway study, and delivered a report in March, entitled The Nova Scotia Electronic Highway Study: An Action Plan To Seize Opportunities In The Electronic Marketplace (NGL Nordicity Group, 1994, March; Appendix A, 1994, March, pp. 106-107). The report provided a policy framework recommending a number of components, namely:

> • provide affordable equipment, technical support, training resources and funding
> assistance to support user-led activities throughout the province such as Free-nets,

community networks and business networks
• create a virtual incubator system…[and] develop, demonstrate and test-market new application and information services
• stimulate the development of universal, province-wide electronic highway services, including: public Internet access points-of-presence in every local calling area; public mobile voice and data communications services; and high-speed networking services which could support business communications, the delivery of education and training services (NGL Nordicity Group, 1994, March, Re-invigorating Communities).

With this policy framework in hand, Nova Scotia was one of the first Canadian provinces to connect all its schools to the Internet via the Ednet implementation. As Gurstein (2000) pointed out:

[a]t a policy level in Nova Scotia, a conscious decision was made to promote direct links between local economic development authorities and community access sites/projects and to position CAP as an "economic development" program rather than as a communications-support program. Additional resources to support Community Access sites were justified as making a contribution to local economic development, rather than, for example, by their support for continuing education or life-long learning (p. 69).

This policy rationale mirrored that of the federal government, which saw the Information Highway as a means to ensure Canada's international competitiveness and create further job opportunities for citizens.

In addition, other forms of access occurred in the province at this time. Specifically, the Free Net movement offered innovative community networking solutions for the provision of Internet access and support to individuals and organizations. In Nova Scotia, this occurred before commercial services were extensively available across the province. For example, on June 15th, 1994, the Metro Community Access Network Society (called Metro*CAN and later Chebucto Community Net) went online in Halifax. Its founding members included representatives from Industry and Science Canada, Nova Scotia Departments of Education, Transportation and Communications, Supply and Services, the Halifax Regional Library system, and the United Way, as well as some local businesses (Avis, 1995, Chapter Four – The Case Studies.The

Chebucto Community Net, Halifax, NS). In November 1994, an "Umbrella Group for Free Nets in Nova Scotia" held its first conference at the Nova Scotia Agricultural College in Truro (Appendix A, 1994, November, p. 109). Participants from all over Nova Scotia were present, including representatives from different government agencies, community development agencies, regional public libraries, community colleges, universities and the private sector. The Nova Scotia Federation of Community Networks was created out of this conference (Nova Scotia Provincial Library, 1994, Umbrella Group for Freenets Conference). It was through such initiatives that public awareness regarding public access development was increased. By April of 1995, Chebucto Community Net served 6,000 accounts and grew by 200 accounts per week (Graham, 1995, May 6, Members; Appendix A, 1995, April, p. 111).

Once the CAP officially became a "program" in early 1995, many schools in Nova Scotia applied for program funding, entering into agreements with no practical understanding of the numerous logistical issues and challenges that would ensue in providing public access to school environments (J. Thornley, personal communication, March 4, 2002). The goal for many schools was simply to obtain much-needed computer equipment. The "public access" requirement was considered to be secondary. Further, the project did not provide long-term operational sustainability assistance when initial funds became available to schools. For some this represented a government program that may have had an important vision, but nevertheless lacked the necessary underpinnings to address what would become the broader access issues and needs (J. Thornley, personal communication, March 4, 2002).

One group that sought to address public access issues in Nova Scotia and had a sustainable infrastructure in place to support access was the Nova Scotia Provincial Library (NSPL). In 1994 the NSPL set a goal to have at least one publicly accessible terminal in each

public library. But the only community access terminal in Nova Scotia at that time was located at the Spring Garden Road branch of the Halifax City Regional Library (Nova Scotia Provincial Library, 1994, Nova Scotia Community Access Project). By 1997, when Education and Culture Minister Robbie Harrison spoke during Information Rights Week, April 21-27, he was able to state that "all 75 libraries in the province offered public access to the Internet through the department's wide-area network, Ednet" (Nova Scotia Department of Education and Culture, 1997, April 24, Education/Culture—Information Rights Week April 21-27; Appendix A, 1997, April, pp. 118-119).

By 1998, an Urban CAP program was also established in Nova Scotia with the first site set up at the North Branch Public Library on Gottingen Street in Halifax (M. Colburne, personal communication, February 12, 2002). To place these developments within a broader perspective, Gurstein (2000) notes that community access was launched in many communities, particularly those in Atlantic Canada, at a time when "other economic resources were in severe decline and when the national system of broad social supports appeared to be under threat" (Gurstein, 2000, p. 68). As it turned out, CAP was very quickly seen by various regional development agencies in Nova Scotia as not only providing access to a communication/information tool, but also as a new resource for local development (p. 68). This perception created a "policy window" priority for a full province-wide implementation of CAP in Nova Scotia, a priority that was not shared by other programs or initiatives.

Within these various federal and Nova Scotia dynamics, the CAP program developed in Nova Scotia and in other parts of the country. However, a national analysis of CAP sites, carried out in 1999, identified significant information architecture design issues at the local CAP web site level (LibraryNet, 1999, January 12; Appendix, 1999, January, p. 130). Further concerns

were also evident concerning supervisors' and users' experiences of CAP in rural Nova Scotia communities (Deveau & Winstanley, 2000). Concerns included the need for better coordination, on-going technical support and long term sustainability. Another study (Pfiester & Colle, 2000, October 31) based at Cornell University identified similar issues at the sites analyzed. These studies will be considered in more detail in the next chapter.

Chapter Seven – CAP site experiences

Official funding for CAP in 1995 was established as a one-time grant administered through a local community volunteer board of directors. Such boards applied to the federal government for funding to establish a CAP site. In terms of funding arrangements, the federal government's framework provided "funding up to a maximum of $30,000. per site, and not exceeding 50% of the total cost" for a period up to 18 months. The expected average cost at the local level was "$5000.00 or less." Contributions were also accepted by "other non-federal public or private" sources and "the recipient's share of costs" could also include in-kind contributions (Canada, Industry Canada, 1995, March 9, <u>What is Community Access?</u>). Another important element was the ability of the community to show that its CAP site would achieve financial independence. However, as a study of rural Nova Scotia CAP sites indicates, this requirement caused significant stresses as well as challenges to those communities already lacking access to basic resources (Deveau & Winstanley, 2000). Further, no guidelines were provided to communities applying for CAP funding as to how they would go about establishing an information architecture for their own web site to provide access to local, national or international information services. Nor were there any guidelines for training and/or orientation to information literacy programs for users. This indicates that the government was simply interested in getting sites "connected."

In many ways, once communities received funding, they were left to determine whether in the long term their CAP site would stay afloat financially and what programs and services, if any, their site would offer. Some might look upon this as an acceptable operational model of "the strongest will survive." But was this the "access" model the government had intended to establish in communities so as to provide access to government information services, create jobs

and be internationally competitive? Nothing else indicated that the government thought

otherwise. Possibly the federal government hoped to interest provincial governments to get

involved, as was the case in provinces such as Nova Scotia. The latter, was not the norm across

the country.

In 1998, IHAB initiated a study conducted by C. J. Howse and Associates to determine

the kinds of information infrastructures that existed at various CAP sites across the country. A

survey was conducted, recommendations were developed and a report was released on January

1999 entitled Survey of CAP Web Sites in Canada: Draft Final Report. They recommended that

CAP sites had to develop the capacity to

serve and help people through the World Wide Web in areas such as:

> • Computer/internet help-desk assistance,
> • Information for community, business, and personal development/ decision-making,
> • Tools for accessing key business and government services,
> • Long distance learning with new technologies, and generally, presenting their
> communities to the world and the world to their communities (LibraryNet, 1999, January
> 12, HTML. Introduction).

The survey also proposed an "Information Architecture Model" for CAP sites, to be utilized in

the construction of a community-based information infrastructure. These recommendations

reflected concerns that had been expressed by advocacy groups almost four years earlier during

the Information Highway public policy debate, namely that "universal access" must be

understood as multifaceted in nature and must take into account not only basic network

connectivity services, but "also include much more attention to the remaining layers: such as

literacy/social facilitation, service providers, software tools, and devices" (Clement & Shade,

1996, III Access Sandwich). Yet other than a cost-shared funding arrangement, these "layers"

were not considered in the federal government's delivery of the CAP program.

Other concerns and challenges for CAP sites were also identified in a provincial CAP site study that Deveau and Winstanley (2000) undertook for the Nova Scotia Technology and Science Secretariat (TSS). The analysis took place in the summer and fall of 1999 based on a survey of 126 CAP sites in rural Nova Scotia. This study entailed an analysis of experiences at the CAP sites since the inception of the program, from the point-of-view of fifty-four site supervisors (out of a mailing to one hundred and twenty-six CAP sites) and thirty-six users. Both quantitative and qualitative data provided by participants through surveys and selected on-site interviews were analyzed.

The analysis of the users' statistical data produced results similar to larger quantitative studies of Internet use in Canadian households by Statistics Canada (2002). For example, both studies gave similar results when respondents were asked to identify the main reason they began using the Internet (Figures 4 & 5). User similarities are indicated below with the identification of e-mail and browsing as the two primary main online activities (browsing was defined as "curiosity" in the study).

Figure 4 – 1999 CAP User Site Survey results
(Deveau & Winstanley, 2000, p. 14)

CAP Site Survey

curiosity
*personal developm
e-mail, chat
current events
specific research
homework
learn
all of first four

0   5   10   15   20   25   30   35

*personal development

Percent CAP Users
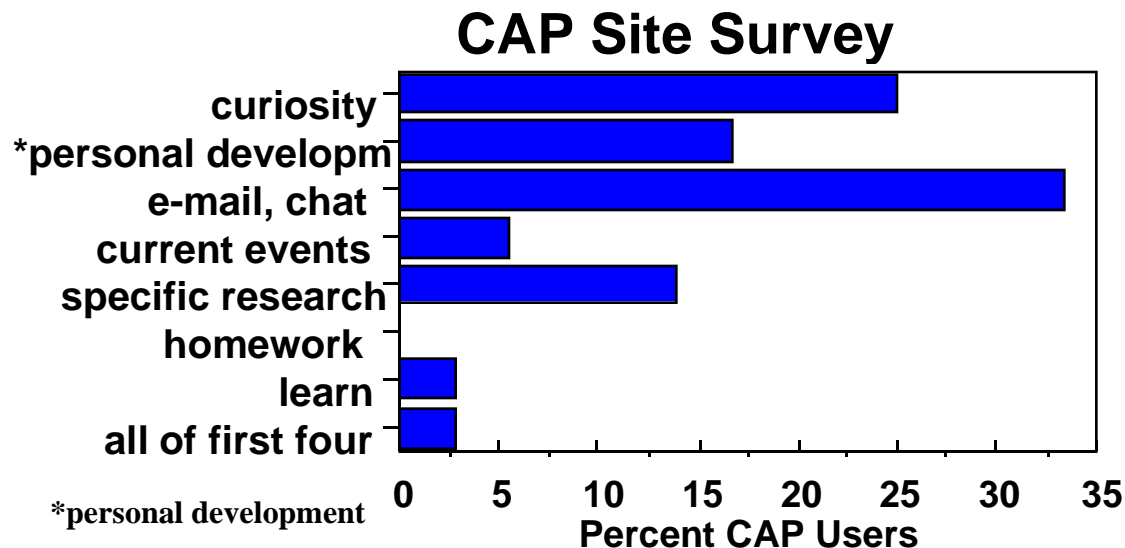
Figure 5 – Statistics Canada Canadian Use of the Internet – 1998
(Deveau & Winstanley, 2000, p. 15; Statistics Canada, 2002,
Research papers and articles)

**Canadian Use of the Internet - 1998
Statistics Canada**

http://www.statcan.ca/DailyEnglish/990423/d990423b.htm

e-mail
e-banking
purchasing
medical search
education
gov't info search
other info search
browsing
games
chats
other

0   10   20   30   40   50   60   70   80   90

Percent of Internet Household Users
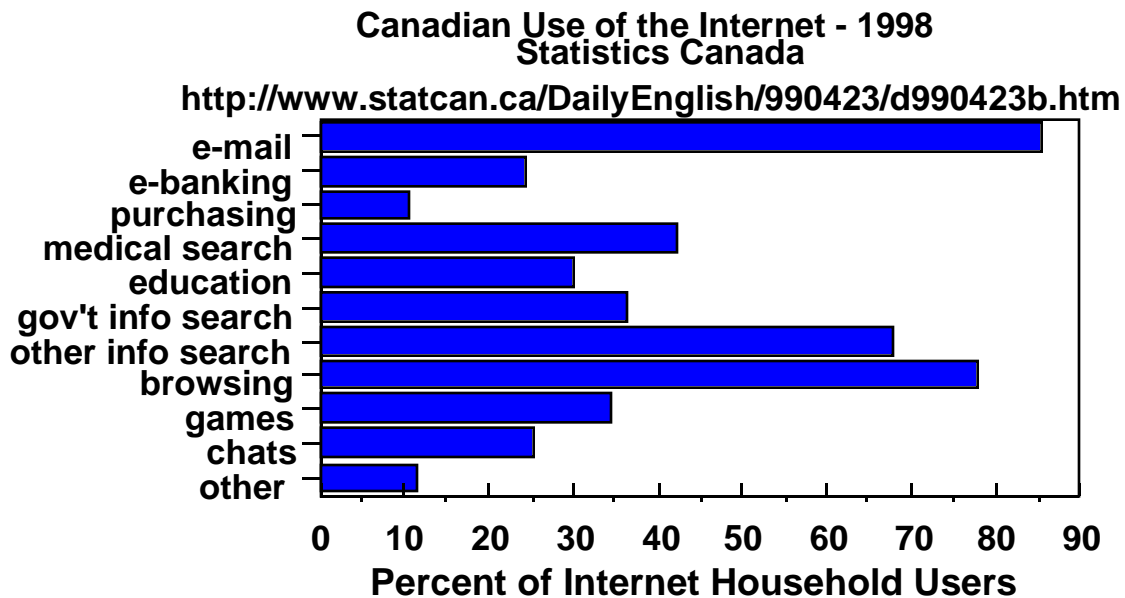
The qualitative interview data provided a more in-depth picture of how CAP sites were

integrated into both the community life and the lives of individual people (Deveau and

Winstanley, 2000). As will be outlined below, the data revealed how the lack of a broader

understanding of the social dimension to "access needs" in rural communities on the part of the federal government's 1995 CAP program policy significantly impacted CAP sites in rural Nova Scotia, creating specific difficulties and challenges.

Themes arising from Nova Scotia CAP site experiences

The Nova Scotia CAP site study (Deveau & Winstanley, 2000) identified three main themes that came out of the supervisor and user interviews: themes of "access" and "sustainability" along with a third strong theme, "community" (p. 1).

Clear indications in the data revealed that the character of each CAP site was partly determined by the institution in which it was situated. For example, CAP sites in libraries, schools, business centres and community centres or stand-alones (meaning a distinct location within a community that is not one of the others) had different priorities and different approaches to CAP. CAP sites in libraries, schools and business centres benefited from the structure of those institutions, but differed from each other in their priorities. For example, CAP sites in libraries and schools benefited from their respective institutional structures in terms of staffing support and resource availability, but differed in their emphases. This was not unexpected, as libraries are much more interested in the "public" aspect of public access than schools, which tended to do less community outreach as CAP sites in other institutions.

CAP sites that were located in libraries were supported by the library system in various ways, including staffing, housing and training. However, stand-alone sites did not have this kind of support. Paying the rent was a sustainability issue for the latter, as was finding volunteers to staff the CAP site in its day-to-day operation. With the definition of sustainability meaning economical viability, a question arose in Deveau and Winstanley (2000): is sustainability a

possibility given the diverse nature of CAP settings (p. 15)? One supervisor stated,

"[s]ustainability is a problem when the system relies on volunteers" (p. 16). This statement

implied that there was not as much community support as planned or intended with the CAP site.

The data also revealed that sustainability differed depending on the type of institution with which

CAP sites were associated.

As with sustainability, issues of access varied depending on the institution in which the

CAP site was situated. For example, improved access to computer technology was identified as a

major achievement of CAP, especially in schools where some students would not have had

access had it not been for CAP assistance. As one school CAP site supervisor stated

"[c]omputers at school were in individual classes and most not working. Now all are in one room

and up to date and working" (p. 16).

Rural communities were defined in CAP literature as those with populations under

50,000. Evidence from Deveau and Winstanley (2000) indicated that in rural Nova Scotian

communities CAP sites were firmly rooted in their community. This rooting was CAP's saving

grace, the place where technology could be utilized by the public and the place where change

could happen. However as explained below, depending on the available resources within a

community, just being rooted in the community could also be a CAP site's weakness.

Community impacts on CAP sites

CAP sites in marginalized communities exhibited the characteristics of such

communities, often lacking sufficient financial resources to provide either a full-time paid staff

person to support a CAP site or pay a technician to fix technical problems. In Deveau &

Winstanley (2000) the lack of ongoing funding and staffing were often the biggest problems

identified by the site supervisors. Reliance on volunteer work created undue stress on and contributed to burnout amongst volunteer workers and organizers. People who were on the front lines gave a very different picture than did government employees who assisted in coordinating various CAP efforts. When CAP site supervisors were asked if a fairy godmother could give them whatever they want for their CAP what would it be? Almost invariably the answer was "paid staff." This response reflected the frustration of trying to run a "sustainable" operation with little infrastructure support in the community. Yet if CAP sites had the ability to hire more paid staff, would this equate with more community involvement? With or without paid staff, it was clear that some community CAP sites underestimated the effort involved in sustaining long-term community involvement. Was this a fault of the federal government's CAP program? Not necessarily, but it was an inherent weakness that failed to consider such grassroots challenges, especially in those communities where resources were already limited. CAP sites were also challenged by the fact that moderately priced PC computers came into the market in the mid-1990s as well as other ISP services that attracted users to get their own access in the home. What in fact was the size of the populace that CAP was intended to serve? Had IC done any market analysis on this question? Nothing turned up in this enquiry to indicate the federal government had ever undertaken such an analysis.

Although one of the minimum operating standards outlined in the CAP proposal document was physical and electronic accessibility for persons with disabilities, most of the sites that Deveau & Winstanley (2000) visited were not wheelchair accessible. One exception was a CAP site in an Assistive Technology Centre located within a high school setting. That site provided an outline of levels of "access" and what it meant to people with disabilities:

- Financial access
- Physical access to public access sites

       • Physical access to the workstation
       • Access to inputting information into the computer
       • Ability to access information output
       • Ability to access and transfer information (Welsford, 1999).

These terms show a much more sophisticated and broader perspective on the requirements for access than the federal government's own CAP program.

One of the strengths of CAP that was identified was its supportive role in the community. For example, in some areas of Nova Scotia resources to support literacy efforts were limited (and still are). Situations like this helped define some of the CAP site activities such as a site (with no local library) which became a place for school children to do their homework in the evenings. This site provided computer literacy support and access to online resources. The site was truly becoming a part of its community by serving a local need. However, one size does not fit all. In terms of sustainability, it was evident that CAP sites in poorer communities would benefit greatly from more stable funding and access to training and on-going technical expertise.

Deveau and Winstanley (2000) concluded that users were satisfied overall with the CAP sites in their communities. Respondents used computer technology in much the same way as many much larger surveys reported computer usage (Figure 5). However, strong themes related to the everyday experience of life for Nova Scotians did emerge from the data, namely that there are very complex economic and social issues arising out of both the use and the implementation of CAP in rural communities. For example, users who had low literacy skills required literacy training before computers and online services could be used at a CAP site. Thus, although the CAP site supervisor would often seek individuals to assist in addressing literacy development needs, such a service was not funded through CAP. It is clear from such examples that the federal government's concept of CAP did not address these larger issues of "access," namely the required literacy levels for users and the availability (or lack thereof) of literacy development

resources within the community to support the user at a CAP site. CAP appeared to be built upon

structures of marginalization already in place without a clear analysis of the challenges that such

marginalization had in terms of acquiring necessary resource support. Deveau & Winstanley

(2000) determined that achieving sustainability is not seriously addressed if regional differences

in available community resources are not taken into account, nor if interests other than the

interests of the community define it. As Lesser and Hall pointed out in 1987,

> [t]he determination of outcome will depend not on the network but on the structural/institutional characteristics of the regional economies, on labour force characteristics and on demographic characteristics. All these factors put less developed regions at a disadvantage relative to more-developed regions in gaining a significant share of the development benefits made possible by telecommunications in an information economy (p.165).

What about the "new and exciting opportunities for jobs" that CAP access was intended

to create? Little evidence of these opportunities was presented when the Nova Scotia data was

collected in 1999. Jobs created at the community level were often part-time and very low paid

(or not paid), and advantage was taken of a depressed work force. One problem with the student

internships program was identified, namely that it offered jobs to young people while excluding

some older very involved volunteers from applying for these jobs. An unemployed, volunteer

supervisor in one community was quite angry that, despite the many hours of dedicated volunteer

work that she had put in at a CAP site, she was not eligible for an internship job that became

available at that site. The job was given to someone younger from outside the community

(Deveau & Winstanley, 2000, pp. 31-32).

There was some economic activity in terms of jobs for a new management

level within CAP itself. More than one respondent felt that the money spent on CAP site

coordinators would be better spent at the site or for technical help. Although some supervisors

felt that the coordinators were important to their sites, others said they did not feel that their

coordinator was helpful to them.

Although the study confirmed that CAP did increase online "accessibility" in rural

communities, it was also evident that the achievement of CAP's lofty goal of access for "all"

Canadians was hampered by issues of marginalization. These issues were not given the attention

needed for longer term development and enhancement. For example, when many CAP sites were

not wheelchair accessible, the disabled remained unable to use a resource that could have

enhanced their lives. In this way marginalization was unintentionally reinforced or emphasized

through the CAP program. Policies to address access for disenfranchised individuals and groups,

namely those who have low literacy levels, the disabled, the unemployed, etc., should have been

well thought out and researched by policy makers with an understanding of the mechanisms that

reinforce marginalization. In light of these findings, it is evident that the federal government's

CAP initiative, although containing a great deal of initial promise and idealism, created a number

of challenges. IC had not sufficiently considered the social impact requirements of providing

"access" services in rural communities.

By 1999, two years after the federal government had announced its "Connecting

Canadians" initiative, there was still a considerable gap in the provision of appropriate long term

funding to sustain various CAP sites. Information access, and more specifically "universal

access," in the context of CAP by 1999 still remained narrowly defined. It was chiefly aimed at

connectivity to the Internet with the rationale of facilitating the dissemination of government

information and eventually incorporating electronic commerce applications.

A study (Pfiester & Colle, 2000, October 31) based at Cornell University identified some

similar issues. In this study entitled: A Picture of the Community Access Program of Industry

<u>Canada: Based on case studies in Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward</u>

<u>Island, and Newfoundland</u> , (Appendix A, 2000, October 31, p. 122) the researchers stated that

the intent of their study

> was not to evaluate, but to capture a picture from the field of a dynamic national program whose goal is synonymous with other nations around the world – to connect people and organizations with information and communication resources that will contribute to their social and economic development (Pfiester & Colle, 2000, October 31, <u>C. Findings</u>).

> Further, the study demonstrated that,

> most CAP sites believe they are not maximizing their potential…There is great variety among sites in eastern Canada on issues such as training, sustainability, and community participation…Our review of CAP experiences in Canada's eastern provinces suggests a variety of themes that warrant the attention of policy-makers and organizations (2000, October 31, <u>Executive Summary</u>).

The study outlined ten major issues for IC to consider in "future strategies for Connecting

Canadians" (Appendix G). As with Deveau and Winstanley's study (2000) in Nova Scotia,

Pfiester & Colle (2000, October 31) identified similar concerns about sustainability of CAP sites,

the value of volunteers (Appendix G, # 4) and that community participation requires a strategic

approach (Appendix G, #10). However, Pfiester & Colle (2000, October 31) also recommended

that "CAP organizations need to develop their own long term sustainability and business plans

that fit the culture of the community" (Appendix G, #8). Although this would be an important

consideration for a CAP organization to undertake, I question why Pfiester and Colle (2000,

October 31) implied that just the community alone must develop its sustainability plans when the

funding program was a 50/50 funding arrangement with the federal government? The

government had some responsibility in this concern for sustainability. In the case of Nova Scotia,

the MOAs signed in 1999 provided other funding sources to address sustainability concerns.

That, however, represented only 30%- 40% of the funding equation. If, as one of its many

purposes, a CAP site provides public access to federal and provincial government information

services, then it is incumbent upon the respective governments to share the responsibility of the long term productivity and longevity of the CAP site with the supporting CAP organization. It is not just a matter of weaning CAP sites off "government funding," as suggested by Pfiester & Colle (2000, October 31, 1. Finanicial Sustainability).

Chapter Eight – Conclusions.

In this thesis, I have undertaken to document and demonstrate how the policymaking dynamics of the Information Highway policy debate influenced CAP organizations and specifically the rural experiences of CAP supervisors and users in Nova Scotia. I have concluded that the federal government's information policy to deliver "universal access services" to communities across Canada delivered high expectations, but offered operationally a great deal less than what might have achieved had the government considered the policy input provided by advocacy groups during the Information Highway debate. When the federal government announced that the CAP program would "provide rural communities with affordable public access to the Internet" and help "create new and exciting opportunities for growth and job" (Canada, Industry Canada, March 9, 1995, What is Community Access?), it did not consider the broader access resource support requirements of CAP sites, especially those residing in marginalized environments. Instead, while conveying the need for innovation and change, the approach to policy development that IC undertook reflected more of a traditional perspective, seeing the Internet as just another form of "transportation capacity." This perspective was evident in the government's use of terminology, which saw access sites as representing the "on ramp" to the Information Highway. The government's approach to helping Canadians access the Information Highway was to provide enough funding to allow communities to purchase a few computers, provide one year's worth of Internet connectivity, and, staff it with volunteers. In a time of budgetary constraint, it may be surprising that even this much was accomplished. The government's CAP funding arrangement also expected a further 50% contribution from a local organization. However, these organizations had no guidance as to how to promote, support, train or encourage the use of CAP by community members. Did IC assume a CAP site would just

emerge from the community's own available resources and skills? Was this the government's notion of job creation and preparing Canada to be more internationally competitive on the Information Highway? In light of the growth of the Internet since CAP began, the initial CAP implementation was comparable to putting someone who did not know how to drive on a busy eight-lane highway. Could this have been foreseen if the IC had not been blinkered by an industrial policy that locked the "attributes of the internet [into] a technical medium of transmission?" (Slevin, 2000, p. 229). The government's information policy development orientation saw individuals as users of communication systems akin to broadcasting or telecommunications, whereas the Internet was a dynamic, multi-directional, information and communications network – a network that required substantial information literacy and skill development support to make full use of its potential.

Between 1993 and 1999 the CAP access pilots and eventually the official initiative was framed in a government program that was supposed to promote local community autonomy for job creation and economic development through the application of new communications technologies. Yet, the limitations of the centralized funding arrangements and the lack of further information resource support and orientation created significant operational challenges for many CAP organizations, resulting in outcomes that were not in keeping with the program's original intent. For example, in the context of the operational challenges experienced within marginalized communities and population segments, Beamish (1999) states that

> technology can benefit low-income communities and can lead to better education, improved job prospects, and stronger communities, but there is an alarming lack of research or evidence that any of this is taking place. Some of the most glaring examples are the hundreds of public access centres that claim to train participants for the job market, but never assesses how many participants actually get jobs as a result of the project (p. 5).

This was the case with CAP in Nova Scotia, possibly in the rest of Canada as well. Although seven years have passed since the CAP program became an official government initiative, no assessment has been done on the rate of job creation and economic growth as a direct result of this program's impact and presence in rural communities.

I believe that had the federal government considered in more detail the policy concerns raised by advocacy groups, specifically in the call for a broader national access strategy to support complex resource support needs in communities (beyond just providing connectivity), the serious operational issues and sustainability challenges that many CAP sites identified might have been avoided. For example, had the federal government formed a National Access Board, as suggested by CPI in December of 1994 that would have focused on evaluating progress and developing strategies to achieve universal access and participation at local access sites, many of the issues identified in the aforementioned studies might have been avoided. Slevin (2000) has observed,

> We cannot properly acknowledge the opportunity for new modes of relationship if we focus primarily on the attributes of the technical medium while ignoring the structured social relations and contexts within which information and other symbolic content are produced and received…It is therefore not realistic to treat the [I]nternet simply as a medium of new opportunities for creating new forms of human association. It is instead a medium of practical social activity. This means that its use is inextricably linked to the kinds of knowledgeability, skills and resources which individuals and groups can bring to these new interactional situations, and to the intentions they have in using it (p. 113).

Is the Internet going to provide new opportunities for communities and individuals, or will the use of the Internet mean a further loss of autonomy? As Slevin's (2000) statement points out, the answer to this question still depends on the knowledge base and skills that exist amongst individuals, groups and communities and what they can bring to the Internet. In the "Connecting Canadians" initiative, the federal government was treating the Internet, in Slevin's terms, as a

"medium of new opportunities" (Selvin 2000, p. 113). Athough in its idealism it encouraged

partnerships with the knowledge, skills and resources of local communities to establish CAP site

environments, it did not provide adequate support infrastructure for communities where such

skills and resources were limited. The Nova Scotia study (Deveau & Winstanley, 2000)

identified that this was the case in a substantial number of beginning CAP sites in rural

communities.

As seen in Gurstein (2002) comments at the very beginning of this enquiry, there has

been no evaluation of the federal government's claim throughout the Information Highway

debate that public access sites actually helped participants train for, obtain and/or create jobs. By

1999, the CAP program had addressed only one fundamental component of a community access

environment, namely the physical provision of public access sites in rural and remote

communities. However, there may still be hope that CAP might reach its original vision.

During the course of the rural Nova Scotia study (Deveau & Winstanley, 2000), the Nova

Scotia government was in the process of creating a three year operational plan to manage CAP in

the province under terms established in an MOA the province signed with the federal department

of IC on February 16, 1999. TSS was assigned as the coordinating provincial body for the CAP

program in the province. When the MOA was signed, there were 108 CAP sites in Nova Scotia.

Plans were to establish an additional 100 rural sites and up to 30 urban sites (Nova Scotia

Technology and Science Secretariat [TSS], 1999, May). The province subsequently developed

criteria for new CAP site development based on "Need, Organization, Infrastructure,

Partnerships, Future Development and Sustainability" (TSS, 1999, May). A provincial CAP Site

Review Committee was established to review CAP applications and proposals in conjunction

with six Regional Working Groups (RWGs) representing different areas of the province. A

sustainability plan was developed to support CAP sites whereby the RWGs were required to

match funding up to $5,000 a year for two years. Thus, individual CAP sites could not access

sustainability funds directly, but rather had to request such support from within their assigned

regional working group. Although not perfect, this process is now beginning to address some of

the issues that were previously identified in the Nova Scotia study (Deveau & Winstanley, 2000).

As of the summer of 2002 there are 242 official CAP sites in Nova Scotia, representing

385 locations (some sites have more than one location). However, there is now a federal plan to

lower the number of CAP sites by 20%. "We are beginning to seriously look at what can be

sustained and the value of the effort that communities are putting into keeping sites opened,

compared to the value of the service provided" (Karen Parusel, personal communication, August

12, 2002). Thus, it remains to be seen whether CAP will reach its full potential in the coming

years, or be submerged into bigger institutional settings (e.g., libraries and business centres),

greatly depleting the program's potential in reaching out and extending opportunities, especially

to marginalized communities.

For all the weaknesses identified with how the CAP initiative was implemented, the

growing awareness of a "digital divide" (Reddick, 2000; Reddick, 1995, September) now makes

the presence of CAP sites even more valuable in both rural and urban environments. Reddick

(2000) has pointed out that "[t]he gap between organizations with resources and skills and those

without them (social infrastructure) is another dimension of the digital divide" (p. 6). In the

context of communities, Jeffery Roy (2001) has asked

> whether information technology and the electronic marketplace will improve social and
> economic circumstances of the whole community, or further widen the distance between
> the haves and have-nots. For communities to really make the technologies and
> applications work to aid the development of healthy and sustainable communities
> requires much more than bandwidth. A truly smart community will need to develop
> comprehensive plans to address, in more depth, the issues surrounding access and

education to ensure that all citizens have the opportunity to benefit from the knowledge-based "networked" economy (2001, <u>Education and Inclusion</u>).

In this regard, the government of Nova Scotia's Technology and Science Secretariat has now developed a conceptual framework model for a "Nova Scotia Information Infrastructure" in which to consider how communities in the province can begin to consider issues of access development and education in the evolving knowledge-based "networked" economy (Appendix H). It is clear from this model that the Information Highway is a holistic process incorporating various important elements that make up a vision of access. In many respects, the Nova Scotian model represents a broader understanding of a "universal access strategy" the components of which were recommended by advocacy groups during the time of the Information Highway debate.

As Appendix A demonstrates, I have examined a wide range of actvities, dynamics and issues that unfolded during the Canadian Information Highway debate in which the Internet had a significant impact at national and local community levels. I have shed light on how government in its idealism created an innovative program to deliver access services to Canadian citizens via SchoolNet and CAP and demonstrated how CAP, though providing a beginning level of access in communities, had yet to reach its full potential by the late 1990s due to a lack of awareness about broader access issues and community needs on the part of the federal government. This lack of awareness is now being addressed due to provincial MOA commitments of support and interest.

Melody (1996) has observed that "as with all new technology systems, information and communication technologies portend both significant potential benefits and serious potential problems" (p. 244). Such has been the consequences of the federal CAP initiative. Significant benefits have been experienced with CAP, but are they the benefits the government had

originally intended and that communities and individuals had sought? Problems have arisen to the extent that a national plan is now proposing a 20% reduction in current CAP sites. Could these problems have been avoided? I believe they might have been offset considerably had the original policy input by advocacy groups been taken more seriously by government.

Technological change will be ongoing in our 21st century world. And issues of "access" will continue to play a critical role in the participation of citizens in modern democratic societies. Technology will continue to frame systems and methods of access. But in the words of George Grant (1986) there is now, "a pressing need to understand our technological destiny from principles more comprehensive than its own" (p. 34). This insight by Grant is ultimately the lesson I have learned from the Canadian Information Highway debate and its impact on the experience of public access in rural communities.

Appendix A - Key events timeline of the Canadian Information Highway policy debate

The purpose of mapping out this sequence of events is to locate specific issues and patterns of interaction, as well as to identify groups and agendas that were visible in the Information Highway debate in Canada as it unfolded primarily throughout the 1990s.

1984 • First "Free-net" is proposed in Cleveland, Ohio, by Tom Grundner at Case Western Reserve University (Gutstein, 1999, p. 266).

• The Bell System in the United States is broken up. Computer and data communications are perceived to be different than telephony. "In its place was a new AT&T and seven regional Bell operating companies" (AT&T, 2002, <u>A brief history</u>).

• Mulroney Conservative government is elected.

1986 • Tom Grundner creates a method to tie together a public community information system to personal electronic-mail accounts. The service is wildly successful and draws tens of thousands of registered users. Grundner later goes on to create the National Public Telecomputing Network (NPTN) which helps develop and coordinate free nets across the U.S. (Gutstein, 1999, p. 266).

1987 • The Canada-U.S. Free Trade Agreement (FTA) comes into effect.

• Federal election takes place with the Mulroney Conservative government remaining in power.

• The Institute for Research on Public Policy in Halifax publishes <u>Telecommunications Services and Regional Development: The Case of Atlantic Canada.</u> (Lesser & Hall, 1987). Lesser and Hall's analysis concluded that the federal government needs to develop a national information policy framework in which to fit regional development policies.

1988 • CANARIE (Canadian Network for the Advancement of Research, Industry, and Education) initiative begins with an investigation by the federal Industry Science and Technology Canada (ISTC) department, focused on the application of new technologies for Canadian industry.

1989 • The Harvard Information Infrastructure Project begins (O'Neil, 2000, April 28).

1990 • **February**, Benoit Bouchard is appointed Minister of Industry, Science and Technology in the federal government and holds office to April, 1991.

1990 continued…

• **September**, sixty leaders from industry, education, research communities and both levels of government meet to discuss strategy, requirements and potential participation in the proposed national high-speed network. This workshop concluded that the network project should proceed as a cooperative project between the private and public sectors. The workshop also agreed that the proposed network should evolve from CA*net.

• Ontario Library Association's (OLA) Strategic Planning Group releases its document One Place to Look: The Ontario Public Library Strategic Plan (1990), expressing the need to develop an information policy and strategy for the province of Ontario. "The plan called for governments to develop information policies and strategies to support a public information grid" (Skrzeszewski, 1999, August 1). The Association followed-up this initiative with a proposal for an Information Policy for Ontario (see below, 1992).

• "Peter Deutsch, Alan Emtage and William Whellan of McGill University introduced 'Archie'…Archie allowed users to inquire about the existence of a filename in the public FTP areas of any computer on the Net" (Margolis & Resnick, 2000, p. 40).

• **December**, "the world wide web (WWW) [was] developed from an application first introduced by Tim Berners-Lee and Robert Cailliau. It was demonstrated at the headquarters of the European Laboratory for Particle Physics (CERN) in Switzerland in December 1990" (Slevin, 2000, p. 37).

1991 • The World Wide Web protocol was introduced in North America. By 1995 it had become the dominant Internet protocol around the world in facilitating access to online information (Zakon, 1999).

• New Broadcasting Act in Canada comes into effect, stating that: [t]he Canadian broadcasting system should be regulated and supervised in a flexible manner that...is readily adaptable to scientific and technological change; [and] does not inhibit the development of information technologies and their application or the delivery of resultant services to Canadians" (Electronic Frontier Canada, 2002).

• Archie was followed by Gopher in 1991. Gopher…provided system administrators with the ability to place the contents of information on menus...Gopher capabilities soon were enhanced when Fred Barrie and Steven Foster of the University of Nevada added 'Veronica,' a tool that enable users to search Gopher menus by topic. By 1993, Veronica could peruse more than 1 million entries on Gopher menus around the world (Margolis & Resnick, 2000, p. 40).

1991 continued…

• **April**, Michael Wilson is appointed Minister of Industry, Science and Technology in the federal Conservative government (Canada, Industry Canada, 2002).

• **April**, Network Organization Conference takes place, sponsored by Industry, Science, and Technology Canada. At the Conference, an executive committee and four working groups (Business, Governance, Marketing, and Network Architecture) were given the mandate to establish plans for the creation of a high-speed network. "The objective of the working groups was to detail the infrastructure needed to implement the network by January 1, 1993. The composition of CANARIE's working groups reflects its mandate to foster greater cooperation between the research and industrial sectors" (Silva & Cartwright, 1992, pp. 4 –14).

• Department of Communications (DOC) establishes a Local Networks Convergence Committee, involving major players in both the telecom-munications and cable sectors, to advise the government on new develop-ments, as well as issues of cost, choice and accessibility (Canada, Department of Communications, 1992).

• The Internet Society (ISOC) is formed in response to the needs of the growing commercial sector, including major providers of network access, telecommunications and computer products, research and information services, systems management, etc. (Margolis & Resnick, 2000, p. 43).

1992   • Steering Group on Economic Prosperity, established by the federal Conservative Government, releases a seventy-five page report titled Inventing Our Future. (1992). It was developed by a twenty member Steering Committee and contained sixty-four recommendations, which suggested the building of a strong learning society through joint initiatives and the development of an electronic highway (Canada, Steering Group on Prosperity, 1992).

• DOC releases a document entitled New Media New Choices. (Canada, Department of Communications, 1992).

• **June**, CRTC releases Telecom Decision 92-12: Competition in the provision of public long distance voice telephone services and related resale and sharing issues (1992). This permitted full-scale competition in public long distance telecommunications and allowed free entry for facilities based carriers along with interconnection of their networks with those of the then federally regulated telephone companies (CRTC, 1992, June 12).

1992 continued…

• A National Capital Free-net (NCF) is established in Ottawa as a non-commercial, co-operative, community project. Participants include volunteers, Carleton University, and private industry (Shade, 1999).

• **August**, OLA's earlier recommendations in 1990 are further outlined and developed by a committee (The Advisory Committee on a Tele-communications Strategy for the Province of Ontario), consisting of public and private sector representatives in the release of a document: Telecommunications: Enabling Ontario's Future (1992). Besides reiterating OLA's earlier concerns from 1990, the committee also recommended that the provincial government develop a consultative process to facilitate a broad information policy debate in Ontario.

• **September**, DOC releases a report entitled Convergence: Competition and Cooperation (1992) based upon the work of the Department's Local Networks Convergence Committee that had been formed in 1991.

• **December**, the North American Free Trade Agreement (NAFTA) is ratified and signed. Agreement is to take effect January 1, 1994.

• Singapore's National Computer Board releases its report: A Vision of An Intelligent Island: The IT 2000 Report (Applegate, Neo, King, & Knoop, 1992).

• **December**, DOC sponsors the National Summit on Information Policy in Ottawa (Dec. 6-8). Several national organizations such as the Canadian Library Association, the National Research Council's Canada Institute for Scientific and Technical Information, l'Association pour l'avancement des sciences et des techniques de la documentation (ASTED) and the Information Technology Association of Canada co-sponsor the event. Over 240 participants from across Canada convened in the capital to discuss equity of access to information and to attempt to answer issues relating to privacy, access, and copyright questions. DOC Minister Perrin Beatty also reiterated a set of privacy principles for telecommunications users at the Summit and announces the creation of a Telecommunications Privacy Protection Agency.

• **December**, CANARIE announces in its annual report and business plan: "a group of leading organizations from Canada's research and business communities have agreed to cooperatively establish a new initiative to respond to the challenge that Canada faces. That initiative is Project CANARIE…" (Canadian Network for the Advancement of Research, Industry and Education, 1992, December).

• **December**, the CRTC initiates a review of its regulatory framework: "CRTC Telecom Public Notice 92-73 is asking interested parties to make interventions stating whether the Commission's historical form of regulation was still appropriate; what alternative frameworks might be proposed; how the regulatory

1992 continued…

process might be streamlined…" (McDowell & Buchwald, August, 1992, <u>Liberalization and New Legislation</u>).

1993   • **February**, US President Clinton formally announces the National Information Infrastructure initiative (NII) and the Information Infrastructure Task Force (IITF) to advise on policy for the NII. They release their first document in 1994 introducing the American vision to the GII (see 1994 below).

• **February** 23rd, twenty-four hours after the American President, Bill Clinton, announced his government's National Information Initiative, Perrin Beatty, Conservative Minister for Communications, speaks in Vancouver at the INTERCOM '93 conference where he outlined the federal government's vision of an "electronic highway system" (EHS) for Canada (Ostry, 1994, <u>On February 23, 1993</u>).

• Marc Andreesen and Eric Bina develop a graphical user interface (GUI) to improve World Wide Web (WWW) access, allowing users to navigate the Web via hypertext by pointing and clicking on graphics, symbols, hot buttons, or the like. It is called Mosaic and it is later described in featured articles in <u>The New York Times,</u> the <u>Economist</u> and the <u>Guardian</u> . "The Internet had entered the mainstream of popular Western culture" (Margolis & Resnick, 2000, p. 41- 42).

• **May**, the Canadian Library Association (CLA) releases its <u>Summary Report of the National Summit on Information Policy</u> (1993).

• **June**, the Conservative party chooses its new leader, Kim Campbell.

• **June**, Jean Charest is appointed Minister of Industry Science and Technology Canada (ISTC). He serves till the federal election is called later in November.

• **August**, the National Capital Free-net in Ottawa hosts the first international conference on Community Networks at Carleton University. It is sponsored by Industry Canada, the Morino Institute and the Ontario, Culture, Tourism and Recreation, Libraries and Community Information Branch.

• The National Capital Free Net attempts to register itself as a charitable entity under the Income Tax Act. The Charities Division of Revenue Canada rules that there was "no judicial precedent to recognize networks, electronic or otherwise, and in particular computer networks, as charitable" (Shade, 1999).

• **October**, Stentor Alliance releases its vision statement <u>The Information Highway - Canada's Road to Economic and Social Renewal</u> (1993, October). The statement calls for the creation of a "network of many networks," owned and operated by different service providers, offering connections to a variety of services, applications, and content sources.

1993 continued…

The Stentor group of companies later announce the Beacon Initiative in early April 1994 (Ostiguy, 1995).

Stentor also defines content creators as: "independent film and television producers, production houses, as well as private and public broadcaster. By excluding community networks from content creation, their work as information providers was marginalized" (Gutstein, 1999, p. 271).

• **November**, the Liberal party wins the federal election on a platform promoting "infrastructure and training."

• **November**, John Manley is appointed Minister of ISTC. Plans are also put in motion to move the telecommunications policy branch at DOC and merge it with Consumer and Corporate Affairs and Industry, Science and Technology to form a new federal department called Industry Canada. The cultural and broadcasting activities of DOC are merged with other cultural agencies to form Heritage Canada. This will be completed by March 1995.

• **November**, Public Works and Government Services Canada presents a discussion paper: Access Canada Initiative (1993). It proposes "that ACCESS Canada be developed within the overall context of national information infrastructure evolution in Canada (Canada Public Works and Government Services, 1993, November 22).

• Canadian Coalition for Public Information (CPI) is formed in November 1993 out of a number of discussions undertaken within the Ontario Library Association in recognition of the transformational nature of the Internet. Over 300 organizations and individuals will join CPI.

• The "SchoolNet -Plugging Kids into the World" initiative is launched in late 1993 by the federal government. Industry Canada has allocated $1.6 million for 1994/98 to support this project aimed at electronically linking elementary and secondary schools across Canada. Its original goal of connecting 300 schools by 1994 was greatly exceeded with more than 4,000 schools accessing SchoolNet services during the 1993/94 school year. A further expansion to all 16,000 Canadian schools is planned (Educational Multimedia Task Force, 1996).

• Fall of 1993, Bernard Ostry is asked to write an analysis and recommend strategy for a national "electronic highway system" (EHS).

• New Telecommunications Act in Canada is put into effect (Electronic Frontier Canada, 2002; Canada, 1993).

• Ontario government establishes the Ontario Network Infrastructure Program.

1993 continued…

• **December** through to February '94, Industry Canada conducts independent focus group studies "with a wide range of network suppliers and network users, many of whom will become key players in the development of Canada's information highway. The study objectives, as set by Industry Canada, were to identify and assess policy issues relating to services in a convergence environment, and access and affordability to networks for users of computer and information networks" (Angus & McKie, 1994). The policy study was later released, called: Canada's Information Highway: Services, Access and Affordability (1994; see below 1994, May).

1994 • **January**, the new Liberal federal government presents its Throne Speech and announces its intention to develop a Canadian strategy for the information highway. Three broad strategies were identified as central to the development of the highway: universal access at a reasonable cost; an interconnected and inter-operable network of networks; and, competition in facilities, products and services.

• NAFTA takes effect January 1st.

• **January**, Jon Gerrard, Minister for the Secretary of State for Science, Research and Development, first announces at the Information Technology Association Conference (ITAC) in Toronto the federal government's intentions to develop a Canadian information infrastructure to establish a "network of networks." He outlines current budget allocations and announces plans that John Manley, Minister of Industry, was soon to announce the establishment of an Advisory Council to make recommendations on a national information highway strategy to government.

• "Between January 1994 and July 1995, the number of Web servers grew from 600 to 23,500. By July 1996, this number exceeded 200,000." (Margolis & Resnick, 2000, p. 42).

• **February**, Paul Martin, as Minister of Finance, presents his budget speech stating that the federal government will ensure that its services to Canadians are more affordable, accessible and responsive. Delivery will be easier and more efficient via an advanced information and communications infrastructure.

• **February**, Bernard Ostry submits his report and recommendations to the federal government entitled: The Electronic Connection: An Essential Key to Canadian's Survival (1994). The document is only released after a Freedom of Information request. Of the 200 individuals consulted, none were quoted nor do any seem to be proponents of public access.

1994 continued…

• **February**, a G7 mini-summit on the Global Information Society is held in Brussels. Ministers in attendance agreed that more competition and fewer restrictions would increase the potential of the information society (Buchwald, 1995, November).

• **March**, the first World Telecommunication Development Conference is held in Buenos Aires. U.S. Vice-President, Al Gore, officially announces the US vision for a Global Information Infrastructure (GII).

• **March**, the Secretary General of the International Telecommunication Union (ITU) suggests a set of regulatory principles which would "create the right environment to encourage investment and to achieve certain public interest goals, but at the same time…avoid pre-judging those decisions which should rightly be taken by the marketplace" (Gilbert, Hepburn & Henter, 1995, p. 74 -75). These principles were listed as: the principle of internationalism; of universalism; of regulatory symmetry; of regulatory independence; of open access.

• **March**, the Information Highway Advisory Council (IHAC) is formed. Dr. David Johnson, a former law professor specialising in securities regulation, corporation law, IT and Intellectual Property (IP) law, is selected as chair. He had formerly sat on the federal government's Steering Group on Economic Prosperity. IHAC establishes five working groups to cover areas of interest: access and social impact; Canadian content and culture; competitiveness and job creation; learning and training; and research and development, applications and market development (Clement, Moll & Shade, 1998).

The composition of IHAC is also criticized by public interest advocates for being dominated by representatives of the primary stakeholders in the broadcasting, cable, and telecom industries; and for dismissing social issues, including equity, democratic participation, social justice, and particularly employment (Clement, Moll & Shade, 1998).

• **March**, the federal Treasury Board issues a report entitled: <u>Blueprint for Renewing Government Services Using Information Technology</u> (Canada, Treasury Board, 1994, March). The paper is built around a corporate/consumer model, putting forth a multi-tiered system of information dissemination.

• **March**, the Nova Scotia Department of Transportation and Communication releases an independent policy study on the Information Highway entitled: <u>The Nova Scotia Electronic Highway Study: An Action Plan to Seize Opportunities in the Electronic Marketplace</u> (NGL Nordicity Group Ltd., 1994, March).

• **March**, CPI purchases a membership in CANARIE to have a voice in national network development. CPI also lobbies to have Liz Hoffman represent CPI.

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as a member of IHAC. She is appointed to IHAC's Education and Training Working Group. Hoffman also is asked to sit on the National Community Access Advisory Board (L. Hoffman, personal communication, March 4, 2002).

•**March**, Marc Andreesen joins James Clark (principal of Silicon Graphics Inc.), to found Netscape Communications Corporation. "The corporation redesigned, rebuilt, and extended the functionality of the original Mosaic" (Margolis & Resnick, 2000, p. 42).

• **April**, the Beacon Initiative is announced by the Stentor Group. Valued at an estimated $8 to $10 billion dollars, the initiative is considered the most ambitious private investment program in telecommunications infrastructure anywhere in the world.

• **April**, Minister, John Manley, releases the document: <u>The Canadian Information Highway: Building Canada's Information and Communications Infrastructure</u> (Canada, Industry Canada, 1994, April).

•**April,** 125 governments signed the Marrakesh Agreement. This concluded the seven-year Uruguay Round of Multilateral Trade Negotiations. It also closed down the General Agreement on Tariffs and Trade (GATT). The organization was replaced at the start of 1995 by the World Trade Organization (WTO). The GATT's principles and most of its trade agreements were adopted by the WTO (SchoolNet, n.d.).

• **May**, a policy study is released by Industry Canada entitled: <u>Canada's Information Highway: Services, Access and Affordability</u> (1994). The report recommendations were based on interviews and contributions from 30 opinion leaders with organizations perceived to have a stake in the information highway. These were supplemented also by focus groups held across the country involving another 150 persons.

• **June**, Japan's Telecommunication Council releases its report entitled: <u>Reforms Towards the Intellectually Creative Society of the 21st century: Programme for the Establishment of High-Performance Info-Communications Infrastructure Report</u> (Siochrú, 1997).

• Australia's Broadband Services Working Group (BSEG) releases its report entitled <u>Networking Australia's Future: Final Report of the Broadband Services Expert Group</u> (Australia's Broadband Services Working Group, 1994).

• **June**, the Bangemann Report (which was released earlier in May) is now approved by the European Council. It is entitled: <u>Europe and The Global Information Society:</u>

1994 continued…

Recommendations of the High-Level Group on the Information Highway to the Corfu European Council (European Council, 1994).

• Andersen Consulting conducts a survey by Gallup Canada in early 1994 and found that 54 percent of Canadians were aware of the Information Highway and that 68 percent thought it was a good idea. Over 75 percent also thought that it should be paid for by those that use it. The highest level of interest (59%) was for educational services. Entertainment and shopping were ranked third and fifth respectively (Smith & Barnard, 1994).

• Statistics Canada conducted a study on information technology in Canadian Households indicating 25% of households (2.6 million) have a home computer, a 10% increase from 1986. However, only one in three (34%) were equipped with a modem. Households in the highest income group were five times more likely to have a home computer (46%) than those in the lowest income group (9%) (Clement & Shade, 1996, Income and class-based access).

• **June**, 3,200 schools in Canada are documented as "now online" (IHAC, 1994, p. 4).

• **June** 15th, Chebucto Community Net in Nova Scotia goes online. Founding members included representatives from Industry Canada, Nova Scotia departments of Education, Transportation and Communications, Supply and Services, the Halifax Public Library, and the United Way, as well as local businesses (Avis, 1995, Chapter Four – The case studies. The chebucto community net, halifax, ns.).

• **June**, CLA releases its statement of Information and Telecommunication Access Principles (Canadian Library Association, 1994, June 18).

• **August**, Telecommunities Canada is formed, representing 40 community network associations and Free-nets in Canada, at the second Community Networking Conference in Ottawa (Graham, 1995, May 6).

• **September**, CRTC Decision 94-19 is issued. Overall, the decision is aimed at reducing the role and form of federal regulation for telecommunications in Canada (CRTC, 1994).

• **October**, a further policy rationale is developed for SchoolNet within Industry Canada entitled: Educational Opportunities on the Information Highway (Fournier & Mackinnon, 1994).

• **October**, the federal government requests the CRTC to gather information and seek input respecting the development of content and competition policies for new

1994 continued…

communications technologies and services that will comprise the 'information highway.' (CRTC, 1995, May 19, p. 1).

• **November**, IHAC releases its progress report entitled: <u>Canada's Information Highway: Building Canada's Information and Communications Infrastructure Providing New Dimensions for Learning, Creativity and Entrepreneurship</u> (IHAC, 1994).

• **November**, the Ontario Ministry of Culture, Tourism and Recreation awards a grant to the CPI in the amount of $49,630.00. The grant assists with costs of a project manager and administrative assistant, public awareness programs and producing a public policy document, implementation of public discussion fora, membership development and fund-raising activities.

• **November**, Umbrella Group for Free Nets in Nova Scotia hold its first conference at the Agricultural College in Truro on Friday and Saturday, November 25 and 26. Participants from all around Nova Scotia were present, including representatives from different government agencies, community development agencies, regional public libraries, community colleges and universities, and telecommunications services. There was general agreement to form a steering committee called the Nova Scotia Federation of Community Networks (Nova Scotia Provincial Library, 1994, December, <u>Umbrella group for freenets conference</u>).

• **December**, CPI presents its document <u>Towards a Public Policy on Universal Access and Participation for the Information Infrastructure</u> to the Access and Social Impact Working Group of IHAC (CPI, December 15, 1994).

• **December**, Netcape Navigator 1.0 is released and soon becomes the dominant Web browser. (Margolis & Resnick, 2000, p. 42).

• The Commission of the European Communities releases its report: <u>Europe's Way to the Information Society: An Action Plan</u> (European Commission Information Society Website, 2002, <u>Action Plan for the Information Society</u>).

• "During 1994, several important search engines were launched, all of which eventually become commercial. Among these were WebCrawler… Lycos…and, most popular of all, Yahoo (Margolis & Resnick, 2000, p. 42).

1995 • **January**, IHAC releases discussion paper entitled: <u>Access, Affordability and Universal Service on the Canadian Information Highway</u> (IHAC, 1995).

• CRTC begins to hold public meetings February and March. Over a 1085 written submissions were received and 78 parties participated in public hearings.

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•The World Trade Organization (WTO) is formed to replace GATT (SchoolNet, n.d.).

• **January**, the McLuhan Program in Culture and Technology submits <u>McLuhan Program Response to CRTC PN 1994-130</u>, in response to a call for comments on the/ information highway by the CRTC (de Kerckhove & Jeffery, 1995).

• The World Wide Web becomes the dominant Internet protocol around the world for facilitating access to online information (Zakon, 1999).

• **February**, the Global Information Infrastructure commission was launched in Brussels. It was formed to promote private-sector leadership on information infrastructure issues (Global Information Infrastructure Commission, 2002, <u>The GIIC: What it is</u>).

• **February**, the Internet Public Interest Research Group (IPIRG) present its submission to the CRTC: <u>New Voices, New Visions: Community Media and the Information Highway</u> (1995), in response to Public Notice CRTC 1994 - 130: Call for Comments Concerning Order In Council P.C. 1994 – 1689 (Stevenson & Searle, 1995).

• **February**, the Public Information Highway Advisory Council (P-IHAC) presents a Second Round Intervention - <u>Response to Notice of Public Hearing CRTC 1994-18/public notice CRTC 1994-130</u> (1995), stating "It adds maddening irony to this process that the shareholders of the corporations are funded, in their representations to the Commission, by rate-payers while the public is not funded making it difficult for institutions which should speak on its behalf" (Yerxa & Moll, February 19, 1995). P-IHAC raised issues concerning what is being defined by the "public interest" in the hearings process. P-IHAC also published <u>Commodification, Communication, and Culture: Democracy's Dead End on the Infobahn</u> (Yerxa & Moll, 1995).

• **February**, CRTC receives a total of 1085 written comments from their October call for public input "respecting the development of content and competition policies for new communications technologies and services that will comprise the Information Highway" (CRTC, 1995, May 19, p. 1).

• **February**, ministerial meetings are held in Brussels for G7 Summit preparations on Information Society; they also discuss issues considering strategies aimed at developing their own economies through high-speed networks and services. Industry Canada releases <u>The Information Economy in Canada: Fact Sheets</u> (Canada, Industry Canada, 1995).

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• **March-April**, the telecommunications policy sections of DOC are now officially merged with Consumer and Corporate Affairs and ISTC to form a new federal department called Industry Canada (IC). The cultural and broadcasting activities of DOC are merged with other cultural agencies to form Heritage Canada (McDowell & Buchwald, 1997, <u>Institutions, open consultation and technical convergence</u>).

• **March**, Industry Canada outlines the application and funding process for SchoolNet and CAP. The goal is to establish 1500 CAP sites by 1998 (Canada, Industry Canada, 1995, March 9). The next four-year phase (1995-1999) of SchoolNet funding includes $22 million for the SchoolNet Community Access Program to "provide up to 1,000 rural communities with access to the information highway" (Graham, 1995, January 26).

• **March**, CPI is commissioned by Industry Canada to conduct a study and produce a report on the state of readiness of public libraries across Canada to serve as public access points to the information highway.

• **March**, at the CRTC oral public hearings on "convergence," CPI was among the first of 84 groups and individuals chosen to appear from amongst more than 950 submissions (Alliance for a Connected Canada, 1996, <u>Coalition for Public Information update</u>).

• **April**, a project coordinated by the University of Toronto Faculty of Information Studies called Developing Information Policies for a Canadian Information Infrastructure: Public Interest Perspectives (DIPCII) receives funding for the period of April 1,1995 to March 31, 1998, from the Social Sciences and Research Council for their Strategic Grants theme Science and Technology Policy in Canada (Information Policy Research Program, 1997, June).

• **April**, Chebucto Community Network is "serving 6,000 accounts -a number growing at 200 per week, with 36 phone lines, the Free-net is adding 24 additional lines, giving it a total of 60 lines.... In the month of March, local and worldwide accesses to this community network exceeded 1 million in one month.... During the past 9 months, more than 100 organizations and 500 individuals have been trained to use the system and another 1,000 have attended demonstrations. Volunteers who respond to requests for help have been there 2,600 times. Other volunteers have written about 600 screens of documentation." (Shade, 1999, <u>Canadian community networks</u>).

• **April**, as part of Information Rights Week (April 3 - 10), CPI releases its document <u>Future-Knowledge: The Report. A Public Policy Framework for the Information Highway</u>, (CPI, 1995, April 3) presenting a national vision and recommending a national information access plan and a national access board to oversee its implementation.

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The document was the result of public consultations CPI held across Canada from September 1994 to March 1995. It was submitted to the CRTC.

• **May**, "the McLuhan Program, the Coalition for Public Information and the Faculty of Information Studies at the University of Toronto organized a one day Public Interests on the Information Highway Workshop. During the summer, a group of librarians, academics, Internet access providers, cultural workers and others who had attended the workshop came together to form the Information Highway Working Group (IHWG). The group started out by gathering information from the various studies conducted for the IHAC and other material" (Alliance for a Connected Canada, Newsletter, Volume 1(1), March 15, 1996).

• **May** 19, CRTC submits its report to IHAC and the federal government, entitled Competition and Culture on Canada's Information Highway: Managing the Realities of Transition (CRTC, 1995).

• **May** 6, 1995, 26 community networks are in full operation in Canada and an additional 67 were in various stages of organizing. The 9 operating community networks that provided membership statistics show a total membership base of 116,500. "It seems reasonable to assume a Canada wide membership of approximately 170,000 for all 26 operating community nets" (Graham, 1995, May 6, Members).

• **June**, the Information Policy Research Program (IPRP) is established at the Faculty of Information Studies at the University of Toronto.

• **June** 15-17, Canada hosts G7 Summit in Halifax. The Information Society is a main theme of the Summit.

• **August**, Telecommunities Canada holds its second annual conference in Victoria, B.C. and formally incorporates. Over 100 communities (in excess of 250,000 members) are involved. By this time, there were an estimated 200 community associations involved in planning public access networks in Canada (Graham & Shade, 1996, 3.1 Mapping community network experience).

• **August**, CPI responds to an invitation from Doug Hull of Industry Canada to present a proposal for a pilot project for remote and rural access to the information highway. Hull asked CPI if it would assist Industry Canada with its Community Access Program (CAP). CPI took on the project, met Industry Canada's objective of generating applications for the CAP program, accomplished significant levels of community-building in small communities, and promoted CPI and its activities across Canada (Alliance for a Connected Canada, 1996).

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• **September**, the Public Interest Advocacy Centre (PIAC) release their study Sharing the road: Convergence and The Canadian Information Highway The report was designed to provide a "consumer perspective" on convergence and the Information Highway (Reddick, September, 1995). PIAC also released The Information Superhighway: Will some Canadians be left on the side of the road? (Reddick, 1995, September). This document examined the kinds of service and capabilities that might be available under different scenarios for the development of the Information Highway.

• **September** 27, IHAC releases its recommendations to the federal government, entitled Connection, Community, Content: The Challenge of the Information Highway (IHAC, 1995).

• **September**, Canadian Labour Congress (CLC) and IHAC advisory board member Jean-Claude Parrot publicly expresses his dissatisfaction with the IHAC report saying it would mean fewer jobs, more profits, claiming that the Information Highway will serve mainly big business (IHAC, 1995, p. 215-227).

• **September**, the "SchoolNet Support Teachers Pilot Project" begins. It was a collaborative experiment in supporting teachers wishing to enrich their students' learning through the use of new telecommunications tools and resources (Egnatoff, 1996). It was a four-month pilot to provide training and professional development for interested teachers. The sponsors included SchoolNet and six school boards. The project was extended for the entire 1995-96 school year.

• **October** 27th, the IHWG made a "submission to Ministers Manley, Dupuy and Gerrard. The submission was intended to alert the ministers to what the group saw as serious weaknesses in the IHAC Report and to advise them that the group would be seeking ways to strengthen the Report's recommendations for the wider public benefit" (Alliance for a Connected Canada, 1996).

• **October**, "Perspectives on Convergence," a five-day workshop/lecture series was presented by the Convergence Research Network at the University of Calgary (University of Calgary, October, 1995).

• **November**, the Information Policy Research Program released Working Paper 2: Canada in Context: An Overview of Information Policies in Four Industrialized Countries (Buchwald, 1995).

• **November**, the Alliance for a Connected Canada is officially announced. Members include – the Public Interest Advocacy Centre (PIAC), CPI, Telecommunities Canada (TC), Information Highway Working Group (IHWG), Public Information Highway Advisory Council (P-IHAC), the Assembly of First Nations, Canadian Postal Workers

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Union, Communications, Energy and Paperworkers Union of Canada, Council of Canadians, Fédération nationale des associations de consommateurs du Quebec, Information Policy Research Program and the McLuhan Program in Culture and Technology at the University of Toronto, National Library of Canada, and the Telecommunications Workers Union of British Columbia (Alliance for a Connected Canada, 1995, November 8).

• **December**, Industry Canada approves 271 grants for the Community Access Project.

• **December**, CPI receives $197,000 in sustaining funds from the Trillium Foundation. It was awarded contracts from Industry Canada to study the potential of libraries as public access points, and to assist rural communities with applications to the Community Access Program (McDowell & Buchwald, 1997, August, Internal coalition dynamics).

• **December**, the Information Policy Research released Working Paper 1: Developing Information Policies for a Canadian Information Infrastructure: Public Interest Perspectives in a Research Framework (Clement, Marshall, McDowell, Mosco & Buchwald, 1995, December).

• **December**, Public Works and Government Services Canada (PWGSC) establishes a bilingual Canada website on the Internet (http://canada.gc.ca) to provide a single window for Internet users seeking access to government information and services, as well as direct links to other federal and provincial government Internet sites (Canada, Industry Canada, 1996, p. 28).

1996 • A new United States Telecommunications Act takes effect. Mandates open access at the local loop for competitors of the incumbent local exchange carriers.

• The Vancouver Regional Free Net Association is successful in appealing the Charities Division of Revenue Canada to the National Capital Free Net in 1994, by a decision to the Federal Court of Appeal (Shade, 1999, Canadian community networks).

• **February**, CPI hosts a Digital Knowledge Conference in Toronto.

• **March**, the Alliance for Connected Canada releases its first newsletter (Alliance for a Connected Canada, 1996).

• **March**, IPRP hosts Universal Access Workshop #1 at the University of Toronto, March 13-16, 1996, entitled "Defining and Maintaining Universal Access to Basic Network Services: Canadian Experiences in an International Context." Funding support comes

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Industry Canada, Long Range Planning and Analysis Branch (Information Policy Research Program, 1996, March).

• **April**, the Director General of the Science Promotion and Academic Affairs, Industry Canada, hosts a select group of participants representing libraries in Canada and asks them to assist him in developing a collective vision and an action agenda for libraries within the SchoolNet framework. The LibraryNet vision was discussed and a "new funding strategy" for ongoing funding for the library system across Canada was explored. By the end of April, an Advisory Committee is established to advise Industry Canada on the implementation of LibraryNet. The plan is to come under funding allocation for SchoolNet and CAP (LibraryNet, 1996, April 19).

• **April**, during "Information Rights Week" the Alliance for Connected Canada called for a second round of IHAC to put "people before profits," to "end the practice of creating public policy behind closed doors," and to deal more directly with "public interest issues (rather than just) accommodate the interests of corporate layers who were the majority at the table" (McDowell & Cowan Buchwald, 1997, p. 716).

• **Spring**, the Nova Scotia Community Access Committee (NSCAC) approves a proposal by the Centre for Community and Enterprise Networking (C\CEN) based at the University College of Cape Breton (UCCB) to coordinate the summer staffing of 21 Community Access Program (CAP) sites. The project takes the name "Wire Nova Scotia" (WiNS). Operating in five regions of the province, WiNS coordinates 65 high-school, college and university students and five regional coordinators (Gurstein, 2000, p. 57).

• **May**, a document is released entitled Introducing Librarynet: A Concept Paper, developed on contract by ASM Consultants for Industry Canada, outlining the idea, implementation and funding strategies for LibraryNet (Skrzeszewski & Cubberley, 1996).

• **May**, the 2nd National Consultation on Education is held in Edmonton, May 9-12, 1996. Education Initiatives in Canada, 1996: A Report from the Provinces and Territories is released soon after (Council of Ministers of Education Canada, 1996).

• **May**, the federal government announces the formation of a second IHAC round with new terms of reference (McDowell & Cowan Buchwald, 1997, p. 716).

• **May**, the federal government released its official response to IHAC's final report of September 1995, entitled: Building the Information Society: Moving Canada into the

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21st century, to "finalize" the Government's policy on convergence (IHAC, 1996).

• **August**, Telecommunities Canada holds its third annual conference in Edmonton, Alberta.

• **August**, the federal government releases its Convergence Policy Statement (Canada, 1996, August 6), which it feels "brings to a close a process of public consultation on specific policies related to broadcasting and telecommunications put forward in October 1994…" (Introduction).

• **September**, "access" is a key topic discussed at a meeting of federal and provincial representatives. They develop specific proposals for ministers' consideration at their next meeting later in 1997. The federal government established an inter-departmental working group on access, involving officials from Industry Canada, Canadian Heritage, Human Resources Development Canada (HRDC), Health Canada, Agriculture and Agri-food Canada, Status of Women Canada, the National Library and Finance (Canada, Industry Canada, 1997, September 30).

• **September**, the CRTC allows preferential tariffs on telecommunications services for non-profit educational and health service entities.

• **November** 21st -23rd, a Community Access '96 conference is hosted by the University College of Cape Breton's Centre for Community and Enterprise Networking (Gurstein, 1996, October 2).

1997   •**January**, the Information Management Forum, co-chaired by Treasury Board Secretariat and the National Archives of Canada, was established to bring together those Directors (or their equivalents) from departments and agencies in the Government of Canada who share a common interest regarding the effective management of information (Information Management Forum, 2000, December 7).

• **February**, the federal budget announces an additional $30 million to the CAP program to expand from 1,500 sites to 5,000 rural and remote Canadian communities with populations between 400 and 50,000 by the 2000-01 fiscal year. Under the Federal Youth Employment Strategy, CAP sites will also develop employment opportunities for up to 1,000 Canadians aged 15–30 years.

• By early 1997, there are 56 CAP sites in Nova Scotia.

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• **February**, the Information Policy Research Program hosts its 2nd workshop entitled "Developing A Canadian Access Strategy: Universal Access to Essential Services," at the Faculty of Information Studies, University of Toronto (Information Policy Research Program, 1997, March).

• **February**, negotiations under the General Agreement on Trade and Tariff Services (GATT) aimed at securing a multilateral framework for trade in basic telecommunications services are concluded. The agreement commits Canada to a liberalization of its international telecommunications and satellite services. "In developing the Canadian position for the negotiations, the federal government consulted extensively with Canadian companies. Under the new agreement, 69 countries will move to open their markets for telecommunications services to greater competition from outside" (Canada, Industry Canada, 1997, Table C-2 Phase I Recommendations and Government Actions: Overseas telecom policy: Action taken).

• IHAC makes awards to undergraduate essay contestants who participated in a writing competition to raise awareness of the information highway. Candidates were asked to write a paper of 15 to 30 pages, addressing Issue 12: "How can the information highway best be used to improve the growth and competitiveness of all Canadian business, especially small and medium sized enterprises, throughout Canada?" (Canada, Industry Canada, 1997, February 27).

• The Electronic Public Space Steering Group (EPSSG) is formed comprising representatives from the education, library and public-interest communities, and growing out of the Alliance for a Connected Canada, to work on a national access model (Clement, Moll & Shade, 1998).

• **April**, IPRP supports "Electronic Space Project" with the document Community/Communications: A Model for Electronic Public Space (Information Policy Research Program, 1997, April).

• **April**, The Internet in Canada. A Background Paper, is prepared by Catherine Peters for the Internet Steering Committee of the Information Highway Advisory Council (Peters, 1997, April).

• **April**, Treasury Board develops a policy on the use of official languages on electronic networks, including the Internet.

• **April**, C\CEN at UCCB is asked to manage and administer WiNS '97.

• **April**, Nova Scotia claims to be the first province in Canada to have all its public libraries plugged into the information highway, as expressed by the then Education Minister, Robbie Harrison, when he marked Information Rights Week, April 21-27,

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1997 (Nova Scotia Department of Education and Culture, 1997, April 24).

• **May**, CRTC announces a series of decisions that will result in the entire Canadian telecommunications market being open to competition. CRTC's rationale is that "[c]ollectively, these decisions mean that Canada will have one of the most competitive telecommunications markets in the world" (CRTC, 1997, May 1).

• **June** 2nd, federal election is held and the Liberal government returns once again to power.

• **June**, the Manitoba Information Highway Advisory Council presents its Report of the Manitoba Information Highway Advisory Council (Manitoba Information Highway Advisory Council, 1997).

• **June**, the Bill and Melinda Gates Library Foundation is established. Funds are provided from $200million of Bill Gates' personal fortune and $200 million of software provided by Microsoft (Bill & Melinda Gates Foundation, 2001).

• **August**, IPRP Working Paper 4 is released: Consultation on Communications Policies: Public Interest Groups and the IHAC (McDowell & Buchwald, 1997).

• **August**, Telecommunities Canada holds its fourth annual conference in Halifax, Nova Scotia (Telecommunities Canada, 1997, August 15-18).

• **August**, British Columbia's Information, Science and Technology Agency releases its Electronic Highway Accord Document (British Columbia's Information, Science and Technology Agency, 1997).

• **August**, the Advisory Council on Health Infostructure is established to contribute to the development of a national strategy for an integrated Canadian
health infostructure by providing recommendations and strategic advice to the Federal Minister of Health (Canada, Health Canada, 1998, October 8).

• **September**, IHAC presents its final report Preparing Canada for A Digital World (1997). It recommends, among many things, a national access strategy to ensure affordable access for all Canadians to essential communications services be developed by the end of 1997 (IHAC, 1997).

• **September** 23rd, the federal government Throne Speech declares its intention to "make the information and knowledge infrastructure accessible to all Canadians by the year 2000," thereby making Canada the most connected nation in the world. The government announces an additional $260 million over three years to SchoolNet, the Community

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Access Program, and CANARIE (Canada, 1998, June 3).

• **October**, CPI organizes a major national conference on community health information entitled Digital Knowledge II Conference: Building Electronic Space for Community Health Information. The conference was held at the Metro Toronto Convention Centre on October 20th – 21st.

• **November**, the third Universal Access Workshop was held at the Faculty of Information Studies at the University of Toronto. It was assisted financially by Canadian Heritage, Human Resources Development Canada and Industry Canada. The workshop included representatives of industry, academia, and public interest groups, as well as government observers. The workshop aimed to contribute to the formulation of the "national access strategy" and making recommendations to the federal government by outlining an alternative strategy that may differ from the official one. In doing this, it drew principally upon the recommendations of Chapter 4 of the IHAC Phase II report Preparing Canada for A Digital World (1997), as well as the previous universal access workshops (Clement, Moll & Shade, 1998).

• **November**, Industry Canada puts up the web site that provides IHAC's final report and recommendations.

1998   • **March** 12th, Canada by Design event is held where John Manley speaks on: A National Vision: Designing a Canadian Knowledge Nation (Canada by Design Visionary Speaker Series Week 8, 1998).

• **March** 26th, Canada by Design event is held where Sheila Copps, Minister of the Department of Heritage speaks on the topic: Designing a Strategy for a Canadian Knowledge Nation (Canada by Design Visionary Speaker Series Week 10, 1998).

• **May** 1998 there are close to 60 community networks operating in Canada from coast to coast (Shade, 1999, Canadian community networks).

• **June** 3rd, John Manley, Minister of Industry, speaks at the Canadian Advanced Technology Alliance (CATA) Conference. He refers to the budget of the previous autumn and remarks "The Speech from the Throne stated our objective: we want Canada to be the most connected nation in the world by making information and knowledge infrastructure accessible to all Canadians by the year 2000… Connectedness is about our vision of the Canadian society we want in the 21st century: one with a strong, dynamic, competitive economy; one with a strong lifelong learning culture, but also one that uses connectedness to promote social cohesion, cultural expression and to build new linkages

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between citizens and government (Manley, 1998, June 3).

• **June** 20th, John Manley speaks at the CLA conference in Victoria, B.C. where he essentially states a similar line as he did at CATA: "Connecting Canadians is a vision and a strategy to lead Canada into the new millennium. It builds upon our successes and aims at providing all Canadians, from St. John's to Victoria to Rankin Inlet, with access to the powerful learning tools of the information economy" (Manley, 1998, June 20).

• **August**, the IPRP presents in writing its Key Elements of A National Access Strategy: A Public Interest Proposal (1998) to Industry Canada (Minister Manley) and Heritage Canada (Minister Copps). The document was the culmination of three workshops it had held (Clement, 1998).

• **September**, a survey commissioned by Industry Canada and CLA and conducted by Ekos Research Associates is released, entitled: Canadians, Public Libraries and The Information Highway: Final Report (LibraryNet, 1998, September 12).

• **October**, the Advisory Council on Health Infostructure invited participants in the health field to participate in a workshop whose purpose was to support the work of the Council. The workshop was organized by the Office of Health and the Information Highway of Health Canada and was held in Toronto on October 8, 1998 (Canada, Health Canada, 1998).

•**October**, the Don Snowden Program Conference: Partnerships and Participation in Telecommunications for Rural Development: Exploring What Works and Why, was held in Guelph, Ontario.

1999 • **January**, a CAP Survey that was commissioned by the Information Highways Applications Branch (IHAB) of Industry Canada to C.J. Howse and Associates is released. Survey of CAP Web Sites in Canada: Draft Final Report (1999). It is a survey of a limited number of CAP-affiliated sites that was undertaken to provide Industry Canada with a clearer sense of how to assist the web site building process across the country (LibraryNet, 1999, January 12).

• **February**, Industry Canada and the Province of Nova Scotia sign a CAP MOA to cost share CAP program and to allow the province to coordinate the CAP applications and its own development strategy (J. Stanley, personal communication, October 5, 2001).

• **February**, the IPRP meets with Industry Canada officials on National Access Strategy issues (Information Policy Research Program, April, 1999). A further meeting is also held in May (Information Policy Research Program, May, 1999). The response by Industry Canada officials was polite but discouraging. They recognized that the "Connecting Canadians agenda was not enough to ensure universal access —that it was only a beginning and that the National Access Strategy proposal would be useful to

1999 continued…

them…The overall conclusion was that, while there was mild interest in continuing to discuss public interest access issues, the government takes little responsibility for the process or the outcome beyond what it is currently doing. The reaction by Canadian Heritage officials was slightly more positive in tone, in that they indicated more willingness to engage in longer-term discussion, but they lacked the resources to support it" (Clement, Moll and Shade, 1998; Information Policy Research Program, 1999, April).

•**February**, the Gates Library Initiative announces that Canadian grant application guidelines had been distributed to the provincial and territorial agencies working with public libraries across Canada. The Gates Library Initiative will work with the provinces and territories to develop an application and implementation schedule for individual libraries in Canada that are eligible to apply for a grant (LibraryNet, 1999).

• **May**, CPI organizes an international conference, "Information Technology: Tracking the impact of the Internet: Are Things Better or Just Different?"

• **May** through till the fall, Deveau and Winstanley conducts CAP site analysis on issues, concerns and challenges of rural CAP sites in Nova Scotia (Deveau & Winstanley, 2000).

• **August**, Industry Minister, John Manley, announces that Canada has become the first nation in the world to connect its public schools and libraries to the Internet. As of March 30, 1999, every Canadian public school, First Nations school and public library wanting to be connected by Industry Canada's SchoolNet partnership was brought on-line (Canada, Industry Canada, 1999, April 19).

2000 • PIAC releases its study The Dual Digital Divide: The Information Highway in Canada (2000). The purpose of this study was to analyse Canadian households at the margins in terms of access to the Information Highway, with a goal of providing a better understanding of the attitudes, practices, and needs of those who are not connected to the Internet, and the circumstances under which some of these non-users are likely to go online.

•**February**, Deveau and Winstanley (2000) submit their analysis of rural CAP sites experiences in Nova Scotia to TSS.

• **August – October,** a Cornell University research team negotiates an agreement with Industry Canada to document CAP experieince in Canada. The team visits 46 rural sites in eastern Canada (Ontario, Quebec and the Atlantic provinces) and interview 20 persons in Industry Canada and CAP administrations. The researchers state that "[t]he intent of the study was not to evaluate, but to capture a picture from the field of a dynamic national program whose goal is synonymous with other nations around the world – to connect people and organizations with information and communication resources that will contribute to their social and economic development" (Pfiester & Colle, 2000, C. Findings).

2000 continued…

• Further perspectives on the future of "access" after 1999, comes from <u>Debating Universal Access in the Canadian Context: The Role of Public Interest Organizations</u> (Clement, Moll and Shade, 1998). Also background discussion papers, as well as general resource materials can be obtained at the Information Policy Research Program (1996, November 20).

Appendix B.1 – Interviewees.

Michael Colburne
Director, User Help Services
Nova Scotia Provincial Library,
Halifax, Nova Scotia.

Bernie Hart
Provincial CAP
Nova Scotia Technology Science Secretariat
Halifax, Nova Scotia.

Liz Hoffman
Co-President
Canada's Coalition for Public
Information.

Jim Stanley
Director of Community
IT Development
Nova Scotia Technology Science Secretariat
Halifax, Nova Scotia.

Jane Thornley
Assistant Superintendent
Halifax Regional School Board
Halifax, Nova Scotia

Appendix B.2 – Individuals contacted for clarification

Brian Campbell,
Director
Systems and Technical Services,
Vancouver Public Library,
Vancouver, B.C.

Michael Gurstein
Visiting Professor with the School of
Management at the New Jersey Institute
of Technology in Newark, NJ. U.S.A.

Doug Hull
International Projects
CANARIE
Ottawa, Ontario.

Karen Parusel
Community IT Development
Office of Economic Development
Nova Scotia Department of Education,
Halifax, Nova Scotia.

Stan Skrzeszewski
ASM Advanced Strategic
Management Consultants
London, Ontario.

APPENDIX C.1 Consent Form (see original thesis copy)

APPENDIX C.2 Consent Form appendum

The thesis title was subsequently change from the original title: A Canadian information policy snapshot of the Community Access Program (CAP) in rural Nova Scotia, to:
The Canadian Information Highway Debate and the Experience of Public Access in Rural Communities, 1993-1999.

Appendix D – The five working groups and the assignments of 15 public policy issues

Competitiveness and Job Creation

1 How fast should the advanced network infrastructure be built?
  How will network improvements be financed?
2 What is the proper balance between competition and regulation?
5 How can the federal government coordinate its activities with other governments?
12 How can the Information Highway best be used to improve the growth and competitiveness of all Canadian businesses, especially small and medium-sized enterprises, throughout Canada?
15 What opportunities does the Information Highway present to improve government operations?

Canadian Content and Culture

2 What is the proper balance between competition and regulation?
3 Should requirements for Canadian ownership and control of communications networks be reviewed?
6 How should copyright and intellectual property issues be addressed?
7 What measures are needed to support Canadian cultural and other content-based products and services?
8 What controls, if any, should be placed on the information that is put on a network?
12 How can the Information Highway best be used to improve the growth and competitiveness of all Canadian businesses, especially small and medium-sized enterprises, throughout Canada?
13 How can Canadians be assures of universal access to essential services at reasonable cost?

Access and Social Impacts

8 What controls, if any, should be placed on the information that is put on a network?
9 How can the Information Highway be used to improve government services to the public?
10 How can personal privacy and security of information be protected?
13 How can Canadians be assures of universal access to essential services at reasonable cost?
14 What consumer awareness and learning opportunities should be provided to enable Canadians to be effective users of the Information Highway?

Appendix D continued…

Learning and Training

14 What consumer awareness and learning opportunities should be provided to enable Canadians to be effective users of the Information Highway?

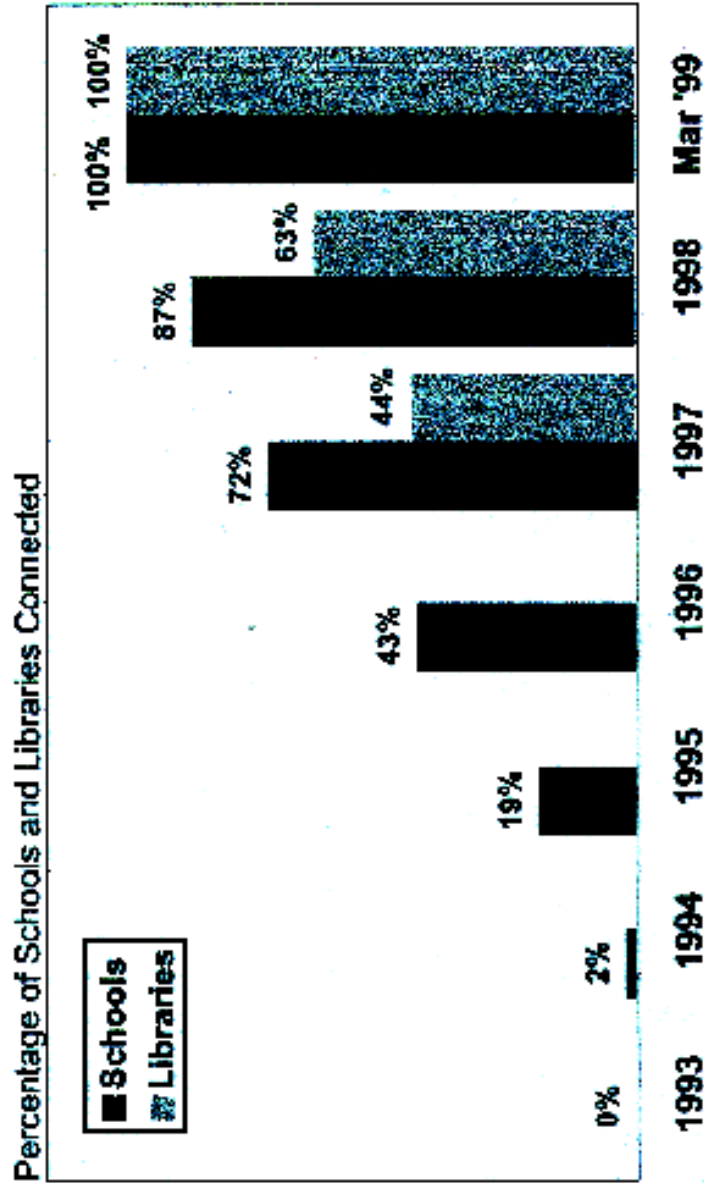### Research and Development, Applications and Market Development

4   How quickly can Canadian industries move toward universal standards, and how should these standards be determined?

11 How can we ensure that Canadian information industries take full advantage of the R&D and technological development opportunities presented by the Information Highway?

12 How can the Information Highway best be used to improve the growth and competitiveness of all Canadian businesses, especially small and medium-sized enterprises, throughout Canada? (Information Highway Advisory Council, Canada, 1995, pp. xxiii-xxiv).

Appendix E

First Country to Connect its Schools and Public Libraries to the Internet

Percentage of Schools and Libraries Connected

Schools
Libraries

1993 0%
1994 2%
1995 19%
1996 43%
1997 72% 44%
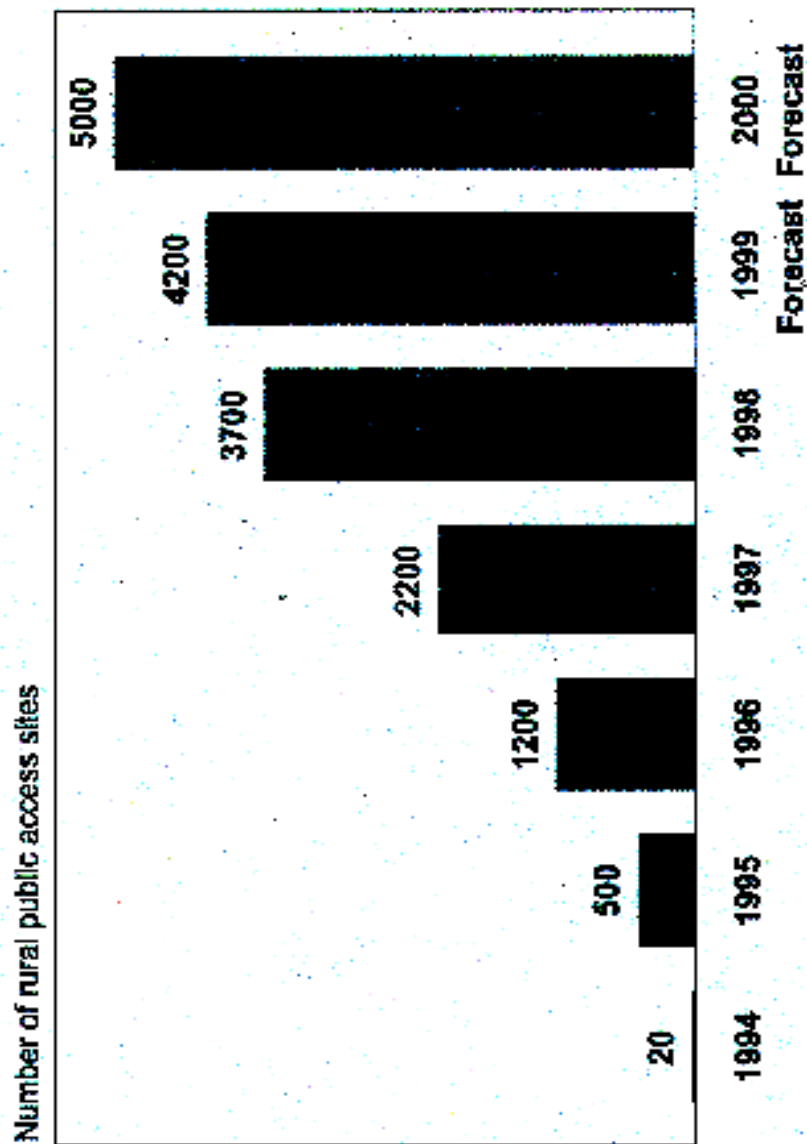1998 87% 63%
Mar '99 100% 100% 100%

Note: Percentage of public libraries and schools that want to be connected.
Source: Industry Canada, based on numbers provided by provincial governments & provincial education networking organizations

(Canada, Industry Canada, 1999, July)

Appendix F

Community Access Program (CAP), Connecting Rural Communities to the Internet

Number of rural public access sites

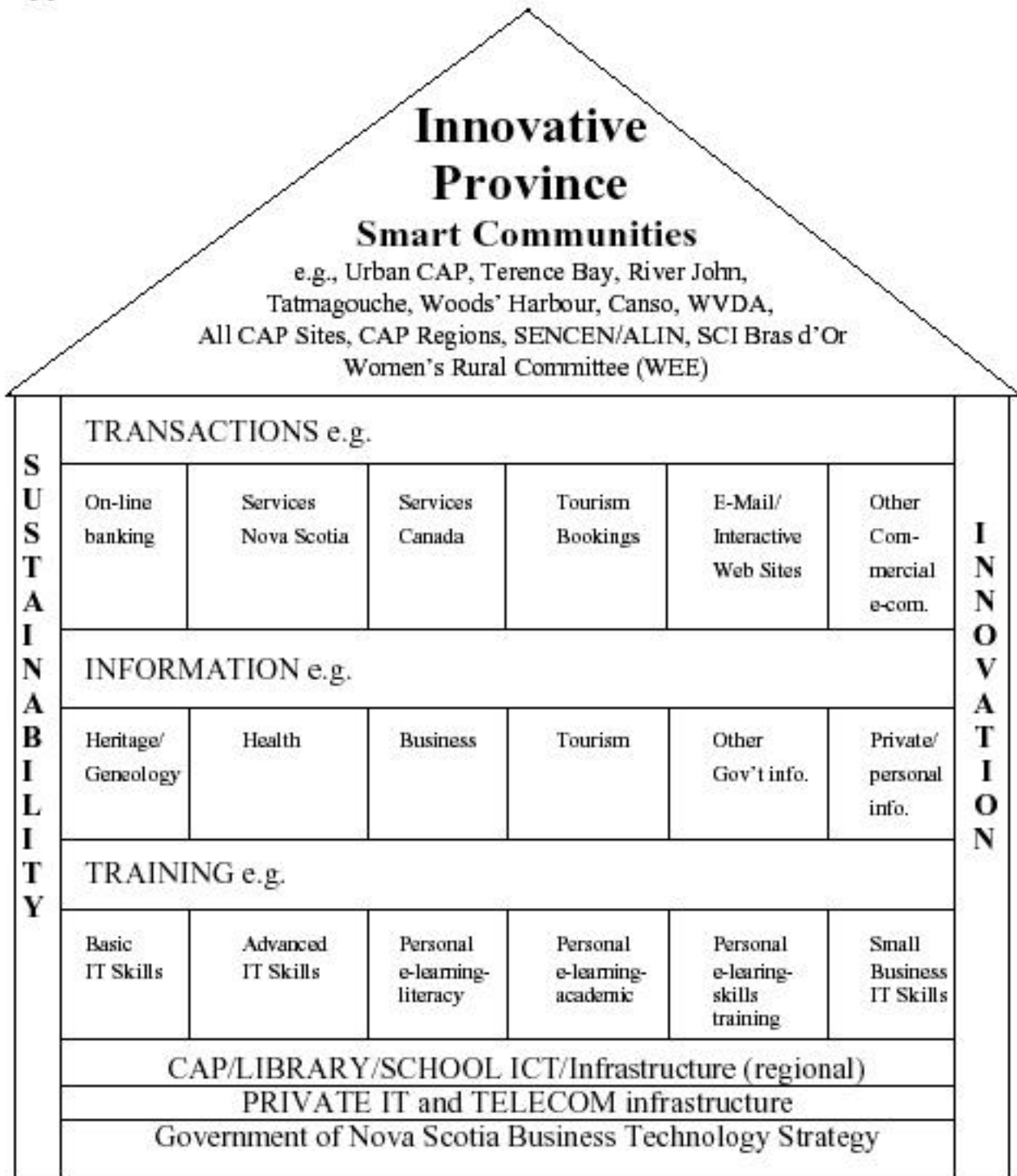| Year	Value
1994	20
1995	500
1996	1200
1997	2200
1998	3700
1999 Forecast	4200
2000 Forecast	5000

Source: Information Highway Applications Branch, Industry Canada

(Canada, Industry Canada, 1999, July)

Appendix G – Issues to be considered by some CAP programs as they mature, and Industry Canada as it charts its future strategies for Connecting Canadians (Pfiester & Colle, 2000, October 31):

1. The power of a national commitment by policy-makers who recognize the value of connecting the people of the country through modem tools of the Information Society and follow that commitment with funding and strong organizational support to establish a program.

2. The importance of partnerships in translating national policy into action through governmental and non-governmental bodies at the provincial and local levels.

3. The value of having local "champions" (Innovators) who can mobilize others (early adopters, opinion leaders) in accepting the vision of the program.

4. The significant value of community volunteers in implementing CAP projects.

5. The advantages of clusters of CAP sites working together in a region to share a variety of resources.

6. The importance of popularizing the belief that information and ICTs can be a valuable resource for individuals, families, organizations and communities.

7. Sustainability and community acceptance of CAP may be enhanced by creating CAP sites within existing community institutions; but retaining CAP principles should be a priority.

8. CAP organizations need long term sustainability and business plans that fit the culture of the community.

9. Focusing on Information services rather than on computers and the Internet alone can build a local institution more fully woven into the fabric of the community and provide a larger base for generating income for a CAP site.

10. Community participation is an important goal that requires a strategic approach.

Appendix H - Nova Scotia Information Infrastructure Model

Innovative Province

Smart Communities

e.g., Urban CAP, Terence Bay, River John,
Tatmagouche, Woods' Harbour, Canso, WVDA,
All CAP Sites, CAP Regions, SENCEN/ALIN, SCI Bras d'Or
Women's Rural Committee (WEE)

SUSTAINABILITY (left vertical label) | **INNOVATION** (right vertical label)

TRANSACTIONS e.g.

On-line banking	Services Nova Scotia	Services Canada	Tourism Bookings	E-Mail/ Interactive Web Sites	Other Com-mercial e-com.

INFORMATION e.g.

Heritage/ Geneology	Health	Business	Tourism	Other Gov't info.	Private/ personal info.

TRAINING e.g.

Basic IT Skills	Advanced IT Skills	Personal e-learning-literacy	Personal e-learning-academic	Personal e-learing-skills training	Small Business IT Skills

CAP/LIBRARY/SCHOOL ICT/Infrastructure (regional)

PRIVATE IT and TELECOM infrastructure

Government of Nova Scotia Business Technology Strategy

Building the Nova Scotia Community IT Development VISION

Source: J. Stanley. Interview.

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