

Broadband Policy Discussion Paper

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A brief paper discussing some of the issues and policy options regarding federal government involvement in broadband. The intention is to provide a high level view of some of the issues. Presented is a neutral position but one that is sympathetic toward ventures under consideration by private investors and the possibility of public private partnerships.

Federal Broadband Policy Discussion Paper

Introduction

There is increasing recognition that fast broadband networks are an important piece of a nation's infrastructure, providing a platform for communications and increasing amounts of commerce. To deliver the optimal benefits this infrastructure must perform at a level that drives productivity and innovation and it must be accessible to as many people as practical.

If the development of such infrastructure starts to lag in terms of performance or ubiquity, the country as a whole can be disadvantaged in comparison to its international competitors. Even where telecommunications requirements have, in the past, been adequately provided for by the private sector, governments need to remain vigilant that the economic and social benefits expected from such infrastructure, continue to be delivered in an optimal fashion.

However governments must always remain cautious about displacing, chilling or disrupting private investment even when they feel compelled to address a perceived infrastructure deficit. The challenge is in finding the right balance between government intervention and ongoing private involvement in the sector.

This paper seeks to highlight some of the issues related to broadband network investment and particularly the options for and potential effects of government intervention.

Broadband Policy High Level Objectives

In general when setting policy a government will seek to address any or all of three separate issues:

1. Broadband Ubiquity – addressing the digital divide or the rural-urban broadband gap.
2. Broadband Performance - ensuring economic growth through leading broadband capability.
3. Competition - creating an enduring competitive environment to drive innovation and consumer choice.

The first area is the focus of the recently announced Industry Canada Initiative enabled by the January 27th 2009 budget allocation of funds for providing broadband access in unserved and underserved areas. The program will endeavour to ensure that as many Canadians as possible can get broadband access at modest levels of service. Broadband is defined simplistically as a minimum of 1.5Mbps¹.

The second area; Broadband Performance has not received much federal government attention in Canada. In many other countries however this has been an explicit objective for government intervention where they are seeking to obtain international competitive advantage by facilitating high performance broadband networks. In practice this means rolling out fibre to the home (FTTH) for a large

¹ http://www.ic.gc.ca/eic/site/719.nsf/eng/h_00001.html

part of, if not all, the population. For example in New Zealand the Ministry of Economic Development has stated²:

“The government wishes to create a step-change in the provision of broadband services by delivering on an aspirational goal of ultra-fast broadband for the majority of New Zealanders.

This is a key part of the government's wider strategy to increase New Zealand's global competitiveness, particularly compared to other OECD countries.”

Other countries embarking on policies with similar objective include Australia, Singapore, Japan, S Korea and many European countries. Because FTTH networks and the benefits they bring are very localised in nature – these objectives are often also sought by local tiers of government including municipalities and there are many examples around the world of municipal projects rolling out advanced fibre networks.

The third area is competition and specifically ensuring that the end users of broadband services benefit from having the choice and innovation driven by competition in the market. There are now many examples of regulatory regimes that have been put in place to stimulate such competition. These range from simple wholesale obligations through network access and unbundling regimes to operational separation of incumbent carriers.

Defining the Issues for Canada

Canada has enjoyed a reputation as a leading country in terms of broadband capability and uptake. A key statistic used for ranking countries has been the OECD Broadband Uptake statistics published every 6 months. Between 2000 and 2003 Canada ranked second only to South Korea, but since then its ranking has dropped alarmingly to tenth³. While this is a ranking that many OECD countries would still aspire to, it is the dramatic decline that warrants attention.

It may well be that broadband penetration in Canada has reached a point where all the commercially viable network investments have been made and, given Canada's size and dispersed population, penetration has stalled while other more densely populated countries have moved ahead. If this is the case then the Industry Canada Broadband program will have some effect by extending networks out to otherwise non-viable service areas.

However perhaps even more alarming are the recent results of an international study on Broadband Quality. This study conducted by the Oxford Said Business School⁴ defined a broadband quality score as a function of download speed, upload speed and latency. It established a benchmark score that indicated an adequate standard for today's broadband requirements and a higher benchmark for the requirements of the near future. By these forward looking measures, Canada ranked 27th out of the 41 countries studied and its score fell well short of both benchmarks.

² http://www.med.govt.nz/templates/StandardSummary_40551.aspx

³ http://www.oecd.org/document/54/0,3343,en_2649_34225_38690102_1_1_1_1,00.html

⁴ <http://www.sbs.ox.ac.uk/news/media/Press+Releases/New+High-Quality+Broadband+Study.htm>

In terms of a competitive market, Canada has also been reasonably well served. There is no outright monopoly and competition between cable companies and telecoms is one of the reasons for Canada's early leadership in broadband penetration. Four major companies deliver telecommunications services across Canada. However second tier providers tend to be suppressed and the big four take different regional approaches to the market, meaning the character of any particular market is closer to a duopoly than pure competition (Shaw/Telus in the west and Bell/Rogers in the east). As evidenced by the Oxford Said study, the current level of competition does not appear to be delivering the innovation and choice that will drive benefits for consumers, economic growth and international competitiveness.

The implication is that Canada's reputation for broadband leadership is in serious jeopardy and its ability to compete in an increasingly internet based economy will be diminished. A recent article in the Globe and Mail⁵ summed this up:

“even with some of the earliest adoption and highest Internet usage rates in the world, Canada is a major laggard in FTTH.”

Private Investment

Perhaps the best outcome would be for private investment to step up and address the broadband infrastructure deficit, bringing customer focus, commercial discipline, innovation and a depth of knowledge to the task. However from a potential investor's perspective there are many issues that will require clear answers before they could sensibly commit to the scale of investment that is required.

Incumbents

Incumbents have little incentive to build FTTH networks as they have heavily invested in first generation broadband and see little opportunity to grow revenues through further large scale investment. Competitive pressure will drive them along a path of incremental upgrade as can be seen by phone companies implementing VDSL and cable companies upgrading to DOCSIS 3.0. These technologies can be viewed as squeezing the best performance out of the existing infrastructure but do not provide the step change in capability that other countries are seeking through their roll-out of fibre networks.

Incumbents are also highly sensitive to the regulatory environment and fear that any benefits of new investments in fibre may be regulated away through unbundling requirements. In the USA major incumbent investments in FTTH networks only got underway when the government excluded such networks from unbundling obligations. This policy triggered some major build-out but may have some less desirable long term consequences on the competitive market⁶.

New Entrants

Around the world many investments in FTTH networks have been made by new entrants to the telecommunications industry. Often these have been existing utility companies or ventures launched by municipal authorities.

⁵ <http://www.theglobeandmail.com/news/technology/article692561.ece>

⁶ Google submission on “A National Broadband Plan For Our Future” p19, http://www.google.com/googleblogs/pdfs/google_noi060809.pdf

The business case for a new entrant is better because they are building new revenues. However making large investments into an already competitive market is still very challenging. The business case relies on driving high levels of uptake and achieving high average revenues per connected customer (by winning a bundle of services away from existing providers). Many new entrants have sought to simplify their entry by adopting a wholesale position assuming that existing or new service providers will be keen to deliver services over a high performance network. However as wholesale network providers they have no ability to drive or respond to the market. Incumbent vertically integrated players have no incentive to support these new networks and independent service providers cannot be relied upon to drive the uptake and revenues to levels that provide an adequate return on the capital invested.

A wholesale-only FTTH network is not commercially attractive unless the uptake and revenue risks are mitigated in some other way. Government could play a demand-side role by promotion, subsidising end-user connection costs and/or providing anchor tenancies.

On the other hand if a new entrant decides to develop the capability to drive retail and service provision on the network, they then face new hurdles associated with being a service provider. In Canada such an enterprise will require at least a CLEC license and a BDU license. The process of acquiring these can be lengthy and could expose potential investors to pre-emptive anti-competitive reaction from the incumbents.

Foreign ownership restrictions can also have a chilling effect on potential investors to the detriment of Canadian consumers. Some flexibility in these requirements could smooth the path for innovative new entrants supported by non-Canadian backers.

Conclusion

In much of the developed world, telecommunications infrastructure is being driven to new levels of capacity and capability through initiatives undertaken by governments, new entrants and incumbents. It is a cause for concern that there are few signs of such progress in Canada. Canada has lost its position as a world leader in broadband and is in danger of falling well below new international standards.

The Federal Government has many options in addressing this issue and has the luxury of being able to study the different policies adopted in other countries and their short-term and likely long-term effects. Options range from direct intervention and heavy public investment (such as Singapore, Australia and New Zealand) through adjustment of the regulatory environment (USA) to a laissez-affair approach. As always the challenge is in finding the balance that delivers the best outcomes for Canadian consumers.