Canada is a world leader in communications development and use and has been so since before its confederation as a state in 1867. Our prominence in this field is directly traceable to the challenges we have had to negotiate and must continue to negotiate in our development as a culture.

- A combination of vast territory and small population dictates our need to negotiate culture across distance.
- Geographical proximity to the most powerful nation in the world and one with which we share innumerable interests and similarities dictates our need to negotiate culture against erosion.
- Cultural diversity, originating with two “founding” European nations imposed upon our resilient First Nations and nurtured by our history as an immigration destination of choice, dictates our need to negotiate culture within difference. Now home to a citizenry that can trace its origins to all corners of the globe, our nation has since 1982 enshrined our “multicultural heritage” in the Canadian Charter of Rights and Freedoms.
- An ethic and history of commitment to social justice dictates our necessity to negotiate our culture amongst issues of class, age, gender and differing abilities.

The purpose of this document and the work surrounding it is to provide a platform from which Canadians can explore the gifts and challenges presented to us by the Internet. Born as a method of military defence and developed in a climate of commercial and cultural experimentation, the Internet is rapidly becoming an essential service. It is up to us as citizens to decide how to negotiate this new form of communication into Canadian society.

—Mandate of the Information Deficit: Canadian Solutions conference

The Internet as a place

Jay McGrath, a youth representative from Branch, Newfoundland, provided the policy session participants and the Advisory Committee with the founding principle for our work. In discussions characterizing the Internet as a tool, he explained that it is instead a place. This profoundly transformed our under-
standing of our task. If the Internet is a place, then it is one that Canada as a nation is in the process of settling. World experience with settlement has repeatedly combined two desires: maximization of the serendipitous that a new landscape has to offer, combined with maintenance of the valuable long fostered by the pioneering community.

In working our way through the problem of importing Canadian values into a new reality, we found we could turn to our original Fathers of Confederation for guidance. Faced with the need to conceptualize how to husband both human and non-human resources now being released by Britain, they worked out the basis for the British North America Act. In a document that would become the premier law of our land, they stressed the new nation’s need for “peace, order and good government,” a set of concepts with such resonance for Canadians that constitutional experts have long abbreviated the phrase as POGG. Eclipsed over the past two decades by our more recent constitutional creation, the Canadian Charter of Rights and Freedoms, POGG takes on fresh meaning once we envision the Internet as a new place in which to negotiate our culture.

With hindsight, it is possible to discern the focus of the Information Deficit: Canadian Solutions conference as predicated on POGG. Our interests were on how to ensure the high quality of content and wide availability of access vital to the social health of the Canadian community. In short, we faced the challenge of conceptualizing an environment in which all Canadians have the opportunity to exercise good citizenship.

Because our focus was on other than the technical aspects of the problem, we sought participation from constituents not generally identified with exploration of new communications technologies. We achieved broad representation from content providers, memory institutions, thinkers from both inside and outside academia, all levels of government, and community groups. Many participants raised voices not usually heard in discussions of the Internet.

In order to capture those voices, we used not only video and audio transcription but a sophisticated system of note-taking. Graduate students working in both English and French provided the policy session participants with summaries from both days of open discussion. The discussions and recommendations of the participants in the policy session, including the final plenary wherein remarkable consensus became apparent, likewise were summarized. The Steering Committee called upon all notes in writing this document. Preliminary drafts were sent out to all participants in the policy session and revisions made before the Advisory Committee met in Ottawa on January 25, 2002, to translate all proceedings into this final set of recommendations.

Provenance
This document flows from the Information Deficit: Canadian Solutions (IDCS) conference held at Calgary, Alberta, on October 29-30, 2001, and a policy session held on October 31, 2001. A joint venture of the Universities of Calgary and Montréal, the IDCS conference was, appropriate to the subject of its study, put together at whirlwind speed. Our ability to organize it within eight months was made pos-
sible by the financial contributions of a variety of funders and the intellectual contributions of our Advisory Committee.

The driving force behind the IDCS conference was a desire not simply to examine issues but to identify action items. As scholars as well as Canadians, the members of the Steering Committee felt drawn to the challenge of throwing our hats into the ring not only with other scholars but with a broad array of Canadians who have practical as well as theoretical knowledge of the effect the Internet has on how people live their lives, on how we negotiate our culture.

To this end, we structured a matrix for the conference to provide an environment that would foster discussion according to two sets of organizing principles. Technology (Connectivity), broad financial considerations (Economy), regulation and responsibility (Law), and product (Culture) were each charted for examination in terms of Issues, Creation, Use, and Action. Action items from the four final sessions formed the basis of discussion for the separate policy session, the aim of which was to generate the basis of the document you are reading.

**Preparation**

Since this was to be a working conference, the Steering Committee put considerable effort into providing context for the discussions and into providing a structure that would allow for raising and refining all relevant issues.

- We commissioned a background report from the InterNet Consulting Group, entitled *Surveying the Information Deficit* (October 2001). The full report is available on our Web site (http://www.ucalgary.ca/idcs-disc). Up to date as of October 2001, the report confirmed that there are real deficits in ensuring delivery of Canadian content over the Internet to all Canadians.
- We mounted a Web site (http://www.ucalgary.ca/idcs-disc) so that all preliminary material could be made available electronically.
- We sent out a call for papers according to the matrix we had constructed and commissioned additional papers to fill any gaps identified.
- We commissioned graduate students from the Universities of Calgary and Montréal to prepare summaries of key documents on Canada and the Internet. These summaries are available from our Web site as Un résumé du document clé sur l’Internet au Canada / A summary of key documents on Canada and the Internet.
- We sought out plenary speakers and charged them with sparking innovative thinking.
- We advertised widely for participants and achieved representation from a wide set of interests. One group, alumni of the Historica Foundation’s Heritage Fairs Programme, has posted its own report on the conference in an e-zine, *ZED* (http://caphis.7thfloormedia.com/zed/), available on the IDCS Web site.
- We put in place a system of electronic capture for all discussions so that we had full documentation of the conference proceedings, creating an archive of data and opinion for future research.
• We applied for ethics approval to treat conference participants as “human subjects” and posted a research advisory in our conference program.
• We assembled representatives of a variety of interests to participate in the policy session and prepared notes for their deliberations.

Conference format

Plenaries  Plenary sessions preceded the breakout sessions and were organized separately along the themes of Issues, Creation, Use, and Action. Each of the speakers was charged with introducing a set of thought-provoking comments that would lend coherence across the breakouts. The texts of some of these presentations are available in this issue.

Breakouts  The breakout sessions were small enough to allow for discussion of the background materials, as well as the plenaries and the points of view of the invited panellists. Each session was chaired by a bilingual moderator and was attended regularly by a member of the Steering Committee. On the last afternoon, each breakout established a set of action items, which were forwarded for deliberation at the policy session.

Policy session  Unlike the conference itself, which was open to any who wished to register, inclusion in the policy session was by invitation only. The Steering Committee tried to assemble a working group that represented a wide variety of interests and abilities. Some attendees, however, were surprised at the policy area to which they were assigned. We explained that we wanted cross-fertilization and that we needed people whose main concern was culture to contribute to, say, the discussion on law.

Reflecting the dynamic process of the conference itself, the grid the Steering Committee originally elaborated (Connectivity-Economy-Law-Culture) for discussion evolved as the information from the conference was discussed at the policy session. As became obvious in our mini-plenary sessions, discussion in each group revolved around Canadian culture and how the Internet could fruitfully be employed to negotiate it through deficits, obstacles, and unexpected minefields.

The themes and recommendations that follow are organized in a way that makes sense of these discussions. Culture takes first place, followed by the technological challenges of Connectivity, a discussion of how the Economy might both benefit and benefit from initiatives in this area, and finally how we might put our Law to use to facilitate our goals. The themes emerged from the conference breakouts; the recommendations were formulated in the policy session.

The amount of overlap between groups was gratifying to the Steering Committee and made the formulation of the final action recommendations, approved by the Advisory Committee in January 2002, a satisfying conclusion to a year’s work.

Discussion sessions

Culture (Frits Pannekoek, Steering Committee Representative)
The intention in both the selection of papers and speakers for the Culture breakouts was to make certain that all memory institutions such as archives, libraries,
and museums were included, particularly at a national level and from both English and French speaking Canadians. Given the real issues of the digital divide, there was an equal effort to make certain that rural concerns were included.

In retrospect, the Culture breakouts were remarkably consistent in their concerns, and all suggested strategies and solutions. There was a general belief throughout the discussions that the Internet could and should not be regulated. There was an equally strong belief that all levels of government have a role to play in ensuring both equitable access to and presence on the Net by and of all Canadians. There was also a strong conviction that all levels of governments collectively have a responsibility to ensure through policy or by best practices that an aggressive approach be taken both in placing and in making accessible Canadian content on the Internet. It was also consistently emphasized that a strong and sophisticated Canadian presence that reflected our memories, our stories, and our intellectual activities is required not only by Canadians, but by those interested in knowing about Canada or by those involved in Canadian Studies programs abroad.

There were several areas of disagreement and areas in which there was surprising silence. There was little discussion during the Culture breakouts of the responsibility of various interests to provide content. While it was assumed that memory institutions would continue to fulfill their mandate to provide both educational and cultural content, there was considerable vacillation on what the role of the State might be in providing content or even in validating content. While all agreed that the State has a role (and some saw a larger role than others), there was a tendency to see less rather than more regulation of cultural content. There was agreement that new models for State strategies are required, but there were few ideas as to what these might be. There was generally silence both in submissions and in discussions from the Canadian groups that represent content specialists. For example, it was suggested that Canadian Studies specialists might validate information on the Internet, but there was no real acceptance of responsibility for creating new content for it.

Culture policy session themes
The first one— is there a Canadian content deficit?— was met with a resounding yes. Acknowledged was the fact that Canadian content currently occupies as much space on the World Wide Web as Canadians make up of the world’s population (1%). Also noted was the fact that Canada ranks seventh in the world in World Wide Web presence, and that English language American content was overwhelming in all information categories. Nonetheless, deficits exist in the areas of:

- Scholarly Canadian content
- Authenticated information
- The stories of those on the margins of Canadian society
- Educational materials
- French language materials
- Aboriginal language materials
Minority language materials

A second key concern focused on way-finding and authentication. It was noted that there was neither a complete inventory of Canadian sites nor an adequate Canadian search engine or portal. Time and time again sessions mentioned the need for authentication of information. Several institutions and organizations were identified as having responsibility for developing way-finding and for information authentication:

- Various levels of government
- Non-government refereeing processes by Canadian scholars or by scholarly associations, like the Canadian Historical Association
- Educational publishers
- Memory institutions such as libraries, museums, and archives

While there was unanimity that governments should not control portals or search engines, it was felt that they nevertheless have a role in offering best practices through policy and through grants.

A third concern that permeated the sessions was the need for education and research on how to find and use Internet materials. It was felt that, from policy-makers to users, too many Canadians lack the skills to make full use of the Internet as a device for the creation, preservation, and dissemination of information. Those identified as having particular responsibilities included librarians, archivists, and teachers. It was acknowledged, however, that not all these have the requisite training and that emphasis in any policies or programs must include training, particularly in using the Internet and judging the quality of information. Some observed that we do not yet know how the Internet is changing our learning strategies and that this must be explored.

A fourth element in the cultural discussions included a need for preservation. It was mentioned at several sessions that Canada is the only member of the G-8 that does not have a data archives policy. Much of what has been accumulated in the past decade has been lost. There is also limited capacity at memory institutions to acquire and migrate digital data and information from one generation of software and technology to the next. Canada has no strategy in place to ensure the preservation of materials held by “not-for-profit” and “for-profit” organizations.

A fifth and remarkably persistent thread in the conversations emphasized the need for balance. It should be remembered for example that translation of existing print material into digital format does not negate the need for preservation of the originals. Funding for digital-content projects can only be successful if the cultural memory institutions can preserve the real objects. There should also be a balance in the nature of content between commercial and cultural, and between memory and creation. There was also a consistent undercurrent in the discussions that “government” should not be the sole driver of digital-content strategies. Positive action here requires a balance amongst all levels of government, not-for-profits, the commercial sector, and memory institutions. Similarly, in identifying responsibility for education, the repeated message was that, while the primary
responsibility may well rest with those in memory and educational institutions, the responsibility of all levels of government could not be ignored. It was also emphasized that the Internet in itself is an incredible tool for enhancing communication but that it should be balanced with other more personal tools as well.

A sixth theme that emerged from the discussions was the need for the creation of an appropriate sustainable fiscal environment for on-line content creation. Within this discussion the need for streamlining existing processes for grant applications was mentioned. Currently every federal government department, every provincial government department and agency, and every foundation have their own grant applications and performance standards. It would seem logical for agencies to work together to develop common application processes. There was also a strong sentiment that the creation of Canadian content was the responsibility of all Canadians and that it could not be done entirely through granting processes. One participant observed that perhaps content could be treated as a capital investment under Canadian tax law. The real concern was that the current grant environment for the creation of Canadian content was a band-aid solution at best. It did not allow institutions to sustain the infrastructure that was required to host and manage complex and voluminous digital information.

A seventh theme that emerged was the issue of copyright. There was a general consensus in the Culture sessions that the failure to clarify digital rights was the major impediment to retrospective digitization, as well as to new creation in digital form that may only exist on the World Wide Web. There was a real understanding that the commodification of information on the World Wide Web was a reality. However, there was concern that the mechanisms for ensuring compliance have not been carefully thought out yet. There has to be a balance between the rights of the creator and the needs of educational institutions.

The eighth point of considerable discussion was the impact of the “digital divide” on Canadian digital cultural content and (as important) on Canadian culture as a whole. It was argued by student Jay McGrath that the Internet was not so much a “tool” as a “place.” It was argued that it was a place to meet, a place to share, a place to gather information, and a place where a generation was growing up. This observation developed considerable strength, and Ian Wilson, the National Archivist, took it and developed it further. Should we encourage a place that has no laws, a place in which the marginalized are not welcomed, a place where viruses can run rampant, and a place where children might not be safe? If we change the metaphor from one of an information highway or pipeline, which sees the Internet as a tool of information conveyance, to a metaphor involving place or community, perhaps we can develop policies, laws, and plans for this place that encourage full participation, that would be inclusive, and that would reflect community.

Culture policy session recommendations

- The Internet already includes a number of Canadian Web sites. As well, there are a number of Canadian search engines. There remains, however, the issue of getting information out of dynamically generated databases and into ser-
vices that meet user needs. It is strongly recommended that Canadian content accessed through databases be made accessible on the World Wide Web and that a cohesive set of services be developed to improve access.

- A concern that was expressed again and again was the need to preserve and migrate digital content. It was noted that critical digital data have already been lost. It is strongly recommended that both federal and provincial governments accept responsibility for preservation and migration through funding mechanisms and through the creation of digital storage capacity in memory institutions.

- While the need to protect creators’ rights was acknowledged by all, the need to accommodate the digital environment was emphasized. Sometimes copyright is dishonoured for the simple reason that it is deemed too difficult to try to track down. It is recommended that an Internet site, either funded or owned by the federal government, be established to make it easy to identify copyright holders.

- Many at the conference saw the dominance of the English language on the Internet as a concern. The poor quality of French language translations was also noted. It is strongly recommended that encouragement be given by funding agencies to the mounting of French language Canadian content.

- One frequent comment at all of the Culture sessions was the need for information literacy training, not only for users but for teachers and librarians who bear the burden of mediation of information. It is strongly recommended that any program to develop content include an information literacy component.

- Any effective Canadian Internet strategy must pay attention both to materials created for this new medium and those originally created for another medium now being “repurposed” for the Internet. It is recommended that any digitization project for Canadian content be balanced between new materials and repurposed materials. Eligible content includes not only that created by Canadians and Canadian institutions, but content created by international Canadianists.

- There was a consistent concern about the “authentication” of the quality of Canadian materials on the Internet. There was also a need established for a site that identified best practices in Canadian cyberspace. It is recommended that a single portal be created to referee and classify Canadian digital material to which Canadians and those living abroad who are interested in Canada can go for best practice sites that link to quality Canadian materials. It was suggested that such a site might be the responsibility of Canadian memory institutions.

- Although there was a strong belief that the “chaos” of the Internet encouraged creativity and had the potential to empower all Canadians, the digital divide remained a concern. There are divides between urban and rural, rich and poor, and young and old, for example. It was noted that smaller communities were not yet as engaged as they might be. The marginalization of Aboriginal peoples and people with disabilities was also a concern. It is recommended
that governments at all levels embrace the role they have to play—through best practices, through the encouragement of their memory institutions, and through their granting programs—in ensuring that all Canadians are engaged in the Internet.

**Connectivity (David Mitchell, Steering Committee Representative)**

During the two days of the conference, the discussions in the Connectivity breakout sessions were enriched by representation in the audience from a variety of constituencies: academic, professional, community development, technical design and support, students, and various levels of government.

The term “connectivity” was chosen to resonate with earlier policy discussions. For example, in a 1995 report of the Information Highway Advisory Council (IHAC), connectivity was used to refer to “connection” in the council’s vision of “connection, content, and community.” At that time, connectivity issues related to the construction of the high-speed technical infrastructure (CA*net1) were given clear priority over those involving content and community development. Subsequently, connectivity has gathered wider connotations as exemplified in the Connecting Canadians strategy that was announced by the Minister of Industry Canada, John Manley, in 1999. In this policy, “connecting” entails connectivity in a technical sense but also in terms of enabling people to connect with content, and with each other. All of these connotations for “connectivity” came into play in the breakout sessions.

In general, there was a sense that knowledge of technical issues provided a common ground on which other discussions, such as those of design, social motivation, access, and public involvement, could be constructed. Some of the very general questions that emerged in this stream included:

- What are the remaining technical barriers to connectivity?
- Why should individuals or communities connect? What are the respective economic, social, and cultural costs and benefits?
- Who should have the right to participate in this kind of debate and planning process?

**Connectivity policy session themes**

Governments currently focusing on constructing main information corridors should also focus on alternatives for final mile connectivity. Universal access programs must account for technical issues as well as affordability and usability. The recent *Report of the National Broadband Task Force* (2001) suggests that all Canadians should be provided with “broadband” access by 2004, wherein “broadband” is defined as symmetrical 1.5 megabits-per-second connectivity. This target is virtually realized in the major cities in Canada through fibre trunk lines and a combination of cable modem or digitized telephone subnetworks. In contrast, this level of connectivity is not the case in many small towns across the country, which remain unconnected to major fibre trunk lines. At present, initiatives are under way to provide broadband connectivity to these outlying towns. For example, Alberta is constructing its SuperNet system in order to bring 10 to 100 megabits-
canadas national internet strategy. In addition, Telesat Canada is planning to launch Anik F2 in 2003 to bring broadband to northern and remote communities. However, there are no plans outlining how these services are to be distributed in the rural towns and remote communities. Gordon Gow (Simon Fraser University) suggested that third-generation wireless telephones may have a positive role to play here.

The time is overdue to move beyond infrastructural issues to other priorities including content creation, usage, and community development. While some participants had a better handle on the technical barriers still facing connectivity—particularly in terms of the final mile—there was a general consensus that discussions of policy and program design should move beyond such a single-minded focus.

Government should not apply the same “smart community” development models it uses for urban centres to smaller rural and remote communities. Developing broadband capability in the latter may require differential levels of public subsidy. Francis Loughheed (Smart Community Cornwall) indicated that some urban communities have been able to use a flexible combination of FreeNet and public broadcasting models in concert with private-sector partnerships. In contrast, Maggie Matear (NEOnet) pointed to the lack of fit between urban-based solutions and rural and remote settings. She emphasized that the latter are hindered by basic barriers to technical connectivity. In addition, most of these communities lack the level of commercial activity necessary to sustain the kinds of business models used in larger towns and cities for such things as the extension of Internet service or the provision of applications and content.

Public resources for connecting Canadians should be deployed more efficiently by co-ordinating strategies and by aggregating resources. Various speakers and audience participants criticized the lack of a coherent strategy for Internet development in Canadian society. They noted that, although there are a variety of support programs available, the vast majority of these are underfunded or lacking in focus. For one example, Industry Canada’s Smart Community program allocates most of its resources to a handful of community demonstration projects rather than aggregating this kind of knowledge and disseminating it to communities across the country. For another example, funds in the Community Access Program are often distributed in small chunks to a host of essentially similar community projects rather than co-ordinating these resources to solve connectivity barriers for many communities within the same overall region. In a similar vein, this criticism was applied to programs for training users and content providers.

Policy for developing Canada as an Internet-mediated knowledge society should include as wide a representation of stakeholders as possible. Related to many of the foregoing points was the sense that if policy is to become more informed as to urban versus rural differences, more coherent in its design of programs and allocation of resources, and more cognizant of the priorities of content provision and community development, then it should involve more stakeholders in the policy formation process.
In the early to mid-1990s the IHAC mostly heard from players in the telecommunications field. More recently, we have seen a shift to include private-sector (content and applications) players, however, there is still little interest in seeking the opinions of users, whether individuals or communities. Without this kind of inclusiveness, the project of integrating “connection, content, and community” may remain unrealized.

Postsecondary institutions in Canada need to develop more sophisticated programs related to the design of Internet content and applications. In one of the sessions, Robin King (Sheridan College) and Doug MacLeod (Netera Alliance) argued that “connecting Canadians” was not simply a matter of telecommunications but also of design. Specifically, they spoke of the need to improve the way in which content is packaged and Internet interfaces are designed. They noted that while a number of publicly and privately supported programs for content development exist in Canada, most of these are focused on quantitatively increasing content rather than qualitatively improving the look and feel of content. Better training for Internet design means taking account of a full spectrum of factors including such things as communication theory, telecommunications engineering, and psychology of use. If content providers are better trained as designers, they are less likely to waste limited bandwidth with “pyrotechnic” effects and are more likely to focus on aspects such as the quality and reliability of information on their sites. Instead of forcing designers to shape the look and feel of content within the constraints of current technology, the group argued that it makes far more sense to adapt the shape of technology to the purposes of content and use.

More public and private-sector resources should be made available for research and development (R&D) and content-production initiatives. There was a consensus that while the World Wide Web is awash with content, much of it is of dubious quality. Notwithstanding the need for more training in this area, many felt that there is an opportunity for Canada to take a leadership position in the development of high-quality Internet content. There are, however, several barriers to realizing this goal. For one, small private firms are experiencing great difficulty in gaining access to risk capital. For another, there is very limited funding for R&D in this area. Using the example of databased publishing, Rowland Lorimer (Simon Fraser University) argued that knowledge gained from university R&D projects could positively be transferred to the private and the not-for-profit sector.

Better training programs related to Internet usage should be made available to all Canadians. Related to the goal of improving the design of content is that of improving the knowledge and skills of Canadian users. Serge Proulx (Université du Québec à Montréal) argued that the Canadian discourse on the “digital divide” should not be preoccupied simply with whether or not individuals have access to Internet applications and content, but also with whether or not they have mastered such usage. Liss Jeffrey (University of Toronto) built on this point by calling for programs that developed basic Internet fluency on the part of users. Various participants echoed this point, calling for better training programs within the K-12
and postsecondary systems and, further afield, for all Canadian citizens, within the context of lifelong learning.

Connectivity policy session recommendations

- While most participants in the policy session were cognizant of the technical problems associated with extending main lines and solving “final mile” connectivity, there was also clear agreement with the view that technical considerations should no longer be the major focus in discussions of “connectivity.” It is recommended that past emphasis on solving technical issues should no longer dominate discussions of connectivity. The time is right to move on to considerations of content and community.

- The group did not seem troubled by the need to define content per se so much as how to consider content in its relationship to community. The latter term received a variety of alternative definitions. For example, communities could be self-defining, physically located, virtual and distributed, anchored in tradition or constantly evolving, normative or diverse in their make-up. Finally, though, the group was satisfied with the notion that community could be defined as either community of place or community of practice/use. This formulation helped organize the group’s consideration of content. Rather than trying to conceive content issues in an environment contextually free of community considerations, the group felt that content issues should be considered as logically secondary to those of community. In other words, rather than promoting programs for content development that conceive of users as isolated consumers, programs should give priority to the actual interests and needs of communities. It is recommended that the “information deficit” not be conceptualized as a deficit of content per se but rather as a deficit of content experienced by various communities and that connection meet their individual needs and interests.

- Having reached consensus that Canadians should be given the right to identify their own particular needs for content and connection rather than having these decided for them by government and private firms, there was some uncertainty within the group about how to proceed. It felt that action in this area should not simply take the form of a critical review of existing policies and programs. There was a general perception that Canada is moving into a more complex environment as a knowledge-based society and that this new environment necessitates a radical rethinking of past policy. Building upon the two preceding recommendations, it was also felt that new policies and programs in this area should no longer be developed in parallel paths but should be fully harmonized. For example, it makes little sense for CANARIE to continue developing infrastructural programs in isolation from considerations of content and community. Likewise, Canadian Heritage’s interest in playing a larger role in content and community-development programs should be fully integrated with infrastructural programs. It is recommended that policies and programs for developing Canada as a knowledge-based
society no longer be developed in isolation. All initiatives related to connection, content, and community development must be harmonized.

- David Moorman (SSHRC) made the point that the group needed to turn its recommendations into concrete action items that made sense in terms of government priorities and private-sector interests. The group agreed, and opened up a discussion of how best to proceed in terms of designing institutional structures and processes. A suggestion was made that instead of continuing with the top-down approach to wired-community development that spreads resources thinly across many communities, policy should be orchestrated from the ground upward. However, Maggie Matear (NEOnet) reminded the group that in the case of rural and remote communities, both of these approaches have resulted in a duplication of effort and inefficient allocation of resources. In contrast, the group agreed that an aggregative approach was a better way to proceed. This would entail concentrating resources for solving similar problems across regions. It is recommended that public (and private) sector resources for “connecting Canadians” be aggregated and deployed systematically.

- With general agreement that all policies and programs related to “connecting Canadians” should be harmonized—and that resources should be aggregated—discussion moved forward to the ways and means whereby this might be orchestrated. Is there an existing agency that could take over this role, or should a new one be instituted? Should such an agency be governmental or non-governmental? The group felt that the appropriate place for such an agency or board is at the national level inasmuch as its interests would be Canada-wide. There remained the problem as to where such an agency or board should be placed and to which body it should report. There was agreement that the Information Highway Advisory Council played a similar role in the early and mid-1990s, although its scope was largely limited to infrastructural development issues. Likewise, John Manley’s Connecting Canadians initiative tried to project a wider focus but was still hindered by the jurisdictional mandate of Industry Canada. Ultimately, the group concluded that there was a gap in the federal system for the kind of body it had in mind. They agreed that the new body should be advisory in nature, not too large yet composed of a wide representation of interests, at arm’s length, and would report directly to the Prime Minister’s Office (PMO). Several models were suggested for the form this advisory committee might take. Finally, it was agreed that the most appropriate model was that of the National Round Table on the Environment and the Economy (NREE). To land this proposal, the group felt it would be essential to locate allies and champions for this initiative in government, the private sector, and amongst NGOs. It is recommended that the federal government establish a continuing advisory committee to oversee the development of Canada as an information society. This committee should be modelled along the lines of the NREE and should report directly to the PMO.
Economy (Claude Martin, Steering Committee Representative)
The Internet, although a relatively new medium, is already firmly established in Canada. Data cited in *Surveying the Information Deficit* (InterNet Consulting Group, October 2001) rank Canada second in the world in terms of the public’s access to the Internet (60% in Canada compared with 65% in Sweden, according to a comparative survey). Furthermore, *Surveying the Information Deficit* lists about 700 sites, all very different in size, able to attract at least 1% of the population. Canadian sites account for 16% of Internet traffic in Canada—an impressive performance, considering how easy it is to consult foreign sites on the Internet. That market share is much higher than that of Canadian film (3 to 5%) according to Canadian Heritage, and occasionally higher in Quebec, according to other sources, and is close to the share enjoyed by Canadian authors (20 to 25% in Canada, 30 to 40% in Quebec in French). It lags, however, far behind that of daily newspapers, which are exclusively Canadian, although part of their content comes from foreign agencies.

These figures, however, fail to reveal the economic extent of publishing via the Internet, which is difficult to assess. Internet-based publishing is undertaken under several organizational forms (such as private firms, conglomerates, branches of public institutions, and community organizations) and obtains funding from various sources (among them public funding, advertising, promotional budgets, and sale of content). Statistics are relatively silent on these realities, primarily because of the newness of this area, but also because of the fragmented nature of the distribution and dissemination of economic statistics content on the Internet.

Breakout participants stressed certain paradoxical aspects of content production for the Internet. One is the cultural and, at the same time, commercial nature of the medium. A second is the linkage of the technological and creative aspects of publishing. A third is the range of organizations in the field, from very small firms or small community agencies up to huge conglomerates, at times international in size.

Economy policy session themes
Given that the Internet has the potential not only to reflect but to preserve and record culture, *considerations of cultural policy are central to economic policy*. It is important to understand why Canada has felt it necessary to enact economic policies pertaining to cultural products in the past and to examine what might be current concerns driving new policy development.

*The nature of models that have served our understanding in the past need close examination.* For instance, we cannot simply transfer our understanding of radio and television to the Internet since the Internet is not, strictly speaking, a “mass medium.” And, in very practical terms, alternative definitions of education as either a public service or a commodity have potentially broad ramifications in terms of international trade agreements.
Funding of production and ancillary support necessary to a Canadian presence on the Internet formed a central topic of discussion. A variety of funding issues were raised, among them:

- The ability of copyright and other intellectual property provisions to function within the context of the World Wide Web. Producers of cultural content must be protected.
- The question of who should provide funding. Models could include public funding, private-sector funding, and partnerships among various interests. Any broad sustainable model for the Internet must take into consideration not only commercial venues but information/content sites.
- The question of who should receive funding. Small companies and individual creators are rarely targeted by the government for funding and have the greatest trouble maintaining a sustainable effort. Universities require more funding for the development of both technology and content if Canada is to remain on the cutting edge. Not-for-profits play an essential role, especially in terms of providing access and in filling in the gaps not addressed by commercial ventures.
- The question of forms of funding. Various methods of generating funds to support the work necessary to Canadian content on the Internet were discussed. These included:
  - Subscription models
  - Pay-per-item models
  - R&D loans
  - Tax incentives for both content producers and buyers
  - Recognition of the contribution of IT workers and artists within the employment insurance and income tax schemes

The reality of various divides according to gender, age, education, geography, and income. These were examined in terms of connectivity, content, use, and simple physical access to equipment. While the Internet has the ability to foster social cohesion, it can also foster divisiveness. Like-minded people with access to the Internet have the ability to form isolated virtual communities, for good or bad. Those excluded from access are excluded from full participation in Canadian society by nature of their exclusion from political participation and diversification of knowledge. The importance of community support was recognized in dealing with such divides.

The need to ensure reliability and credibility of information on the Internet. This not only has social and cultural implications but direct economic implications in terms of accountability for false information.

The necessity of thinking globally. Any economic policy internal to Canada must take notice of international realities, including issues to do with the G-8, the World Trade Organization, and UNESCO.
Economy policy session recommendations

An economic policy for the Internet should be developed with input from all the components in the field. It should be considered as both a cultural and an industrial policy, and be brought to the attention of those in charge of these two fields, in addition to those with more purely economic interests.

Such a policy would also need to be aware of the different types of players in the market, promoting a balance between the various components. Specifically, an economic policy for the Internet should balance its resources between content creation and the technical means of distribution. Without sources of content the system will not succeed in producing a sufficient level of Canadian content; therefore, a policy should compensate for market forces, have economic-effectiveness criteria, and fulfill certain mandates of public interest.

Taking into consideration the themes raised during the conference, the policy session participants made the following recommendations:

• It is recommended that any economic policy for the Internet be developed with consideration for groups particularly vulnerable to exclusion from access, notably:
  – Individuals and small organizations that are trying out new ways to produce content for the Internet.
  – Small commercial or community organizations by paying particular attention to their survival during their first years in existence.
  – Citizens prohibited from access for monetary and other reasons.

• It is recommended that resources be made available for content production. While participants were hesitant to back a policy mandating that a portion of the content distributed on the Internet be Canadian (“quotas”), they did acknowledge that given the way industry is constructed in Canada, content production should be encouraged. Ways of doing this include:
  – Statistics Canada developing a program that would measure the share of Internet-generated revenue that goes toward the creation of Canadian content.
  – The examination of forms of financial assistance. Several forms are currently available for creation and distribution of content (or multimedia content) on the Internet; these are funds created by public or private agencies whose resources come from policy or administrative decisions. What is missing from this spread are funds from telecommunications organizations that distribute Internet content. This is contrasted with the practice of cable distributors or radio broadcasters from various sources.

• It is recommended that an economic policy for the Internet should include the creation of an Internet fund for the purpose of supporting the production of Canadian content for use nationally, as well as for exportation. The policy should be based on a definition of Canadian content that takes into account the characteristics of the medium and that does not restrict development in the field. The Internet fund could be maintained through contributions from telecommunications companies, calculated according to the revenue generated through the Internet. This fund should include a purely creative section,
with no eye to profitability, as well as an industrial aspect that encourages initiatives that are ultimately cost-effective. This policy would take an interest in exporting Canadian skills in the field as well as ways of doing things (or “formats”) developed in Canada.

- It is recommended that an economic policy for the Internet include a section for research as well as the communication of research results linking statistics agencies, and academic and commercial environments so that their efforts may be mutually beneficial. The resultant research would focus on:
  - The best creation and distribution practices
  - New content and creative techniques
  - Means of measuring the audience
  - Working conditions in the field
  - Characteristics, economic importance, and performance of the publishing field

- It is recommended that an economic policy for the Internet pay attention to certain legal aspects regarding content production and distribution.
  - Those who create content should, when the content has not been used or distributed for a long period, have the copyright ownership that they had previously given up automatically returned to them. This would encourage content distribution.
  - Regulating authorities and banking organizations should look into creating a means of payment that is suited to small transactions, such as those dealing with copyright payment for the use of cultural content transmitted via the Internet.

Law (Janice Dickin, Steering Committee Representative)
A number of issues drove the Law breakouts in the conference. Speakers were invited to address not simply the application of laws in place or the creation of new laws but to consider what issues might fall to law to grapple with for the simple reason that they are not addressed through other societal structures. Presenters represented government, private practice, scholars within and outside law schools, collectives, policing, and citizens’ groups.

Law policy session themes
Rights of the creator. The major concern of many attendees was creators’ rights and the question of how or indeed whether current copyright legislation can function effectively in the age of the Internet. Problems arise not simply from widespread breaking of copyright but from practices such as “blanket licensing” and other ways in which creators can unwillingly, and often unwittingly, be coerced into signing away their rights. Given the difficulties of enforcement of Internet practice, revisions to the Copyright Act and related legislation offer little chance of relief. Of some limited use would be accessible (in terms of both availability and understandability) legal information, delivered on-line, to creators to help them protect their own rights.
“Copyleft,” a concept introduced by Roger Petry (University of Regina), enriched the copyright discussion. Many producers of knowledge and commentary, in particular in the academic community, are paid up front for their creative work. Although they may be willing to relinquish their rights (which can be seen as double payment), this concession should not work to the advantage of middlemen (for example, publishers of scholarly journals), but to that of the public. In paying professors to produce knowledge as well as the copyright holders who produce the journals, Canadian society is double charged. Under copyleft, creators could be assured that, in relinquishing their rights, they were not unjustly enriching middlemen.

Currently, creators rely on collectives such as CanCopy and Copibec to supervise the capture of proceeds from use of copyright material. The process required to make this work, however, is unwieldy, and often those seeking exemption do so out of a desire to save time, not to save money. Any further explorations in terms of returning a fair share of profits in this or other ways must be informed by changes being forced on the publishing and recording industries, as witnessed by the Napster controversy.

Criminal practices. Wholesale regulation of the Internet was generally regarded not only as impossible but as undesirable. Chaos is, after all, an important ingredient in creativity. With the decision of the Canadian Radio-television and Telecommunications Commission (CRTC) in May 1999 not to extend its mandate to “new media,” the Internet remains unregulated in Canada as a separate entity. Nevertheless, there remains the problem of general availability of certain types of content, particularly pornography and hate literature. Censorship prohibitions in the Criminal Code can only be enforced within Canadian borders and, even in that case, it is very difficult in the digital world to identify the perpetrator. Regulation outside the Criminal Code offers more possibilities, including:

- Monitoring and penalization of children at home and in school and of employees in the workplace, and
- Self-regulation and use of restrictive contracts by those providing service.

There remains, however, the problem of the use of the Internet for criminal purposes such as gambling, money laundering, and various types of fraud. Alain Lacoursière, a specialist in art fraud with the Montréal police, emphasized that a piece of art could be sold over the Internet several times before authorities in Canada and internationally can start to make headway on the case.

Human rights. The mandate of MediaWatch is to improve the depiction of women (and, resources permitting, of men) in the media. The legal support for such work is found in federal and provincial human rights legislation, most recognizably, the Canadian Charter of Rights and Freedoms. Without a central regulating body, it is difficult for interest groups to exert pressure effectively.

Self-regulation. In times past, public pressure backed up by threats of new legislation have managed to bring about systems of self-regulation. However, such systems of self-regulation as the Hays Commission in 1930s Hollywood and of
the comic book “seals of approval” in the 1950s were born in a spirit of moral restriction and are unlikely to foster creativity.

Privacy. Privacy is another public concern regarding the Internet and one that has criminal connections when it comes to fraudulent use of personal information to do with everything from identity to credit. Although such information might not be considered “Canadian content,” the issue is not unrelated to the ability of Canadians to negotiate their culture. While, arguably, it is up to the individual citizen to decide whether or not to reveal private information to private parties, governments regularly collect and enforce collection of a vast array of personal information. Before the computer, access to such information, when made available, was limited more or less to serious scholars with the resources and ability to travel to where the documents were and unravel their mysteries. All that has changed with Internet availability; not only is there a great deal of private information, but also computer methods that help make sense of it. Ironically, so-called FOIP (Freedom of Information and Privacy) legislation has motivated archives, over the past decade, to remove other previously available and uncontroversial material from perusal. The legal concept of privacy needs reconsideration. Bill C-6, currently under consideration at the federal level, goes some way in this direction.

Freedom of information. Freedom of information itself has two prongs. The first has to do with citizens’ rights to government-generated and/or stored data. Much has been said about putting Canadian governments entirely on-line, and all Canadian governments have started to move in that direction. Questions arise, however, when it comes to deciding what goes on-line. It was pointed out that resources freely available in the United States—for example, information similar to that generated by Statistics Canada—are only available through purchase in Canada. Freedom of information, therefore, necessarily imports the question of accessibility not only in terms of availability but in terms of affordability.

Preservation. Equally important as the ability of Canadians to negotiate our culture is preservation of our community knowledge. Many records that scholars once travelled to archives to explore are available on the Internet—for now! Preservation of digital memory is unregulated in Canada. Material readable in one format today could be completely unreadable a decade from now. In order for our culture to prosper now and in the future, we require a way of preserving memory.

Accessibility. When the question is asked, “Who has a right to Canadian content on the Internet?” the only acceptable answer is, “All Canadians, present and future.” To this end, questions of access by those with special needs must be dealt with, as well as those having to do with poverty, language, and isolation. Problems arise in terms of both accessible hardware and in terms of content itself. One particularly obvious problem, given our bilingual status, is the relative lack of French language material. As well, accessibility of Canadian material to interested parties beyond our borders is also important in terms of our global presence.

Quality control. One last law-related issue is that of quality control. One of the most important services that the academy performs for society is peer review.
Critical thinking is vital to the survival of any culture, and accurate information can be vital to the survival of individuals. The applicability of personal injury and other forms of tort law to the Internet remains largely unexamined. It is, however, an extremely inefficient and costly procedure for a society to rely on. Regulation of some sort is one alternative; another is creation and support of an effective mechanism for validation of both information and opinion through peer review.

Law policy session recommendations

The Law policy session considered the issues from the breakout sessions within the context of Ian Wilson’s keynote address on the policy day. Mr. Wilson extrapolated from a youth comment in the Culture breakouts that the Internet is not a tool but a place. Acceptance of it as a place Canadian society seeks to inhabit, rather than a tool Canadian society can use to remain where it is, entirely reframes all questions. For legal discourse, the effect is profound.

If we regard the Internet as a tool, we are obligated under our Charter of Rights and Freedoms to make that tool available to all individuals. But if we see the Internet as a place, “peace, order and good government,” as stated in the Constitution Act, becomes our proper goal and our discourse becomes one of citizenship rather than of rights. We are driven by the necessity of providing access to and quality in the Internet so that Canadians can better negotiate their culture. In much the same way as rights-based analysis can work to stultify cultural growth (so-called political correctness) while its only aim is equality, citizenship-based discourse (traditionally one of control of the population) can take on a new dynamism.

Once we accept the Internet as a place and our challenge as that of making it a site of citizenship, we need laws that make inhabiting it safe, equitable, and productive. To that end, the policy session made the following recommendations:

- It is recommended that, unless shown to be absolutely necessary and workable, no special regulation of the Internet be legislated. Instead, the group favoured applying current law (for example, the Criminal Code) to the Internet as effectively as possible. Where jurisdictional questions arise, past history of federal-provincial negotiations (for instance, health) can serve as a model.

- It is recommended that any policy decisions made regarding the Internet be based on cultural values so as to encourage self-regulation by citizens. The most effective regulatory manner in which to create a nurturing climate for POGG (“peace, order and good government”) is self-regulation, a system whereby citizens identify and live by generally accepted standards of behaviour. With self-regulation, legal sanctions serve as end results to be avoided. A good example is the controversial area of income tax. Tax avoidance is allowed; tax evasion is illegal. Most citizens can be counted on to choose the former over the latter. Ideally, in a system of self-regulation, resources can be steered away from enforcement.

Creation of policy that will attract the support of the citizenry is key to decreasing emphasis on state regulation in favour of increased personal
responsibility. In order to create policies likely to be widely embraced, intensive investigation of cultural values must be undertaken. Non-governmental groups might indeed find new life in an initiative to set such standards, receiving funding according to the results they deliver in identifying the values of their interest groups and in increasing awareness of what their particular groups have to gain from the policies arrived at.

- It is recommended that all citizens be ensured access to the Internet. Rather than an individual right under the Charter, accessibility is a prerequisite to a healthy civic culture. Access issues pertain not only to delivery of broadband networking but also to access to computers and, in the case of people with special needs, to access to special computers.

- It is recommended that all citizens be provided with the training to be able to access the resources of the Internet. This of course includes computer literacy (considered by the group to now be a life skill), but also language training and critical thinking. Government-funded teachers and librarians at all levels, including university, have been assigned this load over the past century, but in recent decades governments have shied away from supplying more resources to education. At a moment when Canada’s role in global culture depends upon its ability to embrace a knowledge-based economy, this is a disaster. Options in the area of law and policy are for voters to force governments to make education a priority, for governments to increase the attractiveness of non-governmental initiatives in education (such as tax incentives to corporations, grants to non-profits) or even possibly a civilian draft obliging people to serve a certain period as workers in information knowledge.

- It is recommended that all Canadians be guaranteed adequate access to Canadian content. In order for Canadians to be good citizens, they will need not just access to hardware but access to information. Except in cases of clearly proven national security, all government material should be made free over the Internet. In addition, there needs to be full disclosure and cataloguing of all Canadian content currently in existence. All such information is to be made accessible on the World Wide Web and originals are to be appropriately preserved. In the case of information whose original state is in digital form, this also entails ensuring that it can be “read” by whatever software is available in the future. Again, accessibility beyond our borders is key to maintaining a strong global presence.

- It is recommended that there be public input sought concerning the issue of privacy and other areas of civil rights on the Internet. One contribution that might help deal with this is the appointment of an Internet ombudsman. Non-governmental groups could serve as key sources of opinion on how Canadian priorities sort out along the line between individual rights and civic culture. At this point in time, we also need to wait for any legislation flowing from Bill C-6.

- It is recommended that procedures be put in place to ensure the reliability of information on the Internet. If Canada is to depend on its citizens for civic
input, it must provide them with not only accurate but valid information. The group generally agreed that material available on the Internet is haphazard and much of it is unreliable. Teaching critical thinking can remedy some of this problem at the level of the individual, and the provision of experts such as librarians can install a social filter. However, as stated above, funding of these types of social capital has gone out of style in recent years. One backup (never a replacement) mechanism would be to provide education on critical use of the Internet over the Internet itself and to tag it to sites. A second backup is based on the academic model of peer review. Peer review is in essence a rating system, and rating systems regulate consumption by warning the consumer about the reliability of the product. Ways to achieve this kind of a system are to establish standards for reliable portals that guarantee review of their content, to produce a publicly available rating system for the Internet in general and/or to seek ways to “ban” certain sites or material from Canada’s Internet. Provision of reliable portals is certainly easier than banning and less controversial than rating.

• It is recommended that mechanisms be put in place to archive Canadian memory. Guaranteeing longevity of information without impacting dynamism is another area of concern that might be dealt with through regulation. What computers have offered to us is the possibility of rapid manipulation of data. To resist would not only be counterproductive but fruitless. Still, survival of Canadian culture depends on survival of memory. This is an archiving question that must be accepted as vital to citizenship.

• If necessary to the preservation of dynamism, regulation should be considered. Paradoxically, it might be necessary to regulate the Internet in order to preserve dynamism. Monopolies and foreign ownership can strangle cultural creativity.

• It is recommended that, in order to foster creativity, a way be found to guarantee a fair return to creators. This is the key. After we have “mapped our town” in order to map our issues, all that is left to do is to create what we need. As a culture, we cannot manage this without supporting our creators. Copyright is a tortured area, and it was admitted that it is often broken not from resistance to paying for use of someone else’s work but from lack of drive to negotiate all the bureaucracy necessary to doing so. Copyright is a legal right that must be either sorted out or worked around. One way of working around it is to fund creators in the way in which we now fund only one part of them. There is no reason that regularized public subsidization of creativity be limited to academics. Also, this is another area in which change in tax laws might be changed, both by allowing creators to hold on to more of what they earn and by favouring contributions to the work of creators by third parties.
Recommendations of the Advisory Committee

In response to the various calls for change and regularization voiced at the Information Deficit: Canadian Solutions conference, the Advisory Committee makes the following recommendations:

- That an advisory council for Internet policy be established. This advisory council would consider all matters to do with the Internet, including questions of content and access. It would serve as an enabling device to carry out all the further recommendations.

- That a coherent program of research for policy and planning be established. Definition of requirements and allocation of funds for research on the convergence of connectivity, content, and community is of vital importance.

- That a framework be created for digital rights management. There must be a workable system of compensation for creators. One possible model is a subscription model in which Internet service providers collect a fee on behalf of an aggregator who will remunerate creators on a consignment basis. In essence, this will function as an intranet of copyrighted materials to which the user can gain access for a set fee.

- That education in creation for the Internet and use of the Internet be made available to all Canadians. Such training would encompass not simply creation and use of material data but critical thinking. Designed for access by all Canadians, from youngest to eldest, such education could form the backbone for lifelong learning.

- That access to the Internet for all Canadians, irrespective of geography and social or physical condition, be made a goal of any plan or policy. An ethic of equitable access for all Canadians, not only to the Internet itself but to the means to carve out a space on the Internet, is vital to the creation of a healthy climate for our culture. Definition of “equitable access” must involve close consideration of both social and economic impediments.

- That a national policy be developed for the preservation of digital content. In an area of lightning-speed technological change, it is imperative to preserve cultural memory in such a way that it can continue to be accessed long beyond the life span of any generation of software, hardware, or creator.

- That qualified organizations be encouraged to index and evaluate Internet sites in terms of quality of content. Peer review has long been an effective method of evaluation within various areas of expertise. In terms of quality of content on the Internet, credible groups might opt to create screened portals, establish rating systems, or build tools to teach critical thinking.

- That current models of subsidization be expanded to cover the Internet. Existing governmental and granting-agency policies and programs for the development of Canadian content by cultural industries and cultural institutions should be extended to, and made coherent and appropriate for, the Internet.
The Future

Information Deficit: Canadian Solutions brought together a group of people who care about Canada’s current and future on-line presence. Discussions uncovered both areas of concern and possibilities for solutions. Concerns included questions of access and preservation, funding and compensation, as well as charting a map for our Internet future. Our recommendations address these concerns and make it clear that there is much to be done in securing a place for Canada on-line, as well as in securing a place for the Internet in Canada.

That said, even before the final draft of this document was signed off on, grant applications had been submitted by various members of the Steering Committee in order to launch investigation of how best to bring the recommendations to fruition. It is our fervent hope that others will be similarly motivated to move the work of the IDCS conference from the level of the theoretical to the level of the practical.

With the publication of this document, the work of all those associated with the Information Deficit: Canadian Solutions conference is officially concluded. The Steering Committee takes responsibility for the wide dissemination of the results and looks to our fellow Canadians to help address the issues facing Canada in this on-line world.

Calgary and Montréal
April 15, 2002

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Further Reading


