

Canada :
Innovation and Inclusion in the Network Age

Michael Binder
Assistant Deputy Minister, Spectrum Information Technologies and Telecommunications
Industry Canada
300 Slater Street
Ottawa, Ontario
Canada K1A 0C8
Telephone: (613) 998-0368
Fax: (613) 952-1203
binder.michael@ic.gc.ca

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Communications in Canada

Communications in Canada has always been a challenge, an opportunity, and a necessity. With 31 million residents spread over almost 10 million square kilometres, the government has continually placed a high priority on connecting Canadians to each other, and the world. First, were the roads that allowed us to travel and settle this great land. Then came the railways, to move products and people with greater efficiency and speed. Later, a digital infrastructure, with phone and cable lines that now reach almost 100% of our population. And now, a digital infrastructure for the Network Age. Through the miracle of technology, bits and bytes travel through light strands and through space in the blink of an eye.

Through all of this one thing remains constant ... change. Advances in technology are making the world a smaller place. With the click of a mouse we can be in contact with friends half a world away, we can shop across the street, the continent or the ocean, and we can do business in any time zone we like. There is no doubt, that we are experiencing a revolution that transcends national boundaries. We are leaving the industrial age and embarking on the Network Age. And in this new age, the currency is changing. Whereas access to roads, waterways and natural resources once defined power and success - in this new age, access to digital networks, and the information they carry is critical.

What makes access to these networks, to information, so critical? Well, as companies, governments and societies move to the online world, those without access are left behind. As new services in areas such as education, health and commerce, are delivered via networks, those without access will lose out. And, this is not simply a problem of the next year or the next decade. We're beginning to see the signs now. Companies are increasingly using online purchasing, order fulfillment and supply chain management to improve business efficiency. Small companies without access to digital networks will have a difficult time competing.

Now, some will say that investments for the future are a waste of time. Applications of the future may never arrive. Some may postulate that investments in technology and in networks, and the hype surrounding them, lead to what has been called the dot com melt down. The truth lies somewhere in the middle. Any new communications medium .. the telephone, the radio, the television, is usually bundled with expectation and hype. Many have followed a similar road : introduction, slow take up, increasing popularity, hype, and finally widespread, mainstream acceptance. Where are we with digital networks? I don't know, but one thing is for sure. Technology and networks are here to stay. And as they grow increasingly pervasive, we'll dream up new ways to use them.

In Canada, we have long used technology and networks to overcome our challenge of landscape. We are a large country with a relatively small population, spread out from coast-to-coast-to-coast. With a strong neighbour and economic giant to our south, we needed a way to pull together as a nation, from the east to the west to the north. We did this first with railways, then with roads, and finally with communications services. We have always placed a priority on connecting our citizens. A priority which is enshrined in our Telecommunications Act. An Act that commits to reliable, accessible and affordable telecom services for all Canadians.

And we have had success. Almost all Canadians, regardless of location, have access to telephone services, cable, and internet. Looking to the future, our next challenge, is high speed broadband access. Why? Well, I've touched on it slightly but now permit me to expand a little. Technology and digital networks are not simply about improving business efficiency and shopping online. I think, in the future, as more and more advanced applications are developed and deployed, we'll see them used to deliver services, in a couple of different ways. First, I believe that we can use these networks to deliver existing services more efficiently, more effectively, and to larger numbers of Canadians. Next, and this might be a little further off - but not much - I think we'll deliver new kinds of services. And again, I'm not talking about emailing a form instead of mailing or faxing it, I'm talking about new, interactive experiences. Think of providing a full range of health care services to people in their communities, over networks. People who

previously travelled great distances or did without. Think about providing people with interactive links to education, to classrooms, for students who previously did without. And this is not pie in the sky, we're seeing interesting pilots with distance diagnosis in the health field, and interactive online learning in the education field.

But Canada is not alone. While we use technology, use networks, to address our challenges, other countries are also recognizing the benefits. In the US, the state of Mississippi has often found itself near the low end of educational and economic rankings. Now they've recently announced that they became the first state in the country to put an online computer in each and every one of their 32,354 public classrooms. In the UK, Prime Minister Tony Blair recently announced a £6bn investment in information and communications technology (ICT) over three years designed to transform government services. Again, part of this effort will focus on government services, with his commitment to ensure that every primary and secondary school in the country will have broadband internet access by 2006. But his efforts go beyond schools; connections will also be made available for every hospital, primary care trust and health authority in the country and across the entire criminal justice system.

It's clear that governments are waking up to the possibilities inherent in technology diffusion and digital networks. And judging by some recent numbers, so are their citizens. Broadband penetration, e-commerce and cellular adoption all continue to show remarkable growth, despite the doom and gloom scenario we read on a daily basis. In the US, retail sales are growing at 4% annually while online sales are growing at 30-40% (Fortune, Dec 2002 article). EBay, one of the more famous online sites expects to post \$1.18 Billion in revenues this year, a gain of 60%. Some will argue that this is a US phenomenon. But 16% of Ebay's business now comes from Germany, so it's no longer simply a one country wonder. In Canada, the percentage of Canadians who bank primarily through the Internet has doubled in the past two years and the trend towards the use of online banking will continue to rise, according to Canadian Bankers Association. As the hype subsides, we're beginning to see there may have been a dot com slowdown, but apparently there is no meltdown. Demand and use continue to increase.

Now, the next question. If we believe that access to technology, and access to networks are critical, what do we do for those without? As I mentioned earlier, our Telecommunications Act commits to reliable, accessible and affordable telecom services for all Canadians. We've worked to ensure that all Canadian communities have basic internet access, and now we're taking it to the next level : Broadband. We have committed to broadband access to all Canadian communities by 2005.

Recent numbers show that approximately 75 per cent of Canadians have access to broadband, but 75 per cent of Canadian communities do not. Sounds confusing, but it isn't, when you consider that most Canadians live in urban centers, which are well served by broadband. Our concern, and our commitment, is to those communities without access: largely those in rural, northern and remote communities. While many communities will be reached with planned expansions of existing networks, approximately 10 per cent, or 460, of our unserved communities will need to be reached by satellite.

Thus, as the Canadian regulator of spectrum and orbital resources for satellites, I consider them to be essential to fulfilling the government policy for ensuring telecommunications services to all Canadians. In many remote regions, satellites provide the vital link to public safety, government, broadcasting and telecommunication services, and of course, they will be critical to meeting our 2005 goal.

Government Role

The government has been instrumental in evolving the environment for satellite services since the inception of commercial satellites. Traditionally, Canadian communications policies fostered the use of Canadian facilities to carry domestic telecommunication traffic. Telesat Canada had a monopoly on all aspects of domestic satellite communications, and Teleglobe Canada had a monopoly over telecommunications facilities linking Canada to international destinations. However, satellite communications ignores regional boundaries and territories. For Canada, the sheer

physical proximity of the giant to the south, the buying and selling power of the larger, dominant U.S. market and the on-going need for significant capital investment has forced Canada's satellite communications industry to re-focus its thinking from a local and national environment to a North American one and beyond.

In recognition, the Government of Canada has worked hard to liberalize access to its own market as well as those of other countries. Today, Canada has fully implemented its 1997 commitments to the World Trade Organization on basic telecommunications. In important areas, the Canadian Government exceeded its commitments and accelerated its schedule for opening telecommunications markets to full competition. The Government of Canada has amended its legislation to meet its WTO commitments, and the previous monopolies for providing fixed satellite facilities and carrying overseas traffic have ended.

For Canada, the WTO agreement was a "blue-print" for removing trade barriers in telecommunications services and to move global satellite services to full and open competition. The adoption of new policies in Canada, in conjunction with legislation and regulatory amendments, makes Canada one of the world's most open and competitive telecommunications markets. Today, not only has the government issued satellite licences to a number of different satellite operators, satellite service providers and users have access to foreign fixed and mobile satellites through simple approval procedures. Over 50 foreign fixed service satellites have been approved so far, and Canadians can use 5 different foreign mobile service satellite systems.

Ensuring Future Resources for Satellite Growth

There has been significant activity at Industry Canada in the last few years for Canadian satellites. Internationally, the government and industry have played active roles in securing spectrum and orbital resources for satellite communications. For example, since 1992, Canada has led the debate at the 1992 World Administrative Radio Conference to secure exclusive Ka band spectrum for multi-media satellites. As a result of these efforts, Canada will have the first Ka-band satellite in operation later this year, serving the North

American market.

In early 2002, Industry Canada also started the international process for gaining access to a number of new broadcasting service orbital positions. I see these positions as being potentially very valuable for Canadian broadcasting, especially for meeting Direct-to-Home customer expectations of a 500-channel universe, including high definition and local broadcasting by satellite. The success of this long range planning for access will depend on a showing of strong interest from broadcasters and satellite operators as well as the continuing effort of government.

Industry Canada also recently announced a bold satellite licensing initiative to ensure that Canadian broadcasters had the capacity to serve Canada. Four satellite positions were assigned, and for the first time, the awarding of these positions brought ‘public benefit’ commitments from commercial satellite operators. These commitments include a plan to provide advanced communication services, which will support the delivery of government programs for health and education in over 50 communities. Communities where no comparable terrestrial-based services are available.

Commitment to Canadians

All communities deserve access to digital networks in the Network Age. Satellite is and will continue to be critical to reaching our remote communities, and fulfilling the government policy of telecommunications to all Canadians.
