HOME TRUTHS FOR CITIZENS ONLINE

TELECOMMUNITIES CANADA'S SECOND ROUND SUBMISSION TO THE TELECOMMUNICATIONS POLICY REVIEW, September 15, 2005

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Yes TPR Panel, now that we are all in a Knowledge Society, there is a role for government. No, BCE, the market is not enough to serve the public interest. It is not enough to appropriate the language of change while acting to safeguard the interests of yesterday.

There are common themes in the submissions of many of the public interest groups that express a commitment to community development online. These themes are significant to any national strategy for the uses of ICTs for development. But they are almost entirely absent from the industry/government submissions. Since the groups in question do have direct experience of what daily life in a fully connected Canada might feel like, perhaps the subtitle of these themes should be, "key policy issues for citizens of a knowledge society."

We need:

1. Symmetrical peer-to-peer broadband as a basic service, because, online, everyone is a producer. But striving to achieve universal access to that service must maintain multiplicity and local involvement

2. Community-based open networks

3. A need for a technologically neutral definition of broadband oriented to use, (but it certainly isn't DSL)

4. A shift to a revenue/services model as central to an understanding of markets in a networked economy. This requires a clear separation of infrastructure providers (the physical layer) from services providers (the applications layer)

5. A government role in defending Internet Protocol in the sense of a commons

6. A government role in leveraging procurement by specifying community-based open access in the purchase of network support

7. Continued Federal involvement in programs that support local engagement and choice in transition

8. Acknowledgement of the need for municipalities to address policies for ICT use

9. A vision of public policy grounded, not in the current conflicts over market ownership, but in the experience that Canadians now have of daily life online.

10. Awareness that the price of universal access to technologies is not the primary social issue. Because Internet Protocol affects relationships, participation in and effective use of changed social institutions and forms is the primary social issue.

Since the language of public interest and the language of markets have lost all common ground, these "bullets" may not provide everyone with a self-evident description of what these groups are saying. The following quotes from the submissions of the community-based and public interest groups are intended to express more fully the content of these policy issues.

1. Symmetrical peer-to-peer broadband as a basic service, because, online, everyone is a producer. But striving to achieve universal access to that service must maintain multiplicity and local involvement

> The BC3 holds that access to telecommunications systems (systems for communicating information, including data, text, pictures, voice and video over distance), is a **fundamental social and economic necessity for Canadians today**, (BC3 Submission, response to B1)
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> This connectivity should be considered as important as other basic infrastructure such as electrical distribution system, water distribution system or community road. (BCFNTC Submission, p1)
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> The basket of “basic” services proposed by the CRTC must now be expanded and supported by the Government of Canada to include access to broadband and open network infrastructure as defined in the National Broadband Task Force report from June 2001. (K-Net Submission, summary)
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> Universally available and affordable access to network technologies for all Canadians who wish to use them, including those in rural and remote regions. (CRACIN Submission, para 21)
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> In 2005, the ability "to connect via low speed data transmission to the Internet" no longer suffices. Standards of Internet usage have evolved to the point at which high speed connections are necessary in order for users to be able to communicate and access content on the Internet effectively. (Consumer Groups Submission, para 71)
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> Moreover, as the telecommunications infrastructure moves to IP-based platforms, only those consumers with broadband access will benefit from the increased array of options and features offered by this new technology. ... Therefore, in 2005, "an appropriate level of access to modern telecommunications services" includes a high-speed connection to the Internet. (Consumer Groups Submission, paras 241 and 242)

2. Community-based open networks

Open access definition: "The BC3 defines Open Access infrastructure as an infrastructure where service providers compete to sell services to end customers using a common network. There is no need for the service providers to own or construct a network. The owner of the open access infrastructure does not offer services to end customers, but instead makes its revenues by operating as a wholesaler of connections on its network. By aggregating as many Service Providers as possible to sell services to the end customers the open access network owner earns sufficient revenue to operate a first class network and its end customers enjoy a broad selection of services." (Jeff Roberts, posted to a Broadband Community Champions Cooperative (BC3) discussion list, August 31, 2005).

MISA suggests that a potential solution to the development of a competitive marketplace lies in the development of a community controlled shared high speed infrastructure that connects open network "transit exchanges" to consumers. At these locations service providers would obtain equal access to "local loop" transit, and the consumer could obtain service(s) from any provider connected to the exchange. (MISA Submission, response to A5)

Policies and practices that enable the transition to a Learning Society are currently being considered on the national and international stages. But acting to realize the opportunities of community as it goes online requires a vision of open systems of access, design, practice, and policy debate. (CANCAP Submission, p1)

3. A need for a technologically neutral definition of broadband oriented to use, (but it certainly isn't DSL)

We shift the focus of debate from "how much bandwidth makes it broadband?" and other technical red-herrings, to those things far more relevant to the people of Canada: *Do the people across Canada have similar access in terms of cost, quality, selection and experience to the same social and economic opportunities via their telecommunications networks? If not, how can we correct that?* (BC3 Submission, response to D6)

4. A shift to a revenue/services model as central to an understanding of markets in a networked economy. This requires a clear separation of infrastructure providers (the physical layer) from services providers (the applications layer)

The BC3 holds that access to a variety of services is more important than access to a variety of infrastructures. While infrastructure is of course necessary, it is not an end in and of itself. … It is not the infrastructure that provides improved quality of life. It is the services and applications of that infrastructure. … Just as the majority of jobs aren't created by the companies that build and operate roads, but instead are created by the companies providing goods and services over these roads, so it is with telecommunications. (BC# Submission, response to B1)

Due to a variety of historical reasons, telecommunications companies have generally sold access to their networks to third parties on a per-megabit-per-second (mbps) basis. While simple and straightforward, this billing-related issue has tremendous implications on the innovation of new services especially at the point of interconnection. … Billing by per megabit per second inherently ***penalizes*** usage. (BC3 Submission, response to B17)

The infrastructure required to deliver services to a customer is a nearly fixed cost regardless of the number of services you deploy over it. By enabling the delivery of multiple services, such as voice, video and data, each with their own revenue stream, a network operator can significantly increase their average revenue per user (ARPU). … Infrastructure owners that could once claim that it was technically expensive and extremely difficult to allow third-party applications and services to traverse their network can no longer defend such arguments. This means that consumers should be able to have a choice of services provided by different organizations over a single infrastructure. (BC3 Submission, response to C22)

It is important to safeguard relatively open and non-discriminatory access to IP network platforms so that more robust competition can be established at the level of applications and services. (Comments of Dr. Johannes Bauer on behalf of the Consumer Groups, Executive summary, point 5)

If IP-based, open (rather than proprietary, segmented) network architectures were to be used as the dominant platforms, the markets for transmission capacity would begin to resemble commodity markets. This would imply an unfortunate combination of relatively high investment cost, low value-added at the network level, and low margins. On the other hand, applications and services, which promise much higher value added and potential margins than network services, could be configured relatively easily at the edges of the network. Comments of Dr. Johannes Bauer on behalf of the Consumer Groups, para 46)

5. A government role in defending Internet Protocol in the sense of a commons

Protect the internet as a commons and as a public interest medium. (CRACIN Submission, para 22)

The electronic commons, along with our land, air and water, is a shared resource vital for supporting the varied activities of daily life. To maximize its benefits to society, it needs to be equitably apportioned and managed in the public interest by carefully balancing the contending legitimate demands for its use. The electronic commons thus encompasses more than carriage, capacity, or physical bandwidth which has been set aside for access by the public within a predominantly private and commercial infrastructure. The electronic commons includes the electronic marketplace and the electronic public space. Beyond that the electronic commons is based on the premise that all citizens, in particular those who traditionally have been marginalized within society, should share in the benefits of advances in information technology in terms of a higher quality of life. (CRACIN Submission Appendix 3, Key Elements of a National Access Strategy)

The next decade will see the gradual migration from IPv4 to IPv6, a version of the Internet protocol that will facilitate expanded numbering, more efficient routing, and allow better quality of service management on the Internet. IP-based protocols will likely become more ubiquitously available in devices and network platforms. However, given the different demands of services and applications, it is probable that the present end-to-end architecture of the Internet will at least in parts give way to a more differentiated network platform in which open and proprietary protocols co-exist. If this scenario materializes, the widespread assumption that applications and services will evolve in an "access-independent" fashion may be misleading. Rather, a diversified network environment in which systems of providers (of network platform services bundled with content and applications) that compete with other systems of similarly packaged services may emerge, at least for large parts of the information and communication markets. The efficiency implications of such an environment are largely unknown but not necessarily negative, as this environment may be conducive to innovation. (Comments of Dr. Johannes Bauer on behalf of the Consumer Groups, para 25)

In a Knowledge Society, the IP networks are essential public goods. Ensuring access to end-to-end connectivity in those networks is the responsibility of governments, not corporations. (TC Submission p 1)

Governments at all levels have an essential policy and regulatory role in enabling the use of IP to grow and thrive by sustaining the existence of the Internet "backbone" as a network of IP-based networks. Changes to Internet governance should not impede the

development of the Internet as a commons. (TC Submission p 4)

We agree that, “Internet Protocol (IP) networks have been a fundamental driver of innovation and demand for connectivity” (CP 4). But that word “protocol” in “Internet Protocol” has very broad implications. It is IP that makes networks, including social networks, “open.” And there is nothing inherent in the competitive strategies of the telecommunications industries that guarantees that the networks stay open. But it is essential that regulation ensures that they do. (TC Submission p 13)

6. A government role in leveraging procurement by specifying community-based open access in the purchase of network support

In addition, where community networks have been implemented to manage broadband distribution within the community, we call on government to direct its local agencies and officers to become subscribers of the community-network service. This will not only provide local encouragement for the development of ICT user-skill within the community, government subscriptions can be an important revenue source for the community operator. (BCFNTC Submission , para 40)

Federal and provincial programs and services need to be purchasing bandwidth and technical supports from local community networks to support their ongoing operations. … these community and regional networks will be at risk if the telecommunications industry is provided access to public funding to build their own networks. All public dollars need to flow through the local community groups and they should be the ones selecting the solutions that meet their needs. As well, contributing to the local network instead of building parallel networks to support government applications seems simple enough but too often technicians living in far away places find it easier to plan and build their own networks in isolation and in competition to existing infrastructure and services. (K-Net Submission, paras 10-11)

In many rural and remote communities, Federal Government facilities offer the biggest potential single source of revenue for a fledgling Open Access network. ….. Having these local community members as an “anchor tenant” can mean the difference between financial viability and non-viability for these small market networks. … Currently contracts to serve these locations are managed nationally, meaning that only major companies can bid them and local suppliers are shut out of the bidding. This was experienced directly by all of our members who participated in BRAND. As our members developed their business plans, many realized that without Federal participation as an anchor tenant, they would be unable to or struggle to make the network viable. After uniting in a request to Federal bureaucrats to get local federal agencies to purchase services from these fledgling networks, our

members were told clearly that Federal agencies would be unable to procure services from them. The irony was lost on no one. The same Government that was giving us clear instructions to "find anchor tenants and get commitments" because of the importance of aggregation, was turning around and telling us that they couldn't participate in that community aggregation. (BC3 Submission, response to E11)

7. Continued Federal involvement in programs that support local engagement and choice in transition

Flagging government commitment to completing the job of connecting Canadians in a meaningful way threatens to halt, and even undo, the progress made in the last decade. (CRACIN Submission, para 4)

The imminent cuts to and/or closure of connectivity programs such as CAP and BRAND should be reconsidered. New resources and, if need be, new programs should be dedicated to connecting Canadians and to strengthening community-based ICT organizations and the programs they offer. … Connectivity policies and programs should be designed and implemented to support the necessary social structure of universal access and to encourage effective use of ICTs by individuals and communities. (CRACIN Submission, para 15)

Connectivity policy and programs should be designed and implemented with a strong community-based component in mind. This means not only better funding for community-based ICT initiatives, but involving communities and community organizations in connectivity policy making, defining access needs, designing programs etc. (CRACIN Submission, para 20)

It is at the community level and through community groups that the integration of access, training, and support with a local economic strategy occurs. This integration is essential to our being able to achieve the social and completive goals we seek as a country. Continued government support to ensure equal access to these opportunities is essential. (CANCAP Submission, p4)

More resources should be devoted to supporting local community initiatives designed to extend broadband access to low income, unemployed, disabled, elderly, and other disadvantaged communities, and to assist those communities in making effective us of such access. (Consumer Groups Submission, p 3)

The federal government should commit to stable, long term funding to community networking and public access programs and organizations, including the Community Access Program. (Consumer Groups Submission, p 4)

8. Acknowledgement of the need for municipalities to address policies for ICT use

Promote the development of community-based and/or municipally-owned broadband and wireless infrastructure; (CRACIN Submission, para 22)

Technology, standards and equipment along with the convergence of radio and IP have, and will continue, to allow organizations to take local control of their own communication technology. Local governments now have the means to control high speed data and shape the future of their communities. This has significant impact on the local economy. No longer does a local community's economic development need to be in the hands of telecommunications carriers who invest only when they can get sufficient return on investment. (MISA Submission, response to A1)

Funding for broadband expansion must go directly towards local community networks with proven business plans. Funding to local governments should not be filtered through Provincial Governments. This has proven to be very ineffective. Local government knows best its local needs and drivers. Provincial governments have generally been ensuring that everyone gets the lowest common denominator. Resistance to local public / private partnerships has often resulted in the handing of the funds over to the incumbents for services that do not met the community's long term needs. (MISA Submission, response to D5)

Except in a small number of communities, politicians have yet to become aware that ICT infrastructure is the next foundation for economic activity, and thus a place to invest. (MISA Submission, response to E3)

In some areas publicly owned access networks will likely be available or cities and municipalities may serve as coordinators of local broadband infrastructure development deployed and operated by the private sector. (Comments of Dr. Johannes Bauer on behalf of the Consumer Groups, para 39)

The entry of municipalities has raised some concerns as to whether these projects bias competition and cause disadvantages for wireline broadband service providers. Whereas safeguards against distortions of competition are acceptable, public sector sponsored projects are an important tool to advance broadband connectivity. It is important that this option remains available and is not prohibited by legal and/or regulatory actions. (Comments of Dr. Johannes Bauer on behalf of the Consumer Groups, para 60)

Municipalities are largely asleep to the nature of their own direct responsibilities to ensure that their communities have adequate access to open networks and the potential they represent for community development online. (TC Submission p 2)

9. A vision of public policy grounded, not in the current conflicts over market ownership, but in the experience that Canadians now have of daily life online

Telecommunications delivers, and will continue to deliver, products and services that will be accepted like basic telephone service as a natural component of participation in society as a citizen. Access, choice, control of transmission, rights and redress in electronic marketplace are natural outgrowths of the regulatory structure chosen. Any vision must have the perspective of the design of a public interest and commercial ecosystem with appropriate checks and balances. (Consumer Groups Submission, p 11)

When we frame issues in terms of a citizen's relationship to governance online, or an individual's relationship to social networks and community in a Knowledge Society, a transformation in the nature of the public good comes into view. (TC Submission p 1)

We identify a major issue – the story of community-based daily life online and its absence from public policy debate. Within the framework of that issue, we can buy into an "infrastructure" strategy, as opposed to a sector support strategy. But the trick is that infrastructure in a Knowledge Society is far different from an Industrial Society. There is now far more at stake than issues of industry support. We recommend an approach to policy and regulatory reform that is open, transparent, and broadly representative of Canadian experience of the Knowledge Society, something that points toward where we're going, not where we've been. (TC Submission p 4)

The lessons emerging from hands-on community experience of broadband show us that, whatever the applications of broadband to daily living may be, they are not to be found exclusively in sectors of service. They are to be found in the new ways that people connect to each other. As any sector adapts, what it learns about transition will be found in two places. First in that sector's openness (its connection) to other processes and institutions of anticipation within Canadian society overall. Second, in the way that augmented social networks change relationships among autonomous individuals. (TC Submission p 6)

10. Awareness that the price of universal access to technologies is not the primary social issue. Because Internet Protocol affects relationships, participation in and effective use of changed social institutions and forms is

the primary social issue

The Digital Divide exists not only as a geographic circumstance. The Digital Divide also exists where ready access to ICT services is not available as the result of economic hardship, limited education, physical disability, or other limiting factors. (BCFNTC Submision , para 11)

However, the work of CRACIN researchers, among others, suggests that we must be wary of an over-emphasis on 'technical connectedness' in an assessment of the effectiveness of Canada's national ICT strategy thus far. As numerous studies have suggested, Industry Canada's leadership in the area of federal connectivity policy has stressed the development of the technical infrastructure of access (i.e. maximizing the installation of computer hardware and internet connections) at the expense of developing the necessary social infrastructure of universal access and effective use (literacy, ICT training, etc.) and placing this on a sustainable foundation. (CRACIN Submission, para 10)

"Affordability" need not be based on purely internal rate of return models. The long term savings for remote communities will be manifested in the form of improved health, education and economic opportunities. There is scope to develop long-term impact studies to re-visit the assumptions and definition of cost and benefit of broadband in remote communities. … Rural communities are the stewards of our food, water and soil; remote communities are the stewards of cultural heritage and vast natural resources. Rural broadband policy cannot be designed purely on short-term economic, market forces. (Ricardo Ramirez Submission).

Government policy should focus not only on physical access to broadband and ICTs, but also on affordability, special needs access, awareness and training, and effective use by local communities. The status of all of these aspects of access should be measured and tracked on an ongoing basis. (Consumer Groups Submission, p 4)

The ability to access telecommunications service is an important driver for the economic health of communities and acts as a significant enabler for the provision of educational, health and cultural programs and services. In addition, telecommunications allows individuals to be productive within commercial and public ventures without being resident in the locale of that venture. (Consumer Groups Submission, para 85)

Access involves more than simple **physical availability**. Even where service is available to be purchased, it may be **unaffordable** to large numbers of potential users. It may also be unnecessarily **inaccessible to those with certain physical disabilities**. Finally, significant proportions of the population may be unable to make effective use of it due to

lack of training or awareness of the vast array of information, services, and opportunities that broadband access offers. Any analysis of the state of access to broadband and advanced ICTs in Canada needs therefore to examine all four aspects of the issue. (Consumer Groups Submission, para 189)

Access alone will not be sufficient to achieve the government's ultimate goals. Strategies for the **effective use of ICTs** to support local economic development, local access to education and health services, social justice and political empowerment are also necessary (Consumer Groups Submission, para 190)

The telecommunications industry is only part of the picture in seeking to understand the socio-economic and political impact of the Internet. In a Canada that is connected, the central issue of any "telecom" policy review is really going to be about emerging new forms of governance. (TC Submission p 1)

The fact of marginalization does not disappear when daily life moves online. What does change is the qualitative nature of its characteristics. Social services agencies now have a new program reality, a new basic necessity in the life of their clients called "being online." This is a significant structural change in the nature of services delivery, and those agencies do not have the program dollars to respond. Response requires a different way of seeing the problem of how the poor are always with us. It's not the "digital divide" or "emerging technologies " that make the gap. It's society online that perpetuates the gap in different ways. (TC Submission p 18)