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**Memorandum to the Minister of Industry and the Director General,  
Telecommunications Policy****COMMENTS ON THE DRAFT POLICY DIRECTION TO THE CRTC*****Filed on behalf of the Coalition of Quebec Internet Service  
Providers, and Tucows Inc. (The Coalition)*****1. Main Points**

The purpose of these comments is to persuade the government that issuing the policy directive to the CRTC in its current form is not in the public interest. We agree with much of its direction adopted by the government but consider that, to be in the public interest, the directive must account for the market power of all those who control access to the customer. These are, at the moment, telephone and cable operators.

The particular provision calling for the CRTC to review its rulings in relation to mandated access to wholesale services, and restricting mandated access in future to "essential services" needs to be understood in relation to its effect on the Internet, including especially the right of people to reach goods and services and communicate freely over the Internet.

The concern of independent ISPs is that a) access by ISPs to customers through the cable system has been until recently almost wholly blocked, and remains inadequate, and b) access through the telephone system is becoming increasingly blocked, as will be shown by the financial data presented below. The proposed hearing on phasing out non-essential services is part of a general trend to eliminate the independent ISP industry through regulatory salami-slicing.

The ISP industry is concerned that governments are engaging, consciously or not, in a fundamental reversal of over 100 years of policy, whereby telecommunications carriers – which includes cable operators when they act in that capacity - have been deemed "common carriers". As such they have not been allowed to unduly discriminate against any customers, including rivals using their facilities.

Access to “non-essential” services for third parties is the basis of the independent Internet Service Provider (ISP) industry, provided by those who offer Internet access through the facilities of incumbent telephone and cable companies<sup>1</sup>. The policy directive directs the CRTC to review a long line of decisions with a view to terminating the rights of people to reach customers through the facilities of carriers.

Why should a set of services labeled “non-essential” be so important? The answer is that, when “essential” facilities are blocked, access to the “non essential” becomes even more vital. Access to “essential” facilities relevant to many ISPs is blocked, delayed or rendered ineffective. Now the government, at the behest of the Telecommunications Policy Review, proposes the reduction and removal of access to “non-essential” facilities.

The issue concerns access to the Internet. Incumbent carriers are engaged in a campaign to squeeze out suppliers of competitive access. We shall explain why access to “essential” facilities imposes architectural choices on ISPs that are becoming obsolete, and why access to the “non-essential” services, namely high speed DSL, is vital.

The category “non-essential” is a regulatory construct of the 1990's, derived from a decision whose concern was the voice telephone market, CRTC Telecom Decision 97-8, Local Competition<sup>2</sup>. The decision did not contemplate that the issues arising from access to the Internet would so quickly and completely overthrow the assumptions of what was relevant for the voice market, which is in rapid relative decline.

The decision relied on the concept of unbundling, breaking up the facilities of the incumbents into parts that could be leased, so that competition in voice telephony could start without the need for entrants to replicate the facilities of the telephone company.

“The Commission concludes that to be essential, a facility, function, or service must meet all three of the following criteria: (1) it is monopoly controlled; (2) a CLEC requires it as an input to provide services; and (3) a CLEC cannot duplicate it economically or technically. Facilities that meet this definition shall be subject to mandatory unbundling and mandated pricing.”<sup>3</sup>

To find a list of “essential” and “non-essential services”, one must go to the ‘price cap’ decisions, of which the latest is Telecom Decision 2002-34<sup>4</sup> which catalogue all services as category 1, essential, or category 2, non-essential. In every case, access to ADSL (asynchronous digital subscriber line) service is categorized as “category 2”, or non-essential. The CRTC keeps price mark-ups charged by incumbents of category 1 essential

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<sup>1</sup> A useful discussion of the “essential facilities” doctrine and its treatment in Canadian regulatory proceedings is found in the 1996 OECD paper, “The Essential Facilities Concept” at <http://www.oecd.org/dataoecd/34/20/1920021.pdf>

<sup>2</sup> <http://www.crtc.gc.ca/archive/Eng/Decisions/1997/DT97-8.HTM>

<sup>3</sup> Paragraph 74 of Telecom Decision 97-8, above.

<sup>4</sup> <http://www.crtc.gc.ca/archive/eng/Decisions/2002/dt2002-34.htm>

services to 15% of what the company would charge itself; category 2 non-essential services can be charged at whatever price the incumbent desires.

It is those “non-essential” services that include those which allow rivals access to services that are the fundamental constituents of the Internet Service Provider (ISP) industry. Access to the Internet has always depended upon reaching it through carriers, such as telephone or cable, which exercise significant market power at the customer's or supplier's endpoints. No reputable economist will state that having only two suppliers of access (a duopoly) is sufficient competition to allow complete deregulation.

Non-discriminatory access to the products and services offered over the Internet constitute the fundamental policy of the Internet as we have known it. Now, by contrast, the government appears to seek the end of such third-party interconnection rights. In so doing it appears to have accepted the notion that the telephone and cable carriers have the right to exercise price and other forms of discrimination against rivalrous users of their facilities.

The conditions of fact that the government is helping to create engage larger questions about the future of the Internet. We consider that these conditions of fact open the real possibility that the carriers may soon exercise various pressures against other suppliers of services over the Internet. In brief, the Coalition believes that the tone and substance of the Directive will create or enable conditions that amount to a fundamental policy change in relation to the Internet. It threatens directly the technological and service innovation that has characterized the Internet – innovation without permission of carriers.

All rational economic actors will want to engage in price discrimination. For instance, a carrier will always want to charge more for carrying a pound of gold than a pound of coal. Economic regulation was established in telecommunications to prevent excessive prices from being charged to customers who had no bargaining power against monopoly carriers. Constraining regulation without addressing the reasons why it exists is no solution.

The premise of the draft Order in Council, as regards third-party access, is that there is now enough competition between various kinds of carrier that we do not need to worry about the market power of these carriers to engage in price discrimination, and to select who, and what types of supplier, should be able to reach the customer. The Coalition considers this notion to be untrue, and finds strong support for this proposition in the results of the CRTC's 2006 Telecommunications Monitoring report<sup>5</sup>, discussed in detail further on.

In addition, we consider that the draft Order in Council is not some minor policy adjustment, designed to rein in or speed up a reluctant CRTC. It represents the beginning of a fundamental and, we believe, deeply misguided, policy shift away from imposing non-discriminatory obligations on carriers, to assuage unfounded concerns that Canada is falling behind in bandwidth usage. While the purpose of the Policy Directive is genuinely

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<sup>5</sup> <http://www.crtc.gc.ca/eng/publications/reports/PolicyMonitoring/2006/tmr2006.htm#n72b>

to seek greater reliance on market forces, and to a great extent its language is consistent with its purpose, its real effect, if section 1 (c) ii is not removed or changed in substance, will be to strengthen incumbent carriers against their rivals, their customers, and applications services providers.

We observe that a similar trend is emerging in the United States, where not merely have the independent ISPs been cut off from access to underlying facilities by the FCC, but moves are being made to undermine barriers against carriers discriminating among service providers on the Internet. This has engaged a broad discussion under the title of network neutrality, upon which there is considerable proposed legislation in the Houses of Congress.<sup>6</sup>

By strengthening the already immense power of incumbents against their rivals, the Directive will have the effect of reducing competition in access to the Internet. One can only admire the daring and brilliance of the companies that have persuaded the government of this course of action. The carrier duopoly will benefit from the suppression, as far as the Internet is concerned, of the common carrier concept to the detriment of the Canadian economy, the Canadian Internet user, and the development of domestically-based service innovators, while the government believes it is expanding competition.

If the government truly considers that the common carrier concept is obsolete, it should pursue this through Parliamentary action by a change of the Telecommunications Act. If it does not, it should strengthen rather than weaken the alternatives to the cable-telco access duopoly. At a minimum it should take stock of what it is asking the CRTC to do in paragraph 1 [c] ii and be sure it understands the consequences. Indulging the desire to slap the CRTC around should be resisted if by doing so the health and neutrality of the Internet is risked.

## **2. Background**

The origin of the draft Policy Directive lies in a discussion of “mandated wholesale access” in the Report of the Telecommunications Policy Review (TPR)<sup>7</sup> of 2005-2006. In Chapter 3, “Economic Regulation”, the authors of the Review concluded that there needs to be a review of the scope of what are called “essential services”<sup>8</sup>, and second that the CRTC’s policy of “mandated wholesale access” to certain essential and non-essential facilities of the telephone companies should come to an end.<sup>9</sup>

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<sup>6</sup> See net neutrality legislation at <http://www.cybertelecom.org/ci/neutralleg.htm>

<sup>7</sup> [http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/en/h\\_rx00054e.html](http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/en/h_rx00054e.html)

<sup>8</sup> <http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/en/rx00057e.html#T28>

<sup>9</sup> <http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/en/rx00057e.html#T24>

## 2.1 The ISP business

We shall discuss what the Internet Service Provider industry is and how it gains access to the facilities of telephone and cable companies. We shall discuss the importance of Internet access as the basis for new revenue opportunities for the incumbents.

The rights to get access to incumbent facilities can be illustrated by a simple table.

	Telephone company	Cable company	Price mark-up
“essential” facilities	Local loops, collocation in central offices	Nil	Telco's costs plus 15%
“non-essential” facilities	DSL	Third-party Internet access	Anything they want to charge, typically 60-70%

We shall leave off for a moment from examining why something is classified as “essential” or “non-essential”. That is irrelevant to the business of supplying one's customers, except as regards the difficulty and price of getting services out of the incumbents.

The early idea of competition in local services was the competition was going to be about voice telephony. The first decision about local competition was in 1994<sup>10</sup> and a significant follow-up decision occurred in 1997<sup>11</sup>. The CRTC sought to encourage market entry by allowing parts of the telephone industry's facilities to be “unbundled”, that is, broken up notionally into constituent parts, and these parts would then be leased out to competitors who would then offer competitive local telephone service.

It should be recalled that the World Wide Web became downloadable off the CERN website in 1990<sup>12</sup>, and the Internet was not on the regulator's mind, or anyone else's, as the relevant place where telecommunications competition would emerge in 1994 or 1997. Competition was then considered to about competition to the public switched telephone network, the PSTN, a circuit-switched, time division multiplexed cash machine.

The arrangements for competition were designed with voice telephony in mind. In the case of the cable industry, it can be observed that there are no facilities deemed to be “essential” to which third parties have even limited rights of access.

<sup>10</sup> Review of Regulatory Framework, Telecom Decision CRTC 94-19, 16 September 1994 (Decision 94-19), <http://www.crtc.gc.ca/archive/ENG/decisions/1994/DT94-19.HTM> followed by Implementation of Regulatory Framework - Local Interconnection and Network Component Unbundling, Telecom Public Notice CRTC 95-36 (PN 95-36)

<http://www.crtc.gc.ca/archive/ENG/Notices/1995/..%5C..%5CNotices%5C1995%5CPT95-13.htm> initiating a proceeding to establish principles and procedures that would permit competitive entry into the local exchange market.

<sup>11</sup> <http://www.crtc.gc.ca/archive/Eng/Decisions/1997/DT97-8.HTM>

<sup>12</sup> <http://www.zakon.org/robert/internet/timeline/>

In those later 1990's, many companies registered themselves on the CRTC's lists as potential resellers of voice services. However, the spread and development of the Internet has made it clear to all participants that the PSTN is not where you want to be. It is an artifact of history, and however profitable it may be, its time is passing. (Economic data gathered by the CRTC will demonstrate this in later sections).

The independent ISP has faced severe hurdles. First, the business is migrating to higher speeds but in relation to them he has had no rights as he would have in relation to "essential" facilities – essential to local voice competition, that is. Second, the cable industry cleverly delayed the development of a standard that would allow third party access for five years, so that access to their infrastructure, while available in principle since at least 2000, was non-existent until 2004<sup>13</sup>. But the CRTC found that DSL, the higher speed offering of the telcos, was not supplied by a monopoly because third party access to cable was theoretically available. So DSL was not an "essential" facility.

The evidence will show that the ISPs growth has stalled, its revenues and subscribership are down, and now the government proposes to subject them to a new hearing whose premise is that their source of effective high-speed access should be phased out.

You can see their problem.

## 2.2 Views of the TPR

### "Essential facilities and services"

The Telecommunications Policy Review Panel (or the TPR)<sup>14</sup> issued its recommendations on March 22, 2006.

We shall set out what the TPR wrote *in extenso* in order to understand the TPR's reasoning and objectives.

This was the discussion by the TPR of essential facilities and services:

To be considered "essential" under the current CRTC definition, a facility, function or service must meet three criteria:

- ✍ be monopoly-controlled
- ✍ be required by entrants as an input to provide services
- ✍ be economically or technically difficult for new entrants to duplicate.

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<sup>13</sup> <http://www.crtc.gc.ca/archive/ENG/decisions/2004/dt2004-69.htm>

<sup>14</sup> <http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/en/Home>

Implementation of the Panel's recommendation of limiting the scope of mandated wholesale access to essential facilities requires a clear and operational definition of essential facilities.

Under the CRTC's current definition, determining whether a facility is required by entrants as an input or whether it can technically be duplicated is relatively straightforward. However, determining whether duplication is economically feasible is not straightforward for several reasons.

First, it may be economically feasible for an entrant to build its own facilities and ancillary services in some areas but not in others. The analysis will require a definition of markets with common economic, geographic or demographic conditions. The market definition will likely differ depending on the facilities involved. The Panel is concerned that the CRTC's analyses to date may have relied upon markets that are too broadly defined.

Second, it is not clear what criteria should be used to identify situations in which duplication of a facility is not economically feasible. Facilities that have natural monopoly characteristics certainly meet this test.<sup>62</sup> However, it is not clear whether other facilities may also qualify.

Third, addressing the economic feasibility of the duplication of a facility by entrants also requires explicit consideration of a time horizon over which duplication may be expected to occur.

The Panel believes the foregoing issues require further study.

Effectively addressing these matters requires the involvement of both the CRTC and the Competition Bureau. The working group of CRTC and Competition Bureau members, proposed in Recommendation 3-15 above, should examine the definition of essential facilities and its application.

Some conclusion or wrapper is missing here as a leeway into the next section.

## Mandated Wholesale Access

The TPR discussed mandated wholesale access in these terms<sup>15</sup>:

As stated above, a fundamental objective of mandated wholesale access should be to maintain incentives for innovation, network efficiency and investment. In the Panel's view, the most effective method for promoting these incentives is to ensure that competitive market forces apply to the broadest possible range of network and service components in as many locations as economically feasible.

To this end, new entrants should have both opportunities and incentives to build their own facilities. Since by definition retail market entry is not possible without competitor access to essential facilities, the regulatory framework should continue to require incumbents to make these available, on a mandatory basis if necessary.

However, the Panel concludes that, given the current state of competition in Canada, continuing to require that incumbents make non-essential facilities<sup>58</sup> available to competitors undermines the incentives for the latter to build alternative facilities. This in turn undermines competitive market incentives for all service providers to be efficient, to innovate and to invest, for several reasons.

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<sup>15</sup> <http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/en/rx00057e.html#T24>

First, when designing their networks, entrants can either build non-essential facilities or lease them from the incumbent. Mandated wholesale access at regulated prices reduces the cost and especially the risks associated with leasing relative to building. It thus increases the likelihood that leasing will be more attractive than building. Mandated wholesale access therefore tends to discourage entrants from supplying their own facilities, even where doing so would otherwise be economical. The potential negative impact is much more limited if mandated wholesale access is limited to essential facilities.

Second, regulated wholesale pricing reduces the revenues that entrants who build facilities can generate in the wholesale market when they lease those facilities to other providers. This arises because regulatory constraints on ILEC wholesale prices also effectively place upper limits on the price that other service providers can charge for facilities in the wholesale market. This in turn affects investment decisions of both incumbents and new entrants in cases where the viability of constructing network facilities is dependent on their ability to profitably supply facilities on a wholesale basis to other service providers.<sup>59</sup> The broader the scope of mandated access, the greater the negative impact on investment decisions.

Third, artificially low wholesale rates undermine the price levels and revenues that could otherwise be sustained in the retail market. The broader the scope of mandated access, the more significant the impact on retail prices. This compromises the ability of both entrants and incumbents to recover potential network investments.

Accordingly the TPR made several recommendations relating to phasing out mandatory access requirements.

### Regulation of Non-essential Wholesale Services

The Panel recommends restricting mandatory wholesale access requirements and regulated pricing to essential services, interconnection services and, during the transition period, existing non-essential arrangements. The availability and pricing of other wholesale arrangements should be left to market forces and commercial negotiations. The Panel considers that no valid purpose will be served by continued economic regulation of non-essential wholesale arrangements following the end of the transition period. However, as in the case of retail services, there remains the potential for anti-competitive conduct in the provision of non-essential wholesale services. The TCT<sup>16</sup> should be empowered to deal with such complaints.

#### **Recommendation 3-25**

(a) Tariff regulation should not apply to new, non-essential wholesale services, and should be removed from existing non-essential wholesale service arrangements, including the resale of regulated retail services, following a three-to-five-year transition period.

(b) The *Telecommunications Act* should be amended to require the filing of tariffs for wholesale services only for essential facilities and ancillary services and for interconnections services. Tariffs should be filed for existing non-essential facilities during the transition period to phase them out.

(c) The Governor-in-Council should issue a policy direction to the CRTC stating that regulating the availability and pricing of new, non-essential facilities and ancillary services is inconsistent with policy objectives set out in section 7 of the *Telecommunications Act*, particularly paragraphs (f) and (g).<sup>66</sup>

The Coalition submit that the TPR largely ignored the fact that over 400,000 customers in the province of Quebec are now facing the prospect of losing the little choice that they can currently exercise (and have in becoming a customer of an incumbent ISP) as a result of TPR views that become implemented without any regard to the market power of the incumbent telephone and cable carriers.

## 2.3 Views of the Government

In keeping with these recommendations, the government issued a draft Order in Council, a policy directive to the CRTC under section 8 of the *Telecommunications Act*, in the *Canada Gazette Part 1* on June 17<sup>th</sup>, 2006<sup>17</sup>.

The Regulatory Impact Analysis Statement that accompanies the draft directive says that

“A fundamental finding of the Panel was that competition in telecommunications markets has evolved to the point where market forces can be relied upon to achieve many telecommunications policy objectives and the need for regulation should no longer be presumed. This concept of reliance on market forces to the maximum extent feasible fits with the Government's overall objective of improving the competitiveness and productivity of the Canadian economy. The Panel recommended specifically issuing a policy direction under section 8 of the *telecommunications Act*, and the proposed policy direction draws heavily from the proposal recommended by the panel.”

The Government has explained the Policy Directive in these terms:

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<sup>16</sup> TCT Telecommunications Competition Tribunal, a joint regulatory tribunal composed of members of the CRTC and the Competition Tribunal, also recommended by the TPR.

<sup>17</sup> *Canada Gazette Part 1*, pp 1606 – 1610 *Order under Section 8 of the Telecommunications Act – Policy Direction to the CRTC*

“The proposed policy directive would formally and transparently lay out the Government’s vision for the telecommunications regulatory regime, a regime where market forces are relied upon to the maximum extent feasible; regulation is minimally intrusive and clearly defines the policy objectives which regulatory measures are intended to advance; and reduction and streamlining of regulation is continuously pursued.”

The Coalition finds this perfectly laudable.

The provisions that would have far-reaching negative effects on the goals the government seeks to achieve are contained in section 1 (c) ii as follows:

“(c) in order to promote efficient, informed and timely operations the Commission should adopt the following operational practices:

(ii) with a view to providing increased incentives for innovation, investment, in and construction of competing telecommunications network facilities, conduct a review of its regulatory framework regarding mandated access to wholesale services, in order to determine the extent to which mandated access to wholesale services that are not essential services should be phased out and the appropriate pricing of mandated services to encourage investment and innovation in network infrastructure”.

### ***3. Scope of the Coalition's Comments***

The Coalition’s comments will focus on matters of immediate and long term concern to the existence of the independent ISP (internet service provider) and the ASP (application service provider) industries.

The Coalition is concerned with two things, in essence. The first is the guiding doctrine of the Policy directive. This concerns the rationale for the regulation of enterprises with market power. We consider that the rationale remains valid, as did the Telecom Policy Review Panel. The second is a specific provision that requires the Commission to review its provisions for third-party access to underlying facilities for services not deemed “essential.” The Coalition considers this provision a dangerous strengthening of the power of some carriers over others, over consumers, and over Internet suppliers.

The Coalition raises a general set of concerns about what it perceives to be the net direction of telecommunications policy in Canada and in the United States. All discussion must ultimately point to some words somewhere that would be better if they were changed. Accordingly the Coalition has issues with words in the policy directive

concerning “non-essential” services, and the more general failure to relate the directive to the issue of market power.

The specific concerns are instances of a general policy direction we have perceived that aims to strangle the independent ISP industry, and to strengthen some incumbent carriers at the expense of their customers and some large Internet-based suppliers of information and services.

The picture we will set forth in the following pages relates the activities of the large carriers to the supreme economic and political importance of the Internet. The Coalition considers that the government may not be giving sufficient consideration to

- ✍ the need for competitive access to the Internet through ISPs, and
- ✍ the strategies of the large carriers to extract greater revenues from the Internet at a time when, for telephone companies at least, their traditional source of long distance revenue is in the process of disappearing.

The purpose of the Coalition's intervention is to try to persuade the government that the issues under discussion are not the minutiae of the “regulatorium”, the set of actors and policies oriented to the telecom policy arena, but rather they concern the future of how this transformative marvel we know as the Internet is under attack from many directions by people who would kill the golden goose if they were allowed.

#### ***4. The Rationale for Regulation: Market Power***

The Coalition agrees in principle with the views expressed in the Regulatory Impact Analysis Statement:

- ✍ That the need for regulation should no longer be presumed;
- ✍ That market forces can be relied upon to achieve many telecommunications policy objectives;
- ✍ That market forces should be relied upon to the maximum extent feasible.

The Coalition thinks that the CRTC could benefit from an occasional stirring from the government and that by and large the Telecom Policy Review Panel got its emphases right. What concerns us is that this directive serves to protect certain large carriers from the challenges associated with third-party access to the end customer, and lays the groundwork for the large carriers, cable and telco, to start charging ASPs for the right to reach clients instead of, as is now the case, the end-user paying to receive services. If these two events come to pass, the directive will have had precisely the opposite effect to what its authors intended: a duopoly carrier industry strengthened against competition from independents, and placed in a position to extract further revenues from a weakened applications services industry and the carriers' customers.

In short, it is the concern of the Coalition that the directive, if fully realized, will engender the conditions it seeks to prevent. That leads us to go back to the fundamentals of why regulation exists.

The chief questions for us are

- ✍ what is “the maximum extent” to which market forces can feasibly be relied upon, having regard for the purposes for which regulation was established?
- ✍ What is “minimally intrusive”, having regard for the purposes for which regulation was established?

In short, what is the problem for which regulation was established and is it still a relevant consideration in 2006?

We consider that the problem is *market power* and that it is and will remain relevant for the foreseeable future.

Market power is defined by the European Commission's Directorate-General for Competition<sup>18</sup> as the

“Strength of a firm in a particular market. In basic economic terms, market power is the ability of firms to price above marginal cost and for this to be profitable. In competition analysis, market power is determined with the help of a structural analysis of the market, notably the calculation of market shares, which necessitates an examination of the availability of other producers of the same or of substitutable products (substitutability). An assessment of market power also needs to include an assessment of barriers to entry or growth (entry barriers) and of the rate of innovation. Furthermore, it may involve qualitative criteria, such as the financial resources, the vertical integration or the product range of the undertaking concerned.”

The Coalition maintains that those who hold rights of ownership over the means whereby customers are reached by cable or land-based telephone lines are in a position to exercise market power.

Market power, in its essence, is the power of a vertically integrated competitor to weaken or exclude competition in upstream or downstream markets by actions taken in a particular market.<sup>19</sup> Thus for instance, the ability to exclude competitors from the access market (getting on the Internet) may also have ramifications for the ability of others to compete in the applications services markets (reaching customers through the Internet.)

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<sup>18</sup> [http://ec.europa.eu/comm/competition/general\\_info/m\\_en.html](http://ec.europa.eu/comm/competition/general_info/m_en.html)

<sup>19</sup> See, for instance, “Regulation and Competition law in European Telecommunications”, by Martin Cave, 2006 at [http://www.pts.se/Archive/Documents/SE/Regulation\\_and\\_Competition\\_Law\\_in\\_European\\_Telecommunications.pdf](http://www.pts.se/Archive/Documents/SE/Regulation_and_Competition_Law_in_European_Telecommunications.pdf)

Industries controlling access technologies will, in their economic interests, exercise market power of they have it unless effectively restrained by regulation or by more competition in access technologies.

The current state of economics and technology is such that the cable-telephone duopoly in local access is insufficient to prevent the exercise of market power. There are no effective substitutes yet, despite the limited emergence of wireless broadband alternatives. The Canadian consumer, and the Canadian applications service provider, is faced with a duopoly of cable and telephone services, for the most part. The customer is largely captive; the costs of switching in time and inconvenience from DSL to cable and back are high enough to restrict most people from doing so once they have made a decision, especially as services – wireline, television, cellular and Internet access - are increasingly bundled.

Carriers have the means, motive and occasion for inhibiting the access of other third parties to the end user, and to put in the way of third parties an endless series of difficulties that keep the regulatory mills grinding. Frustration with the slow pace of obtaining access to the customer through the incumbent carriers in each region of Canada is a large source of the frustration with regulatory activity in general. The layered nature of the Internet<sup>20</sup> has only increased the zones in which blockages can be effective. Vertically integrated firms—often incumbents—are tempted to block or degrade the performance of competitors' communications or applications over their networks. This is a direct violation of the basic principle of the public Internet, that there shall be no discrimination among packets.

Forbearance that imposes no pricing discipline at the retail level always fails to constrain upstream market behaviour. For example, the incumbent can virtually give away service at the retail level to lock in the customer. He can engage in margin squeezes that gradually diminish and drive out competition dependent on his facilities. This is exactly what is happening now in the ISP market.

The European Community's Access Directive provides useful concepts that need to accompany the proposed directives as they will be implemented in Canada.<sup>21</sup>

In particular, operators with significant market power should avoid a price squeeze whereby the difference between their retail prices and the interconnection prices charged to competitors who provide similar retail services is not adequate to ensure sustainable competition.<sup>22</sup>

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<sup>20</sup> See prepared statement by Vinton Cerf, of Google, to the US Senate Committee on Science, Transport and Communications, February 7, 2006 on "Network Neutrality" at

<http://commerce.senate.gov/pdf/cerf-020706.pdf>

See also "The Internet Illustrated" by T.M.Denton at

[http://www.tmdenton.com/pub/internet\\_illustrated.pdf](http://www.tmdenton.com/pub/internet_illustrated.pdf)

<sup>21</sup> [http://72.14.203.104/search?q=cache:DBpaZAw-](http://72.14.203.104/search?q=cache:DBpaZAw-T3gJ:europa.eu.int/information_society/topics/telecoms/regulatory/new_rf/documents/l_10820020424en00070020.pdf+European+Access+Directive&hl=en&gl=ca&ct=clnk&cd=1)

[T3gJ:europa.eu.int/information\\_society/topics/telecoms/regulatory/new\\_rf/documents/l\\_10820020424en00070020.pdf+European+Access+Directive&hl=en&gl=ca&ct=clnk&cd=1](http://72.14.203.104/search?q=cache:DBpaZAw-T3gJ:europa.eu.int/information_society/topics/telecoms/regulatory/new_rf/documents/l_10820020424en00070020.pdf+European+Access+Directive&hl=en&gl=ca&ct=clnk&cd=1)

<sup>22</sup> At paragraph 20 of the Directive

The Coalition observes that this is precisely what is occurring to them in Canada now.

The consequences of allowing incumbents to close off access to the customer to third party suppliers are far-reaching. This is more than a fight among rival carriers. It is a battle to secure the relative power of business incumbents of one kind, the incumbent carriers, against the Googles, Tucows, and other service innovators. If successful, this campaign against third party access in the name of less regulation and more competition will inhibit the development of the new products and services on which the future and present competitiveness of Canadian society depend. This is especially true as we head into an era of IP television and IP telephony.

The issue goes beyond the rights of carriers to compete with one another effectively and to reduce regulation in the course of achieving this laudable goal. The issue goes to the predominance of carriers over other kinds of service provider, which is essentially what the Order in Council would accomplish, in the Coalition's view. Therefore, to understand the opposition of the Coalition to the proposed directive, we need to consider in broad strokes what has been happening to the telecommunications industry and the Internet over the past five years.

## ***5. The Strategy for Survival***

A series of actions has taken place in the market and in the regulatory arena, and now in the government, of both Canada and the United States, that have changed the nature of the Internet, long-standing policies pursued by regulators, and the government's own concept of the tasks it faces in the telecom sector.

Formidable changes in underlying technology in computers have allowed the introduction of competition into long distance services. These have been so successful that business has not needed to focus on telecommunications policy for some time. It is illustrative that a large ASP recently checked its total telephone costs and found that it was spending \$22,000 a year on telephony. At that price, telephony has become so cheap it is not worth thinking about. This reflects the triumph of competition and the regulatory process that introduced it, yet if you are a telephone company, it shows that the major traditional profit centre is disappearing, and new sources of income have to be found.

The following propositions are intended to present a picture of what the Coalition considers to be the real game being pursued by incumbents. It seeks to connect the regulatory trench warfare to the large scale events. Thus laws passed to protect network neutrality are linked to abstruse discussions of "essential" and "non-essential" facilities. Events in the United States illustrate what is beginning to happen in Canada.

## 5.1 The argument

The following propositions set out what has been happening as a result of the wave of innovation and destruction that struck the industry since competition was introduced and the Internet changed everything.

1. There is now a duopoly in most areas of Canada (and the United States) in broadband Internet access: the cable company and the telephone company.
2. Canada does not lack for broadband access, nor is the goal of higher broadband penetration likely to be achieved by allowing carriers to increase their profits at the expense of consumers, rival ISPs and ASPs.
3. The telephone companies have lost massive amounts of income from rival technologies and face severe challenges to their future viability
4. One of their goals is to squeeze out non-facilities-based third party suppliers who use their facilities;
5. The carriers want to pursue new profit opportunities - charging ASPs to reach customers is a real possibility;
6. The essence of the carrier strategy is to weaken the ability of regulators to prevent discriminatory behaviour on their part. In this the cable industry's interests are aligned with those of the telephone industry.
7. The Internet was founded in and fostered by a conscious regulatory program that prevented discrimination by carriers, deregulated computer-based services, and allowed innovation in computer-based services without the permission of the carriers.
8. The goal of the carriers is to reduce regulation for the purpose of squeezing more profit out of users and suppliers of the Internet, and thereby to threaten the sources of innovation that threatens them.
9. The Internet will be damaged by the weakening of strictures against discrimination by carriers against their rivals, and with it, the economic growth of Canada.

### **5.1.1 There is now a duopoly in most areas of Canada (and the United States) in broadband Internet access: the cable company and the telephone company.**

This fact is so evident that argument would be superfluous. High-speed now accounts for 80.4% of residential Internet subscriptions, and the companies that are able to supply it in any given region are the local cable and telephone incumbents. The enormous difficulties put in the way of independent ISPs offering high speed have been recounted in this memorandum and elsewhere.

The Cyberetelecom<sup>23</sup> website discusses the adequacy of broadband competition in these terms:

“Previously, in a competitive ISP market, net neutrality was not a pressing issue. With so much competition, if one ISP did not provide you with the best service, you switched services. According to some research, individuals had on average a choice of 10 ISPs. According to Boardwatch Magazine (no longer in publication), at the height of the market, there were over 7000 ISPs in the United States....

“Now there are generally a [broadband ISP duopoly](#): [DSL](#) from your incumbent telephone company or [cable](#) from your incumbent cable company (note that the FCC has essentially done away with [DSL](#) unbundling and linesharing - in the past where you might have been able to get [Covad](#) DSL over [Verizon](#) copper, this is all going away)<sup>24</sup>. If you are lucky to have [fiber](#), there is really only one choice (fiber replaces, not competes with, DSL and cable).

“It is debatable whether there is choice even a choice of two. In many places, there may be only one (or no) service provider ([Municipal Broadband](#) efforts are evidence of this lack of sufficient competitive available broadband service). Where there are two - not considered a competitive market by economists - there still is essentially be no competitive choice. For those who do not subscribe to cable, the incremental cost of cable Internet can be double the cost of DSL (cablecos add on \$15-20 if you don't subscribe to cable video). If one subscribes to cable, the superior bandwidth of cable means that the only competitive choice may be cable Internet. Or if one needs a VPN, and cable internet blocks [VPNs](#), then the only choice is DSL. In terms of microeconomics - the choices available to any one individual - the choice is very limited and the switching costs are very high.”

With appropriate modifications, the situation is the same in Canada. If the draft Policy Directive is implemented in the sense in which it was written, the situation will only become more similar.

### **5.1.2 Canada does not lack for broadband access, and the relationship of the policy to the goals pursued is non-existent**

The CRTC's “Status of Competition in Canadian Telecommunications Markets Deployment/Accessibility of Advanced Telecommunications, Infrastructure and Services”<sup>25</sup>, July 2006, gave a remarkably interesting factual basis for the issues under discussion in this context.

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<sup>23</sup> <http://www.cybertelecom.org/ci/neutral.htm>

<sup>24</sup> Which is precisely what the draft Policy directive is proposing, in effect.

<sup>25</sup> <http://www.crtc.gc.ca/eng/publications/reports/PolicyMonitoring/2006/tmr2006.htm>

- ✍ Telcos and cable are tied in the retail Internet access market.

“The Internet market continued to have strong growth and remained competitive. The Internet market was again one of the fastest growing markets in the industry. Internet revenues increased from \$4.2 billion in 2004 to \$4.5 billion in 2005, a \$0.3 billion or 8.8% increase. The incumbent telephone companies had 43% of the retail Internet access revenues in 2005, while the cable BDUs had 42% and all other competitors, including the incumbents' out-of-territory operations, had the remaining 16%. The four largest Internet service providers (Bell Canada, TELUS Communications Company, Rogers Communications Inc. and Shaw Cablesystems Ltd.) and their affiliates accounted for 63% of the retail Internet revenues in 2005.”

- ✍ Fifty-one percent of Canadian households had high-speed Internet services.

Ninety-eight percent of urban households can access broadband service versus 74% of the rural households up from 68% in 2004. In 2005, 64% of Canadian households had an Internet subscription. There were far more high-speed Internet households (51%) than there were households with dial-up subscriptions (13%).

These figures compare favourably with Internet penetration in the European Union, for example.

A webpage called Internet World Stats<sup>26</sup> gives EU Internet penetration in 2005 as 49.8% of households, whereas North America's is given as 68.6%, and Canada's in particular is stated to be 67.9%<sup>27</sup>, which is consistent with the CRTC's figure of 64% for Canada. The Internet world stats page says that its figures were updated as of June 2006. They list as sources Nielsen/Net Ratings, the ITU and other reputable sources.

- ? Clearly, there is no crisis of under-consumption that justifies a radical policy shift to favour certain carriers over all others, carriers, consumers and ASPs.

The following is taken from the CRTC's report.

#### **Extract from Table 4.4.7 Residential Internet access revenues and market share by access technology**

	2003		2004		2005		Growth 2004- 2005	CAGR 2003- 2005
	Revenues (\$M)	Share*	Revenues (\$M)	Share*	Revenues (\$M)	Share*		
Total								
Dial-up	561	24.6%	433	17.2%	362	13.0%	-16.5%	-19.7%

<sup>26</sup> <http://www.internetworldstats.com/stats4.htm>

<sup>27</sup> <http://www.internetworldstats.com/stats2.htm>

High-speed	1,719	75.4%	2,090	82.8%	2,429	87.0%	16.2%	18.9%
Total	2,280		2,523		2,791		10.6%	10.6%

Source: CRTC data collection

Notes:

(a) Access mode share shows access mode's share of total revenues in same category.

(b) Access mode share for residential dial-up, for example, shows residential dial-up's share of total residential revenues.

(c) High-speed includes the remaining technologies, including cable modem, DSL and fixed wireless.

The table 4.4.7 clearly shows that high speed access, measured by cable modem, DSL and fixed wireless, accounted in 2005 for 87.0% of all revenues earned from residences for access to the Internet.

Since high-speed is now the favoured method of reaching the Internet, and interconnection through the cable industry is not encouraged, few opportunities remain for the independent ISP industry to compete effectively for customers. This decline is reflected in the following table 4.4.3, drawn likewise from the CRTC Telecommunications Monitoring Report.

- ✍ The ISP industry (the "other" category in table 4.4.3 below) saw its proportion of access revenue decline from 22.2% in 2003 to 12.1% in 2005.

**Table 4.4.3**  
**Internet access service revenues by type of provider**  
**(\$ millions)**

	2003		2004		2005	<i>Growth</i> 2004-2005	<i>CAGR</i> 2003-2005
Incumbents	1,219.0		1,432.4		1,554.0	8.5%	12.9%
<i>Market share</i>	40.1%		42.9%		42.6%		
Competitors							
Cable BDUs	1,108.2		1,284.6		1,520.1	18.3%	17.1%
<i>Market share</i>	36.5%		38.5%		41.6%		
ILECs out-of-territory	35.1		114.5	#	134.9	17.8%	96.1%
<i>Market share</i>	1.2%		3.4%		3.7%		
<b>Other</b>	<b>675.2</b>	<b>#</b>	<b>508.3</b>	<b>#</b>	<b>443.1</b>	<b>-12.8%</b>	<b>-19.0%</b>
<i>Market share</i>	22.2%		15.2%		12.1%		
Competitors Total	1,818.5	#	1,907.4	#	2,098.1	10.0%	7.4%
<i>Market share</i>	59.9%		57.1%		57.4%		
Total	3,037.4	#	3,339.8	#	3,652.1	9.4%	9.7%

Source: CRTC data collection

Consolidation continues in the access industry. Table 4.4.4 shows that the four largest Internet access service providers (Bell, Telus, Rogers, Shaw) and their affiliates continue not only to dominate the market but steadily increase their market share of the retail Internet access market, growing from 44% in 2001 to 63% in 2005.

- ✍ Revenues accruing to the independent ISPs have declined 12.8% from 2004 to 2005 and have declined nearly 20% in the past two years.

### Extract from Table 4.4.9 Residential Internet subscribers by type of provider

	2001		2002		2003		2004		2005		Growth 2004- 2005	CAGR 2001- 2005
	Sub- scri- bers /1000	Share*	Sub- scri- bers /1000	Share*	Sub- scri- bers /1000	Share*	Sub- scri- bers /1000	Share*	Sub- scri- bers /1000	Share*		

Dial-up	3,149	55.2%	3,020	46.1%	2,500	35.6%	2,025	27.2%	1,568	19.6%	-	-
High-speed	2,558	44.8%	3,527	53.9%	4,513	64.4%	5,416	72.8%	6,429	80.4%	18.7%	25.9%
Total	5,706		6,547		7,013		7,442		7,997		7.5%	8.8%

Notes: Percentages refer to access mode's proportion of all residential Internet subscriptions of its type, except for the total rows, where they are a proportion of total industry residential subscriptions.

Source: CRTC data collection

There has been a shift in residential Internet access subscriptions from dial-up to high-speed Internet access from 2001 to 2005. As displayed in Figure 4.4.2, in 2001, the majority (55%) of Internet access was by dial-up access. Five years later, in 2005, dial-up access was 20% of all residential Internet subscriptions. High-speed access is now the dominant means of accessing the Internet, comprising 80% of all residential Internet subscriptions.

- ✍ The CRTC frankly concludes that the inability of the independent ISP to offer high-speed services is the major cause of their decline in revenue and market share.

The CRTC data show that 80% of residential Canadian Internet subscriptions are high-speed.

By contrast, the Telecommunications Policy Review (TPR) stated that

Canada has been a world leader in broadband availability and use. In June 2005, we still ranked sixth among OECD countries in broadband penetration per 100 inhabitants.

The OECD statistics showed that Canada was grouped with a bunch of other countries around the 20% mark, with Korea in the lead at 25% broadband household (HH) penetration. The TPR expressed concern that Canada's status was slipping as other countries put into effect aggressive deployment strategies. They based their concerns on the following statistics of the OECD<sup>28</sup>.

### Data June 2005

#### Broadband subscribers per 100 inhabitants, by technology, June 2005

	DSL	Cable	Other	Total*	Rank	Total Subscribers
Korea	13.9	8.9	2.7	25.5	1	12 260 969
Netherlands	13.6	8.9	0	22.5	2	3 642 315
Denmark	13.2	6.1	2.4	21.8	3	1 176 637
Iceland	21.0	0.3	0.4	21.7	4	63 553
Switzerland	12.7	7.2	0.4	20.3	5	1 515 446
<b>Canada</b>	<b>9.4</b>	<b>9.7</b>	<b>0.1</b>	<b>19.2</b>	<b>6</b>	<b>6 142 662</b>
Finland	16.3	2.2	0.2	18.7	7	978 600
Belgium	11.0	7.3	0	18.2	8	1 899 652
Norway	14.8	2.5	0.9	18.2	9	836 060
Sweden	11.3	2.7	2.5	16.5	10	1 482 843
Japan	11.0	2.4	3.0	16.4	11	20 953 090
United States	5.5	8.0	1.1	14.5	12	42 645 815
United Kingdom	9.7	3.8	0	13.5	13	8 095 000
France	11.9	0.8	0	12.8	14	7 935 900
Austria	7.0	5.4	0.1	12.5	15	1 025 036

<sup>28</sup> [http://www.oecd.org/document/16/0,2340,en\\_2825\\_495656\\_35526608\\_1\\_1\\_1\\_1,00.html#data2004](http://www.oecd.org/document/16/0,2340,en_2825_495656_35526608_1_1_1_1,00.html#data2004)

Final	August 16, 2006					The Coalition's Comments
Luxembourg	10.4	1.3	0	11.8	16	52 920
Australia	8.5	2.4	0.1	10.9	17	2 183 300
Germany	9.9	0.3	0.1	10.2	18	8 439 732
Italy	9.4	0	0.6	10.0	19	5 783 319
Portugal	5.1	4.7	0	9.9	20	1 031 491
Spain	7.0	2.2	0.1	9.3	21	3 949 234
New Zealand	6.4	0.3	0.3	6.9	22	283 798
Hungary	2.9	1.6	0.1	4.6	23	469 186
Ireland	3.5	0.4	0.5	4.3	24	175 500
Poland	2.5	0.7	0.1	3.3	25	1 250 000
Czech Republic	1.8	1.0	0	2.8	26	284 200
Slovak Republic	1.2	0.3	0.1	1.6	27	86 958
Turkey	1.1	0	0	1.2	28	862 843
Mexico	0.8	0.2	0	1.0	29	1 051 854
Greece	0.8	0	0	0.8	30	93 287
<b>OECD</b>	<b>7.2</b>	<b>3.8</b>	<b>0.8</b>	<b>11.8</b>		<b>136 651 000</b>

The CRTC's figure of penetration is of subscribing households. The press release accompanying the annual report shows that 64% of Canadian households had subscribed to Internet.<sup>29</sup> Multiplying the percentage of households (HH) subscribing to the Internet by the proportion of HH with high speed, (80.4%), we derive  $0.64 \times .804 = .512$ , or 51.2% of the Canadian households actually subscribed to high speed service in 2005. (The calculation confirms the earlier cited figure of 51%).

Variations in a statistical figure of 51.2% broadband access from one source and 19.2% from another are not explainable on the basis of the material before us. This disparity does not arise from a terminological confusion. Both include as "broadband" DSL, cable modem and wireless access.

It is deplorable that a major policy initiative is being predicated on non-existent problem, derived from erroneous statistics. The TPR cited a figure that would have us believe that, since our relative position in high speed access is only among the top six countries in the world, we must eliminate the independent ISP industry and establish a regulatory regime that would better enable carriers to discriminate in favour of themselves. The OECD data is flatly contradicted by reliable data from the federal regulator.

Indeed, the inference that increasing the power of some carriers over their customers, their rivals, and the Internet in general is the way to solve a *policy problem* is nonsensical. The problem is not in policy. The problem lies in the business competitiveness of the incumbent telephone companies versus other economic actors, for which they seek, as always, a remedy in the regulatory sphere, this time under the banner of "competition".

The TPR reported:

More rapid deployment of advanced telecommunications infrastructure would allow Canada to capitalize on the potential of high-speed networks to improve productivity and foster economic growth through the provision of advanced services. The Panel is concerned that by losing its lead in broadband, Canada may be missing out on a multitude of economic and social benefits, and may be losing "first mover" advantages from rapid deployment of advanced network infrastructure

The Coalition is equally concerned for Canada's productivity and by the possibility of our falling behind. The Coalition has a completely different interpretation of the policy encapsulated in the Policy Directive.

In our view the Directive's result will be to keep incumbent carriers well protected from emergent sources of competition by allowing them to discriminate more freely. The relationship of the Policy Directive to its stated goal – greater broadband deployment- is non-existent, and vitally other important national economic and social goals, such as the open internet, are being threatened and possibly sacrificed for no real gain.

### **5.1.3 The telephone companies have lost massive amounts of income from rival technologies and face severe challenges to their future viability**

The regulatory world encourages a narrow and deep focus. Knowing arcana such as when “basic” services were distinguished from “enhanced”, or “essential” from “non-essential” can fill many an exchange among the initiated on list serves, but the real purpose of all of this regulatory arcane is money. Lots and lots of money.

The telephone industry in the United States has seen in the past five years a reduction in its revenues larger than the total amount of the annual earnings of some industries. The purpose of the Coalition's intervention is in part to draw the government's eyes to what we think the real game is: saving the telephone companies from the extinction of the voice calling business.

The following is freely taken with permission from Mark Del Bianco's study “Voices Past: The Present and Future of VoIP Regulation”<sup>30</sup>, for which the author is grateful.

“The remarkable growth of VoIP, together with the parallel expansion of broadband and wireless service is leading to a permanent structural change in the voice services market. This change is leading to a dramatic decline in revenue from landline voice services in countries around the world, including the United States. That revenue loss will begin to accelerate in 2006 and continue through the decade. In September 2005, News Corp. Chairman Rupert Murdoch argued that voice service will be nearly free in a few years.<sup>31</sup> A few weeks later, eBay's chief executive, Meg Whitman, publicly agreed. She claimed that users can expect to make phone calls for free in three to six years.<sup>32</sup> According to the views of Mr. Murdoch and Ms. Whitman, voice communications will be part of a package of IP services upon which carriers will make money through advertising or transaction fees.<sup>33</sup> These claims should not be taken lightly. The trend is unmistakable: consumers will pay little or nothing for a large portion of their voice services by 2010.

“A key driver in the regulation of VoIP services is the perceived need to address

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<sup>30</sup> 365 CommLawConspectus vol.14 at [http://commlaw.cua.edu/abstracts/14\\_2.cfm](http://commlaw.cua.edu/abstracts/14_2.cfm)

<sup>31</sup> Alan Breznick, *Moves by VoIP Players Could Dampen Cable's Voice Ambitions: eBay's Purchase of Skype Sparks Concerns About IP Telephony Price Wars*, CABLE DIGITAL NEWS, Oct. 01, 2005, <http://www.cabledatcomnews.com/oct05/oct05-5.html>. Murdoch cited the rapid growth of Skype and the likely development of rival free Internet phone services from such major players as Yahoo! and Google. *Id.*

<sup>32</sup> Doug Mahoney, *eBay Signs onto Free Phone Calls*, VONMAG., Oct. 20, 2005, [http://www.vonmag.com/webexclusives/2005/10/20\\_eBayFreecalls.asp](http://www.vonmag.com/webexclusives/2005/10/20_eBayFreecalls.asp).

<sup>33</sup> *Id.*

the economic effects on the existing voice business. Landline voice revenues in the United States were almost \$229 billion in 2000; in 2004 they were only about \$196 billion.<sup>34</sup> This \$33 billion decline in annual landline voice revenues in the past five years dwarfs the total revenues of many U.S. industries. Hollywood movie studios, for example, gross less than \$10 billion a year from U.S. movie theaters, while U.S. radio networks earned only about \$20 billion in annual revenues in 2004.<sup>35</sup> Thus, the decline in annual voice revenues is already larger than the combined 2004 revenues for the movie and radio industries' main sources of income. (*emphasis added-TMD*) Similar declines are forecast for other countries.<sup>36</sup> The worst is yet to come: those revenues are inevitably going to shrink further and faster over the rest of this decade.<sup>37</sup> Even analysts who disagree with the Murdoch-Whitman "voice will be free" position estimate that United States and European landline voice revenues may decline by as much as 1/3 or more in the next five years.<sup>38</sup>

"The U.S. experience is not unique, and it is unclear whether the United States leads other countries in the rate of revenue decline. Nevertheless, it is clear that the trend is being repeated throughout the world.<sup>39</sup> A revenue decline of this magnitude in one industry has rarely occurred in United States or global economic history.

"The challenge for incumbents is to manage this revenue decline while transitioning to a new broadband world. How can they slow the decline of their existing voice revenue stream while they begin generating new broadband revenue streams? One tried and true—and, in most countries, very cost effective—way is to lobby legislators and regulatory agencies to impose regulatory obligations on new VoIP competitors.<sup>40</sup>"

The decline of landline voice revenue is comparable in Canada. The following comes from the aforementioned 2006 CRTC report.<sup>41</sup>

<sup>34</sup> Gary Kim, *Telecom Drought Over*, VOIP BUS. WKLY., Feb. 2, 2006, [http://www.voipweekly.com/features.php?feature\\_id=40](http://www.voipweekly.com/features.php?feature_id=40).

<sup>35</sup> See Yearly Box Office, <http://www.boxofficemojo.com/yearly/?view2=domestic&view=releasedate&p=.htm> (last visited Jan. 28, 2006); Press Release, Radio Adver. Bureau, Radio Tops \$20 Billion in 2004 Revenue Marking Its Biggest Year Ever (Feb. 1, 2005), [http://rab.com/public/pr/revenue\\_detail.cfm?id=49](http://rab.com/public/pr/revenue_detail.cfm?id=49).

<sup>36</sup> Press Release, Analysys, Western European Fixed Voice Revenues Could Fall by EUR29 Billion by 2009 (Mar. 3, 2005), [http://www.analysys.com/default\\_acl.asp?Mode=article&iLeftArticle=1863&m=&n=](http://www.analysys.com/default_acl.asp?Mode=article&iLeftArticle=1863&m=&n=).

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*; see also ITU IP TELEPHONY REPORT, *supra* note 17, at 21–32.

<sup>40</sup> Lobbying expenditures are required to be reported in few countries, so no estimate of total expenditures can be made. However, information on incumbents' United States lobbying expenditures gives an idea of their magnitude. See generally JOHN DUNBAR, CTR. FOR PUB. INTEGRITY, FORMER BELLS DIAL UP BIG NUMBERS IN STATEHOUSES (2005), <http://www.publicintegrity.org/telecom/report.aspx?aid=744>; DANIEL LATHROP, CTR. FOR PUB. INTEGRITY, BELLS VS. AT&T TELEPHONE LOBBYING SURPASSES HALF-BILLION (2004), <http://www.publicintegrity.org/telecom/report.aspx?aid=408>.

<sup>41</sup> <http://www.crtc.gc.ca/eng/publications/reports/PolicyMonitoring/2006/tmr2006.htm>

**Table 4.3.8**  
**Wholesale long distance revenues**  
**(\$ millions)**

	2003	2004	2005	Growth 2004-2005	CAGR 2003-2005
Incumbents	686	530	469	-11.5%	-17.3%
Competitors (ILEC out-of-territory)	130	270	270	0.0%	44.2%
Competitors (resellers and facilities-based)	337	141	118	-15.9%	-40.8%
Total	1,154	941	858	-8.8%	-138.0%

Source: CRTC data collection

The Executive summary of the CRTC report states that:

In the long distance market, revenues continued to decline, decreasing from \$5.6 billion in 2004 to \$5.1 billion in 2005, a \$0.5 billion or 8.6% decline. The number of long distance minutes, however, continued to increase in 2005 increasing by 10.1% when compared to the previous year. The incumbents' share of long distance revenues declined from 67% in 2004 to 64% in 2005.

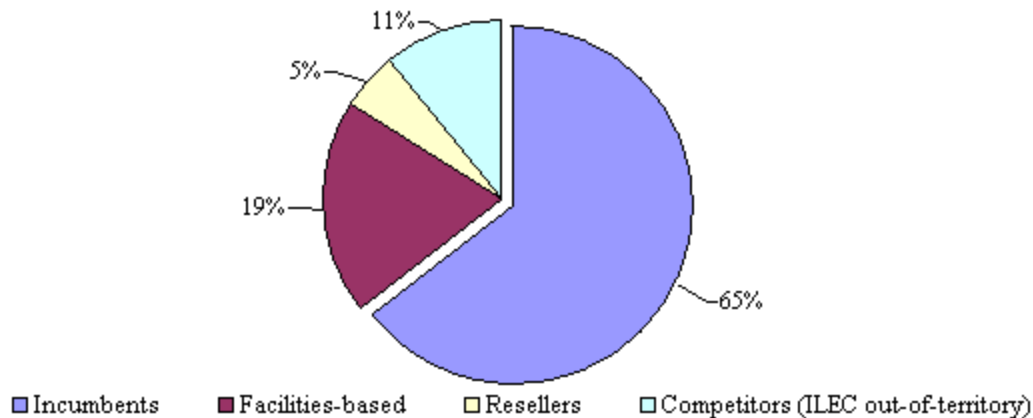
- ? To repeat, the telephone companies have experienced a *half billion dollars of decreased income in one year*. This is the crisis they wish the government to fix, not some OECD figures on national bandwidth consumption.

It is evident that, increasingly, the only pricing pattern that will be sustainable will resemble that of the Internet, where the toll-free "local calling area" is the size of the globe itself. In short, toll calling is soon to be a relic of the past, and those who have depended upon it seek relief in regulatory action.

#### **5.1.4 One of the carriers' goals is to squeeze out non-facilities-based third party suppliers who use their facilities**

The CRTC's 2006 Telecommunications Monitoring Report shows that non-facilities based service providers had 5% of the Canadian market. This five percent of total revenues was earned by 71% of Canadian service suppliers.

**Figure 3.1.1**  
**Total telecommunications revenue market share by type of service provider (2005)**



Source: CRTC data collection

The share of the market held by ISPs (resellers) has shrunk by nearly 10%. In part this reflects the result of regulatory decisions which have declined to enforce third party access obligations on the cable industry, since, as the market has moved to higher access speeds, the shift away from dial-up proceeds and the cable industry has proven exceedingly difficult to obtain interconnection from.

It should be recalled that the long distance revenues of the carriers are in precipitous decline, and that the growing source of revenue is Internet access. Table 4.1.2 of the Monitoring Report illustrates this trend nicely.

**Table 4.1.2**  
**Segmented telecommunications service revenues**  
**(\$ billions)**

	2002	2003	2004	2005	Growth 2004-2005	CAGR 2002-2005
Wireline						
Local and access	10.0	9.7	9.7	9.8	0.7%	-0.8%
Long distance	6.5	5.9	5.6	5.1	-8.6%	-7.9%
Internet	3.3	3.7	4.2	4.5	8.8%	11.3%
Data and private line	4.5	4.5	4.4	4.1	-7.2%	-3.4%
Total wireline	24.4	23.8	23.9	23.5	-1.6%	-1.2%
Wireless	7.1	8.0	9.5	11.0	16.2%	15.7%

Total industry	31.5	31.9	33.3	34.5	3.5%	3.1%
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Source: CRTC data collection

Figure 4.1.2 compares the distribution of telecommunications revenues by market sector in 2001 to 2005. Over this five-year period, Internet and wireless revenues as a percent of total revenues increased significantly. When combined, the revenues from these two market sectors accounted for 45% of total telecommunications revenues in 2005 compared to 28% in 2001. Conversely, the revenues from the remaining three sectors, local and access, long distance, and data and private line, as a percent of total telecommunications revenues, declined to 55% in 2005 from 72% in 2001.

- ? Revenue from Internet access has increased by 8.8% over one year, while long distance declined 8.6% in the same period.

On the same subject of Internet access, the incumbents are garnering a larger portion of that revenue stream and the independent ISPs a smaller share, as shown in Table 4.4.5

**Table 4.4.5**  
**Residential Internet access revenues by type of provider**  
**(\$ millions)**

	2001	2002	2003	2004	2005	<i>Growth 2004- 2005</i>	<i>CAGR 2001- 2005</i>
Incumbents	551.5	780.0	892.0	1,041.8	1,158.4	11.2%	20.4%
<i>Market share</i>	37.7%	40.1%	39.1%	41.3%	41.5%		
Competitors							
Cable BDUs	570.8	846.2	1,049.3	1,218.5	1,392.7	14.3%	25.0%
<i>Market share</i>	39.0%	43.6%	46.0%	48.3%	49.9%		
ILECs out-of-territory	-	-	-	9.0	10.1	12.7%	
<i>Market share</i>				0.4%	0.4%		
Other	339.6	316.9	338.2	254.3	229.2	-9.9%	-9.4%
<i>Market share</i>	23.2%	16.3%	14.8%	10.1%	8.2%		
Competitors Total	910.4	1,163.0	1,387.5	1,481.8	1,632.1	10.1%	15.7%
<i>Market share</i>	62.3%	59.9%	60.9%	58.7%	58.5%		
Total	1,461.9	1,943.0	2,279.5	2,523.6	2,790.5	10.6%	17.5%

Source: CRTC data collection

The decline in the competitors' (other) residential market share is largely explained by the fact that these competitors have a very small share of the growing residential high-speed access market as shown in Table 4.4.9.

Table 4.4.9 indicates that over the 2001 to 2005 period, the competitors (other) had between 1.2% and 4.4% of the high-speed Internet subscribers. When compared to their dial-up subscriptions, the competitors (other) had 2.5 times as many dial-up subscribers as high-speed subscribers.

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The CRTC's explanation above is not complete, in the sense that it does not tell about its own decisions to treat the high-speed market separately from the lower-speed dial-up market. Interconnection arrangements applicable to the telephone-based dial-up market were not made mandatory for a long time for the cable market. Nor do they relate the long campaign successfully waged by the North American cable industry through its DOCSIS standard setting to make interconnection impossible while the DOCSIS standard was under development for five years.

The success of the cable industry in keeping out third-party suppliers until recently has naturally caused the telephone industry to emulate their behaviour in the name of regulatory consistency and fairness. This was precisely the basis on which the FCC got rid of access obligations on the telephone industry.<sup>42</sup>

### **5.1.5 The carriers want to pursue new profit opportunities - charging ASPs to reach customers is a real possibility;**

Faced with really catastrophic possibilities that the long distance voice market may evaporate from a variety of Internet-based alternatives, the incumbent telephone carriers face unprecedented revenue challenges. They have responded adroitly in the arena of which they are the masters, the *regulatorium*: the collection of regulatory agencies, ministries and interest groups which are prepared to give them a hearing. The creation of the Telecom Policy Review<sup>43</sup> can be seen as the opening move in the governmental arena. Telecommunications Policy Review called for a real shake-up of the CRTC, the first in decades, by requiring it to justify its actions more stringently than before. The Coalition has no quarrel with this in principle. Nor does the Coalition have a quarrel with much of the content of the proposed policy directive. However, we observe as a fact that the large players in the telecommunications industry expressed strong frustration with the premises and assumptions of much of the CRTC's regulatory activity in recent years.<sup>44</sup> They sought to replace an existing regime where regulation was assumed, to one where

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<sup>42</sup> The FCC announcement is found at <http://www.teletruth.org/docs/FCCISPelimDOC-260433A1.doc>

<sup>43</sup> [http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/en/h\\_rx00094e.html](http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/en/h_rx00094e.html)

The TPR Panel was appointed on April 11, 2005.

<sup>44</sup> See for instance, Bell Canada's Detailed Policy recommendations to the TPR at [http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/vwapj/D-Regulatory\\_Policy.pdf/\\$FILE/D-Regulatory\\_Policy.pdf](http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/vwapj/D-Regulatory_Policy.pdf/$FILE/D-Regulatory_Policy.pdf)

light handed regulation would be the rule, and regulation would not be automatically presumed.

The second aspect of this sea-change in assumptions is the desire to engage in greater or more frequent price discrimination: charging people different prices according to the perceived value of the commodity being transported. The point which needs to be emphasized in this context is that price discrimination is a rational response by any carrier to the differing values of the packages or loads it carries.<sup>45</sup> The motive to price discriminate may be natural, but common carrier regulation was set up to limit its application in situations where carriers have market power.

The traditional model we have experienced for decades is that the end-user paid for the network. Telephone subscribers have paid for the cost of the network. Cable subscribers did likewise. The cable industry was gradually forced to pay copyright royalties for the video product it distributed, under pressure from US rights-holders.

It was the essence of the common carrier model that the regulator approved tariffs (prices and conditions of service) on the basis that there would be no undue or unjust discrimination among or against customers. The laws governing North American telephone companies started with the premise that services would be regulated. These statutes can be traced back to shortly after 1900, when telephone companies emerged. Laws regulated conditions of service because of the relatively much greater power that phone companies could exercise against their customers. In return, the telephone companies were allowed to consolidate local and then long-distance monopolies. Theodore Vail, then president of AT&T, saw that the price of the long distance monopoly was going to be regulation. Thus began a comfortable though argumentative relationship to government that has persisted until the present.<sup>46</sup>

Now, sixteen years<sup>47</sup> after the introduction of the World Wide Web brought the Internet to everyone's attention, two strategies are being contemplated: 1) a greater ability to discriminate among and between customers, which can only be achieved by a different regulatory environment; and 2) if this ability be granted, then the carriers can charge applications services providers (ASPs) – those who put products and services out into the Internet – for the right to make products and services available.

This ability to charge suppliers as well as customers, or to engage in greater price discrimination, depends on the amount of competition in carrier systems reaching the home. If competition is adequate we do not need regulation to maintain the neutrality of the carriers towards sources of supply. If competition is not adequate, we do.

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<sup>45</sup> Andrew Odlyzko is particularly good on this subject. See, for instance, "The Evolution of Price Discrimination in Transportation and its Implications for the Internet", at [http://www.rnejournal.com/articles/odlyzko\\_RNE\\_sept\\_2004.pdf](http://www.rnejournal.com/articles/odlyzko_RNE_sept_2004.pdf)

<sup>46</sup> The Telecommunications Policy Review is an instance of dissatisfaction by carriers leading to regulatory changes.

<sup>47</sup> The software for the World Wide Web was issued by Tim Berners-Lee from the CERN site in 1991. See <http://www.zakon.org/robert/internet/timeline/>

**5.1.6 The essence of the carrier strategy is to weaken the ability of regulators to prevent discriminatory behaviour on their part. In this the cable industry's interests are aligned with those of the telephone industry.**

At the moment, for most Canadians, the ability to reach the Internet is limited to two choices consistent with the bandwidth needed for most applications: cable modem or DSL (digital subscriber line). The thrust of the policy directive in question is to cause the CRTC to end the policy that allows effective higher-speed resale through the use of "non-essential" DSL facilities. The net result of the policy under discussion will be to strengthen the duopoly of cable and telephone companies in reaching the customer.

This policy has already been adopted by the FCC in the United States for DSL and cable offerings. The Federal Communications Commission (FCC), on August 5th 2005, put out a press release "FCC Eliminates Mandated Sharing Requirement on Incumbents' Wireline Broadband Internet Access Services". The purpose of the policy was said to put telephone DSL offerings on the same competitive footing as cable modem offerings. DSL was subject to interconnection requirements with rivals, cable offerings were not.<sup>48</sup>

By this policy directive, Canada is following suit.

Either:	
There is plenty of competition and Network Neutrality is provided by the market	or
	There is insufficient competition and Network Neutrality must be provided by regulation

As the Cybertelecom<sup>49</sup> reference page says:

"Both sides will argue that their position favors innovation, creativity, and development. Those against regulation argue that the government will thwart innovation. Those in favor of network neutrality regulation argue that the significant market power of monopoly or duopoly local broadband service providers...will thwart innovation."

Quoting from Mr. Del Bianco<sup>50</sup> again:

<sup>48</sup> The announcement is found at <http://www.teletruth.org/docs/FCCISPelimDOC-260433A1.doc>

<sup>49</sup> <http://www.cybertelecom.org/ci/neutral.htm>

<sup>50</sup> 365 CommLawConspectus vol.14, at page 395 at [http://commlaw.cua.edu/abstracts/14\\_2.cfm](http://commlaw.cua.edu/abstracts/14_2.cfm)

Depending on how net neutrality is defined, it can be argued that there are widespread violations of the principle. Vertically integrated incumbents are expanding their tactics from the shotgun approach of blocking, to a more nuanced approach. In the United States particularly, incumbents are looking to increase their broadband revenue streams not by blocking, but by discrimination, charging more for faster download speeds or for certain types of traffic sent by unaffiliated parties.<sup>51</sup> This approach is greatly facilitated by new filtering and “deep packet inspection” network-management tools that allow service providers to determine the types of traffic flowing across their networks.<sup>52</sup> With these tools, network operators can offer improved speeds—and, conversely, to block or degrade the service—for specific types of traffic.<sup>53</sup> It is not just Skype, Vonage, and other VoIP providers that are at risk. Most international telephone calling cards also use VoIP technology and could be subject to this type of blocking or discrimination.<sup>54</sup> In addition, incumbents, at least in the United States, have made clear that they view other providers of other applications services that compete with their own products and services, such as Microsoft Corp. (“Microsoft”) and eBay, as targets for similar discrimination.<sup>55</sup>

The concern of the Coalition is that the Policy Directive will, by weakening the competitive access market by the intended elimination of the independent ISP, mark the beginning of a process whereby carriers will be gradually liberated from their obligations not to discriminate.

The forms of discrimination can be many:

- ✍ Require third party content providers like Google or Amazon to pay that provider a premium in order to deliver their content, creating a [Two Tiered Internet](#).
- ✍ [Block](#) competitors like Vonage and Skype.
- ✍ Filter out criticism of what that provider is doing
- ✍ Use the [AUP](#) (authorized use policies) to prohibit a wide range of activities, including [criticism](#) of the service provider.

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<sup>51</sup> See At SBC, *It's All About "Scale and Scope"*, BUS. WK., Nov. 7, 2005, [http://www.businessweek.com/magazine/content/05\\_45/b3958092.htm](http://www.businessweek.com/magazine/content/05_45/b3958092.htm); Jonathan Krim, *Executive Wants to Charge for Web Speed: Some Say Small Firms Could Be Shut Out of Market Championed by BellSouth Officer*, WASH. POST, Dec. 1, 2005, at D5; *QOS Fees Could Change Everything*, LIGHT READING, Jan. 12, 2006, [http://www.lightreading.com/document.asp?doc\\_id=86495](http://www.lightreading.com/document.asp?doc_id=86495).

<sup>52</sup> Earthlink Ex Parte Filing *supra* note 199, ¶ 5.

<sup>53</sup> *Id.* at 1–2, 4; see also *In re SBC Communications Inc. and AT&T Corp. Application of Transfer of Control, Memorandum Opinion and Order*, 20 F.C.C.R. 18,290 (Nov. 17, 2005) [hereinafter *SBC/AT&T Merger Approval Order*], (discussing the merged companies' ability to selectively discriminate content carried on their networks).

<sup>54</sup> Cherry, *supra* note 207.

<sup>55</sup> See, e.g., Jeff Smith, *Qwest Watches as Others Weigh Fee for Faster Internet Services*, DENVER ROCKY MOUNTAIN NEWS, Jan. 9, 2006, at 6B.

- ✍ Prohibit [virtual private networks](#) - which are generally necessary for telecommuting - but also make it harder for the service provider to detect what applications and content are being used on its network.
- ✍ Prohibit individuals from operating [servers](#) in their homes.
- ✍ Limit the amount of [streaming media](#) that can be viewed.
- ✍ Prohibit Wifi (unlicensed wireless) networks in your home.
- ✍ Prohibit [P2P](#) (Peer to peer) applications.
- ✍ Refuse to let certain content, including competitor's [advertisements](#), over their networks.

So what and why should we care? The changes asked for by the government in relation to the CRTC are in many ways a useful stirring of the pot, with which the Coalition has expressed agreement. Creating a greater sense of urgency in regulatory decision-making, and shifting the presumption away from regulating are laudable objectives. Yet the Coalition urges the government to exercise great caution in not dismantling the regulatory regime that brought us the Internet.

### **5.1.7 The Internet was founded in and fostered by a conscious regulatory program that prevented discrimination by carriers, deregulated computer-based services, and allowed innovation in computer-based services without the permission of the carriers.**

The Internet came into being by a conscious set of actions in the US computer research community in alliance with the Defense Advanced Research Program Administration (DARPA). Larry Roberts, one of the first men in history to have three computer terminals in his office, all of them incompatible, asked the obvious question why they could not interconnect. Thus began the work that would culminate in the creation of the protocols that make the Internet what it is. The story is told in many places.<sup>56</sup>

There were three major decisions taken in the early years that kept the Internet protected from inappropriate regulation, and made it work the way it has.

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<sup>56</sup> "A Brief History of the Internet" by [Barry M. Leiner](#), [Vinton G. Cerf](#), [David D. Clark](#), [Robert E. Kahn](#), [Leonard Kleinrock](#), [Daniel C. Lynch](#), [Jon Postel](#), [Larry G. Roberts](#), [Stephen Wolff](#) at <http://www.isoc.org/internet/history/brief.shtml#Origins>

- a) Computer services were kept unregulated. They were declared “non-essential” or “enhanced” services, and the price regulation appropriate to those with market power was kept away from the highly competitive computer business<sup>57</sup>.
- b) Access was allowed to the Internet through telephone companies through what came to be known as Internet Service Providers (ISPs). This was the result of regulatory decisions allowing companies non-discriminatory access to the customer through the facilities of the telephone companies. (It is the purpose of the directive in question to cause the CRTC to suppress these decisions).
- c) The Internet itself was designed on what has been called the *end-to-end principle*, where as much intelligence as possible was placed at the edges of the network, in the hands of the user, and as little as necessary in the network.<sup>58</sup>

This last point needs explanation and emphasis. The point of the design of the Internet was to allow design decisions to be made by people who did not own the hugely expensive apparatus of physical networks. Innovations like email, the World Wide Web, ICQ, and Hotmail were all designed or created by single people, frequently non-Americans, working completely outside the carrier industries. What has made the world different in the past 15 years in computer-communications has come from sources far removed from the cable or the telephone industries.

The Internet has been called the “stupid network” in contrast to the “intelligent network” of the telecommunications companies. Its design was the deliberate decision of Bob Kahn and Vint Cerf and their team to keep functionality out of the center of the network, so that the freest possible scope would be allowed to innovation at the edge.<sup>59</sup>

As the Internet Society says in their public policy principles<sup>60</sup>:

“The genius of the Internet is that its decentralized architecture maximizes individual users’ power to choose (or create) and use the hardware, software, and services that best meet their needs, and if the Internet is to continue to be a platform for innovation and creativity, its open, decentralized nature must be preserved.”

As all services become absorbed into the Internet, all forms of communications become absorbed into it, and all forms of customer interaction.

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<sup>57</sup> Essentially the same decisions were made in the US and Canada in what were termed “Computer Inquiries”. See “The Legacy of the FCC Computer Inquiries” by Robert Cannon, chief counsel to the Office of Plans and Policy, FCC in the Federal Communications law Journal at <http://law.indiana.edu/fclj/pubs/v55/no2/cannon.pdf>

<sup>58</sup> The first major statement of the end-to-end principle is now recognized to have been made in 1984 by the computer scientists Saltzer, Reed and Clark in “End-to-End Arguments in System Design” <http://web.mit.edu/Saltzer/www/publications/endtoend/endtoend.pdf>

<sup>59</sup> This has been well documented in many places. One of the best high-level descriptions was David Isenberg’s Rise of the Stupid Network in 1997 at several sites, including <http://www.rageboy.com/stupidnet.html> “The Rise of the Stupid Network” is an observation of the consequences of the engineering design ideas Saltzer, Reed and Clark, in note 33.

<sup>60</sup> <http://www.isoc.org/pubpolpillar/principles.shtml>

It is the openness of the Internet to innovation that has given it its value. The expansion in bandwidth has followed the innovation in value. As people saw the value to them of what the Internet could offer, the demand for bandwidth has followed. Thus, as people discovered they could download music or share photographs, it made sense to move to higher bandwidth, such as DSL or cable modem. This openness to innovation has been at least as important as increasing bandwidth.

Unfortunately, the policy directive seems to concern itself only with one aspect of the equation, bandwidth, at the risk of innovation.

There are four essential features of network neutrality:

- ✍ Non-discriminatory routing of packets
- ✍ User control and choice over service levels
- ✍ Ability to create and use new services without prior approval of network operators
- ✍ Non-discriminatory peering of backbone networks

Daniel J. Weitzner, Principal Research Scientist, MIT Computer Science and Artificial Intelligence Laboratory, describes the importance of these principles in “The Neutral Internet: An Information Architecture for Open Societies”<sup>61</sup>

“These principles taken together constitute the social contract among Internet service providers that has been indispensable to its great openness and success. They are equally important regardless of whether the service is broadband or narrowband, wireless or wireline, fiber optic, copper pair or coax. Understanding the Internet requires taking this holistic view of the Internet as a set of business, technical and social arrangements. While traditional telecommunications policy thinking divides the world into 'facilities' and different bandwidth levels, these are not the appropriate categories within which we should regulate or de-regulate the Internet. Indeed, the very foundation of the Internet is its ability to connect efficiently a broad array of quite different networks, allowing a publisher of information to reach a global audience without regard to which network the recipient is on. To allow the nation's leading Internet access providers to upend this fundamental global understanding would be to undermine the Internet itself.”

### **5.1.8 The Internet will be damaged by the weakening of strictures against discrimination by carriers against their rivals**

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<sup>61</sup> The Neutral Internet: An Information Architecture for Open Societies” at <http://dig.csail.mit.edu/2006/06/neutralnet.html>

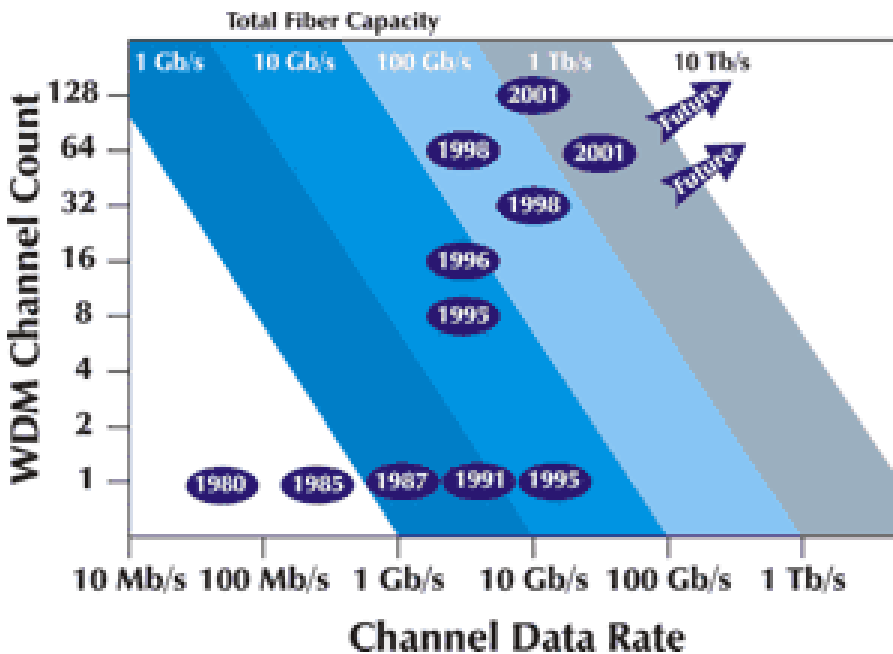
The claim that lies at the core of section 1 [c] ii of the policy directive, that there will be increased incentives for innovation, investment and construction of competing facilities, is that the incumbents will only get on with increasing bandwidth if they can make more money than they do now. It is that simple. How can this be done? By squeezing rivals out and by extracting more money, and one way, though not the only way, this can be done by eliminating mandated access to wholesale services which are not “essential” – that is, those that allow access to the “non-essential” Internet.

Thus, by reducing competition, the incentives to investment and construction can be increased, for some players at least. For others, they disappear.

The logic of economics is that, if prices go high enough, alternative facilities will be constructed by other economic players on a scale that would bring effective consumer choice greater than the cable and telephone companies can provide. There are only so many players who are large enough to get into the facilities business: power companies with rights of way, municipalities, and other companies with public rights of way. At the same time, the incentives being created by the directive are supposed to expand the investment in facilities by the existing players. That can only mean that the policy is intended to cause the incumbents to emplace optical fiber technology at a pace accelerated by the directive.

This seems to ignore the fact that once an optical fiber conduit gets into the house from any source, the bandwidth capacity is so enormous that there would be no further point in having any competitive infrastructure whatever. The first-mover advantage is such that no rational market entrant could challenge it.

**Figure 1: Projected Optical Fiber Capacity**



Source: "A Brief history of Fiber Optic Technology", Daniel Goff R. Goff. Fiber Optic Reference Guide, 3rd ed. Focal Press: Woburn, Massachusetts, 2002. <sup>62</sup>

It is beyond the scope of this brief to review the many repeated promises of telcos that optical fiber would be installed if only regulators granted them more money, which means in effect, more protection from competition. It is so constant a refrain, over so many decades, that books have been written about it. <sup>63</sup>

So what is the real game? This brings us to the second way carriers can make more money out of the Internet, besides squeezing out carriers who do not own facilities that reach the end customer. This is to charge money for allowing people to reach others. This is the traditional pattern of the Public Switched telephone Network (PSTN) but goes clean contrary to how the Internet has been set up and the model that has made it such a success.

Last year, Ed Whitacre, CEO of AT&T, declared:

"Now what they would like to do is use my pipes free, but I ain't going to let them do that because we have spent this capital and we have to have a return on it. So there's going to have to be some mechanism for these people who use these pipes to pay for the portion they're using. Why should they be allowed to use my pipes? The Internet can't be free in that sense, because we and the cable companies have made an investment and for a Google or Yahoo! or Vonage or anybody to expect to use these pipes [for] free is nuts!"<sup>64</sup>

In fact, all Internet customers have paid for access to every site on the web by means of fixed fees (monthly, yearly, hourly) for access. The customer's ISP pays an "upstream" provider for bandwidth, and this provider in turn pays a fee to larger ISPs and so on until the core of the Internet is reached. There, if a carrier is large enough, it will "peer", that is, exchange traffic with another peer of roughly equal size for free. If the carrier connecting to the core of the Internet is not of the size to obtain peering privileges, it will pay to "transit" across the facilities of this larger carrier to reach end points, such as an email server or a website that the originating customer wants to reach.

Two points are clear from this:

- a) Collectively, Internet customers pay for the whole cost of the Internet through their subscription fees. The customers include large services like Amazon who pay a price proportionate to the traffic load they generate; and

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<sup>62</sup> <http://www.fiber-optics.info/fiber-history.htm>

<sup>63</sup> Bruce Kusnick's "\$200 Billion Broadband Scandal" makes entertaining and shocking reading in this regard. See <http://www.newnetworks.com/broadbandscandals.htm>

<sup>64</sup> *At SBC, It's All About 'Scale and Scope'*, BusinessWeek online (Nov. 7, 2005) at [http://www.businessweek.com/@n34h\\*IUQu7KtOwgA/magazine/content/05\\_45/b3958092.htm](http://www.businessweek.com/@n34h*IUQu7KtOwgA/magazine/content/05_45/b3958092.htm)

- b) The individual customer does not have to negotiate with each carrier along the way for his email to reach the intended addressee. It is sufficient to know the domain name of the person he wishes to reach without having to negotiate a price with each carrier for each step along the way.

Mr. Whitacre's proposals involve people paying for the Internet twice, once for the infrastructure costs on a relatively fixed price basis, as we do now, and again for a user to have access to particular content on a per transaction basis. The scheme proposed by Mr. Whitacre of AT&T offends the original architecture of the Internet in more ways than just pricing.

Daniel Weitzner of MIT again:

“forcing a web site operator to pay twice so that a user can have access to its content would begin to break the unique many-to-many nature of how information is linked together on the Internet. Once data is put on the Internet (at a Web site, for example), then the speaker can be confident that anyone in the world can reach that data, regardless of which Internet Service Provider they use. While not everyone who requests that data will have the same quality of service, it is up to the requestor to decide what service level is appropriate for his or her needs. The provider of the content need not be involved in this decision and need not worry about negotiating a transport arrangement with every ISP of every potential user. The genius of the Internet is that it avoids this bottleneck and is thus about to act as an extraordinarily open conduit for speech and commerce. This is the heart of what makes the Internet different from other communications networks.

“The Web and other Internet services are built to take advantage of the real time, many-to-many communications capability of the underlying Internet. Many Internet applications we use appear to be largely just point-to-point, such as email. In fact, although the path of any given email is point-to-point, the various ISPs along that path are not known in advance to the sender. It would cripple the functionality of email as we know it if, in addition to knowing the right email address for your intended recipient, you also had to know that recipient's ISP and make arrangements to pay in advance for efficient transit over that ISP's network.”<sup>65</sup>

Metzner argues that there is much to be said for giving industry a freer hand in designing parts of the future Internet, though we need to be very careful about how industry is allowed to do this.

“The debate, and the very term 'Net Neutrality,' conflates a critical distinction between a focused need for important Internet neutrality principles and the broader question about whether or how to regulate *other* broadband

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<sup>65</sup> See note 60, *supra*

communications networks (such as digital cable television, or interactive services that may be developed separately from the Internet in the future). Internet neutrality is both a factual reality today and a necessity for the future. Whether neutrality or non-discrimination requirements should be applied to broadband networks more generally raises important communications policy questions that should be considered, but need not be decided immediately.”

It is time for Canada to start engaging in this sort of discussion about the Internet. The pressures to make the Internet into something more profitable for some players and more expensive and less useful for the rest of us are not confined to the United States. They will inevitably spill over into Canada. This is an area where the government can create the forum for discussions about how the Internet can be protected and enhanced, and how private enterprise can play a role in fashioning new arrangements that do not threaten the basic architecture that has brought us so many benefits.

#### **5.1.9 The Internet will be damaged by the weakening of strictures against discrimination by carriers against their rivals, and with it, the economic growth of Canada.**

Critics could say “this is all well and good, but who in Canada is attacking net neutrality?” To which one could respond: “What proposals are on the table to reduce the power of the CRTC to enforce the provisions of the Telecommunications Act against unjust or undue discrimination?”

The answers to those questions depend very much on one's interpretation of the whole tendency of regulation and policy in the United States and Canada in the past decade.

Policing against unjust or undue discrimination demands an energetic regulator who is not watching over his back for signs of the government's displeasure.

The answers also depend on the prevailing belief system of the period whether economic regulation can usefully stimulate competition and constrain market power. We seem to be in a decade where the belief is that regulation has been tried and found wanting.

Unfortunately, the net neutrality argument engages all the usual battles about discrimination and anti-competitive behaviour, at a time when governments seem to be sensitive to the worsening plight of large telephone companies, and inclined to look the other way at anti-competitive behaviour.

The Coalition considers that the terms of the Directive are such that the Commission would feel very reluctant to make the energetic measures needed to enforce policies allowing third parties to lease facilities to provide Internet access. The history of third party access rights to the Internet is a story of frustration, delay, regulatory indifference

and active countermeasures taken by the incumbents to keep the ISPs small. A recent CRTC decision indicates the Commission's indifference to their plight<sup>66</sup>.

It is a demonstrated fact that the growth of independent ISPs has stopped and that their market share is declining. They have not been permitted until recently, after five years of delay, to gain access to cable modem facilities of the cable industry. Their access to "essential" facilities of the telephone companies confines them to an obsolete engineering architecture predicated on collocation in central offices at a time when the telephone companies themselves are moving towards providing access from "remotes", which are closer to the customer. Access to "non-essential" facilities, such as DSL, is being actively hindered, with the government joining in on the hapless ISPs.

Competition in access facilities is one of the foundations of a competitive and useful Internet. The more the government strengthens the hands of the incumbent cable and telco industries, the closer we move to a situation where the discriminations now practiced against independent ISPs can be practiced against Google, Tucows, bloggers, websites, and anyone the carriers wish to extract more revenue from, for an Internet whose facilities are already fully paid for by subscribers today.

The Internet is a complex social contract among many players: carriers, users, and government. It needs some thoughtful concern for its future. Strengthening the hands of some carriers against all other players in the name of 'competition' will not lead to the results the government is seeking.

## **6. Conclusion and Recommendation**

Consequently, the Coalition requests that the proposed directives be amended as proposed to ensure that paragraph 1.c.ii is replaced with the following text:

With a view to providing increased incentives for innovation and investment, and to building a stronger competitive environment with greater choice, lower prices and better services for Canadians, conduct a review of its regulatory framework regarding mandated access to wholesale services to ensure that the definition of essential facilities and services is technologically and competitively neutral and adequately addresses the existence, where found, of significant market power with respect to network infrastructure.

Where significant market power is found, the CRTC is required to act proactively to ensure that this market power is effectively constrained at the upstream level via ensuring that the rates for competitor services are free from margin squeeze with regards to past current and prospective retail rates.

It is also important to recall that recommendation 3-5 of the TPR also states that there should be a transition period of 12 to 18 months, during which time services that are

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<sup>66</sup> <http://www.crtc.gc.ca/archive/ENG/Decisions/2006/dt2006-49.htm>

currently subject to economic regulation shall continue to be subject to such regulation **until there has been an opportunity to examine whether there is significant market power in markets for these services.**

In the view of Coalition, these proposed directives to the CRTC also require the CRTC to examine the market power of the incumbent telephone and cable carriers in the high-speed Internet access market, particularly the current level of retail rates in relation to their wholesale counterparts. Recommendation 3-8 of the TPR also states that where market power is found, the service should remain subjected to **presumably effective** sector-specific economic regulation until such time as they no longer possess market power.

The Coalition considers that the CRTC should be the subject of specific directives from Parliament to implement more effective economic regulation of the incumbent access services as requested by the Coalition members. In the meantime, if the CRTC should choose to set rates for wholesale services, it should do so having regard for the retail rates of the incumbents to ensure that the independent ISPs are no longer subject to margin squeeze.

All of which is respectfully submitted

Timothy Denton