Innovation, Science and Economic Development Canada

Telecommunications Legislative Review

Submission From Cybera Inc.

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ISED TELECOMMUNICATIONS LEGISLATIVE REVIEW
SUBMISSION FROM CYBERA INC.

Introduction

Cybera is a not-for-profit, technology-neutral agency responsible for accelerating high-tech adoption in Alberta. One of Cybera's core roles is the operation of Alberta's Research and Education Network, called CyberaNet. This is the dedicated network for unmetered, not-for-profit traffic used by Alberta's schools, post-secondary institutions and business incubators to aid innovation, enterprise and ingenuity.

Cybera is guided by a strategic leadership team and is home to some of the world's top cloud and networking experts who work together to build cloud infrastructure, data storage, and advanced networking solutions. In addition, Cybera is committed to robust advocacy for the right of Canadians to engage in the modern digital economy unencumbered by any and all barriers, including those social, financial or geographic in nature.

Cybera acknowledges the importance of updating Canada's telecommunications legislation to a modern context that seeks to foster accessible and affordable connectivity for all Canadians. The relationship between connectivity and socioeconomic wellbeing is well established. A 2011 study found that, among OECD countries, a 10% increase in broadband penetration raised per capita growth by 0.9-1.5 percentage points.[1] A study commissioned by the US Department of Commerce found 1-1.4% growth in local employment rates with the introduction of broadband.[2] As such, it is Cybera's position

[1] Czernich, Nina. "Broadband Infrastructure and Economic Growth." The Econoimc Journal 121.552. May 2011. 505-532
[2] US Department of Commerce. "Measuring Broadband's Economic Impact." Feb 2006: http://cfp.mit.edu/publications/CFP_Papers/Measuring_bb_econ_impact-final.pdf

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that the relationship between connectivity and Canadians' socioeconomic wellbeing should be viewed as a guiding principle of this legislative review.
Drawing on our expertise and public service mandate, Cybera's submission to ISED's telecommunications legislative review will prioritize those concerns that will improve connectivity and close Canada's digital divide.

Cybera will also propose that those issues related to rural, remote and First Nations connectivity be highlighted to a greater degree in future legislation and further that regulatory authorities be required to pursue a service-based, public-service infrastructure approach within any and all relevant legislation. Further, Canada's telecommunications legislation should seek to support the deployment of modern telecommunications services at affordable rates to all underserved sectors in Canada, delivered to a standard of service reflecting CRTC's Basic Service Objective target at a minimum.

In Cybera's view, these objectives should be viewed as a high priority by this panel and should be comprehensively reflected by those legislative policies the panel will recommend at the conclusion of this process.

Cybera sees opportunity for this legislative review to achieve these goals by;

- Restructuring policy objectives laid out in the Telecommunication Act and Radiocommunications Act to support open-access networks and service-based competition
- Enshrining the principle of universal and affordable coverage for rural, remote and First Nations communities as a policy objective in legislation
- Improving Net Neutrality protections through strengthening Sections 26 and 36 of the Telecommunications Act
- Restructuring the delegated responsibilities of CRTC, ISED, Heritage and the Competition Bureau to better foster efficiency and coherence

- Fostering a multi-stakeholder, collaborative approach with municipalities to facilitate 5G rollout
- Instituting guidelines to ensure transparency, proper representation and minimize the possibility of conflict of interest within the CRTC

Are the right legislative tools in place to further the objective of affordable high-quality access for all Canadians, including those in rural, remote and Indigenous Communities?

1. No, the right legislative tools are not in place to further the objective of affordable high-quality access for all Canadians. In particular, rural, remote and Indigenous communities are poorly served by current legislative tools.

2. The International Telecommunication's Union finds that Canada lags behind all but one G7 peer in its Information Communications and Technology index.[3] ISED's 2017 Price Comparison study found Canada's fixed broadband and mobile wireless prices were more expensive than other developed countries in the majority of service baskets.[4] In addition, CRTC's 2017 Communications Monitoring Report also found rural, remote and Northern communities pay significantly more for than subscribers in urban areas for combined telecommunications services. [5]

3. In addition to affordability, coverage is also a concern for rural and remote communities. High speed mobile access on or around railways, highways and roads is crucial to ensure access to emergency services. While cellular service was improved around Highway 16, BC's infamous "Highway of Tears" in October

[3] International Telecommunications Union. ICT Index 2017: https://www.itu.int/net4/itu-d/idi/2017/index.html
[4] Innovation, science and Economic Development Candada. "2017 Price Comparison Study of Telecommunications Services in Canada and Select Foreign Jurisdictions" : https://www.ic.gc.ca/eic/site/693.nsf/vwapj/Nordicity2017EN.pdf/$file/Nordicity2017EN.pdf
[5] Canadian Radio-television and Telecommunications Commission. Communications Monitoring Report 2017: https://crtc.gc.ca/eng/publications/reports/policymonitoring/2017/cmr.htm

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2018, many more First Nations communities, including Northern and Remote communities are left vulnerable around Canada by a lack of public infrastructure connectivity.[6]

4. First Nations communities still report serious problems with the quality and affordability of their communications services in general. In many cases basic monthly subscription rates are beyond the means of low-income households. In addition, local terrestrial and satellite networks using legacy technology lack capacity while continuing to be prohibitively expensive.[7] Connection speeds and latency are also a concern. In reality, on-the-ground data regarding the quality and adoption of broadband and mobile services in First Nations communities is lacking.

5. Currently, Cybera is spearheading the ConnectIN project along with the British Columbia's First Nations Technology Council, Manitoba First Nations Education Resource Centre Inc. and the First Nations Technology Services Advisory Group. The ConnectIN project will run until February 28, 2019 and will deploy small computing devices to participating public buildings to measure internet speeds. The ConnectIN project was born in part from the realization that many First Nations communities lacked an internet connection sufficient to run even web-based speed tests, such as Ookla.

6. These gaps exist despite a robust appetite for broadband services within First Nations communities. First Nations communities have understood the importance of modern broadband to fostering community resilience and resurgence.[8] In addition, countless community broadband projects throughout Canada have

[6] Global Information Society Watch 2018. "Community Networks": https://giswatch.org/sites/default/files/giswatch18_web_0.pdf
[7] First Mile Connectivity Consortium. "Stories From the First Mile." 2018: http://firstmile.ca/wp-content/uploads/Stories-from-the-First-MIle-2018.pdf
[8] Penny Carpenter, Kerri Gibson, Crystal Kakekaspan and Susan O'Donnel. "How Women in Remote and Rural First Nation Communities are Using Information and Communication Technologies (ICT)." Journal of Rural and Community Development, 2013, 79-97

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sought to implement local solutions to bridge connectivity market failures in First Nations communities. Projects such as those implemented by Bruce Buffalo in Maskwacis, AB, Matawa First Nations in Ontario, Clear Sky Connections in Manitoba and Arrow Technology Group in Alberta reflect this reality.[9] Such projects illustrate the need for community involvement in local First Nations connectivity projects.

7. While the reasons for Canada's digital divide are multifaceted, several arguments have been proposed to explain Canada's high telecommunications prices, including sparse population density, difficult geography and a lack of competitiveness among ISP's offering telecommunications services. However, Cybera finds that countries with similarly challenging geography and similar population density are faring better than Canada with respect to affordability and high-speed access. For example, in the CRTC & ISED's Price Comparison Studies, Canada underperformed significantly compared to Australia with respect to affordability in both fixed broadband and mobile wireless services at multiple levels. As a general rule, immutable characteristics such as geography, population and concomitant issues related to business-case should not in isolation be used to justify broadband access levels and prices. Rather, Canada's digital divide should be seen as the result of a complex mix of factors including digital literacy, dependency, regulatory coherence, historical factors and lack of competition.

8. In this sense, Canada's telecommunications legislation and regulatory regime have not served to bridge this divide. In particular, Cybera argues that the commitment to facilities-based competition should be revisited when formulating future telecommunications legislation. Many of the Telecommunication Act's core provisions are identical to the Railway Act of 1906, which it replaced. As the Telecommunication Act's key innovation over the Railway Act was the addition of

[9] First Mile Connectivity Consortium. "Stories From the First Mile." 2018: http://firstmile.ca/wp-content/uploads/Stories-from-the-First-MIle-2018.pdf

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an overarching set of policy objectives, it is important to revisit this section's applicability to modern telecommunications needs. The Telecommunications Act was created in order to address Canada's transition from regional monopolies in telecommunications towards a regime marked by increased competitiveness. As such, its wording reflects the political economy of an era that is not relevant to modern telecommunications needs.

9. In Cybera's view the legislation should be overhauled to reflect the modern telecommunications environment in Canada, which is significantly more competitive and more complex. In particular, Cybera recommends that any new act should seek to set policy objectives that are mandatory, measurable and view public interest goals as the highest priority. In addition, Cybera proposes that a new telecommunications framework be viewed as an opportunity to form a national broadband and connectivity strategy in alignment with the needs of provincial, territorial and municipal goals. Cybera sees opportunity to pursue these goals by revisiting Section 7 of the Telecommunications Act in several key areas.

10. Section 7 of the Telecommunications Act reads;

> It is hereby affirmed that telecommunications performs an essential role in the maintenance of Canada's identity and sovereignty and that the Canadian telecommunications policy has as its objectives
>
> **(a)** to facilitate the orderly development throughout Canada of a telecommunications system that serves to safeguard, enrich and strengthen the social and economic fabric of Canada and its regions;
>
> **(b)** to render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada;
>
> **(c)** to enhance the efficiency and competitiveness, at the national and international levels, of Canadian telecommunications;
>
> **(d)** to promote the ownership and control of Canadian carriers by Canadians;
>
> **(e)** to promote the use of Canadian transmission facilities for telecommunications within Canada and between Canada and points outside Canada;
>
> **(f)** to foster increased reliance on market forces for the provision of telecommunications services and to ensure that regulation, where required, is efficient and effective;

(g) to stimulate research and development in Canada in the field of telecommunications and to encourage innovation in the provision of telecommunications services;

(h) to respond to the economic and social requirements of users of telecommunications services; and

(i) to contribute to the protection of the privacy of persons.

11. Sections 7a, 7b and 7f introduce a degree of tension within Telecommunications legislation that force the Commission to balance potentially conflicting objectives. Balancing and defining the relationship between these sections has been one of the CRTC's core roles as Canada's telecommunications sector has transitioned to a more competitive regime.

12. In Cybera's view, unlike affordability and universality, the commitment to rely on market forces should not be viewed as a policy objective, per se, and should not be referenced within the policy objective section of the act.

13. In this sense, the structure of the Telecommunication Act's policy objectives is unique when compared to governing telecommunications legislation in similar countries. Both Australia's *Telecommunications Act, 1997* and the United Kingdom's *Communications Act, 2003* structurally separate public interest objectives, such as universal coverage and affordability, from regulatory objectives such as increased market self-regulation.[10] [11]

14. In addition to revisiting Section 7(f) of the Act, Cybera also recommends that the panel clarify the wording of Section 47(a) of the Act, which reads;

> The Commission shall exercise its powers and perform its duties under this Act and any special Act

[10] https://www.legislation.gov.uk/ukpga/2003/21/contents
[11] https://www.acma.gov.au/

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(a) with a view to implementing the Canadian telecommunications policy objectives and ensuring that Canadian carriers provide telecommunications services and charge rates in accordance with section 27; and

15. Cybera finds Section 47(a) problematic in that it fails to require the pursuit public interest goals such as affordability and universality. Cybera proposes that the words "with a view to" be replaced with wording that makes Canadian telecommunications policy objectives more clearly mandatory. In addition, the objectives laid out in Sections 7a to 7g of the Act are too numerous, varied and unprioritized to give effective direction to the CRTC in the manner required by Section 47(a).

16. Cybera feels that a greater degree of regulatory coherence and consistency could be achieved by more concretely defining the Commission's obligations with respect to overarching policy objectives.

Recommendations;

- Reference First Nations, Rural and Remote Connectivity specifically within the Act's policy objectives
- Keep the Act's Section 7 Policy Objectives while making them mandatory obligations
- Remove Section 7(f) of the Act
- Revisit facilities-based competition and support open-access network models

Given the importance of passive infrastructure for network deployment and expected growth in 5G wireless, are the right provisions in place for governance of these assets?

1. No, the right provisions are not in place for the governance of these assets.

2. It is Cybera's view that, in facilitating the transition from macro towers to small cell infrastructure the federal government should seek to balance timely, efficient rollout with the reasonable right of municipalities to ensure safe, unobtrusive and aesthetic infrastructure standards within their communities. In addition, Canada's facilities-based competitive structure will be problematic with respect to 5G. Instead, an open-access network model should be utilized to minimize unnecessary duplication and Right-of-Way (ROW) exhaust. Lastly, Cybera recommends that frameworks which favour a top-down approach to mandate municipal infrastructure access for 5G should be rejected by the panel.

3. This is an important concern as several developed countries have sought to implement such a top-down framework to facilitate service providers' access to municipal infrastructure. In Sept 2016, the FCC instituted limits on municipal powers with respect to small cell deployment, including a 60-90 day time limit to approve or reject installation requests and limits on how much municipalities can charge providers to lease infrastructure. Numerous States, as well have introduced legislation to streamline permitting in state legislatures.[12] [13] At the same time, the European Commission submitted "5G for Europe: An Action Plan" to European Parliament.[14] That document called on European member states to "reduce barriers for the installation of small cells such as local planning procedures and high site rental charges…"

4. In Canada, the doctrine of federal paramountcy with respect to telecommunications is well established in law, legal precedent and in Canada's

[12] Tiffany Hsu. "FCC Puts 5G Rollout Rules in Federal Hands." New York Times, Sept 2018: https://www.nytimes.com/2018/09/26/business/5g-technology-fcc-rules.html
[13] National Conference of State Legislatures. "Mobile 5G and Small Cell Deployment", 2018: http://www.ncsl.org/research/telecommunications-and-information-technology/mobile-5g-and-small-cell-legislation.aspx
[14] European Commission. "5G for Europe Action A Plan", 2016. https://ec.europa.eu/digital-single-market/en/5g-europe-action-plan,

founding legislation. In principle, the Commission already possesses significant authority to mandate the construction of telecommunications structures on municipal land and infrastructure. The Commission has exercised this authority to mandate the construction of cellular towers on municipal lands on numerous occasions, including the landmark Ledcor Decision.[15] In addition, several court cases, including the recent Alberta Queen's Court ruling against Calgary's Municipal Rights of Way Bylaw have supported this authority.[16] However, with 5G deployment, which will see such access requests increase tenfold or more, the exercise of such authority will inevitably lead to an undue burden on municipalities.

5. For this reason, Cybera does not support such top-down approaches to 5G rollout. Implied by this approach is the view that municipalities may hamper 5G deployment through undue permitting or rate structures. Cybera rejects this view. By and large, municipalities understand the value of Smart Cities ideas to their communities, and many are well underway to plan for such an inevitability. The City of Calgary, for example, has set a goal to be 5G ready by 2020.[17]

6. For municipalities, small cell deployment will require significant integrated planning wherein cities are given the opportunity to understand its potential impacts and the time to implement appropriate planning and design policies. In addition, municipalities will have to revisit existing processes around permitting and rates, while also allocating resources to manage the projected increase in access request applications, which is projected to be significant.[18] While small cell antennas are assumed to be relatively unobtrusive in size, their use may still be limited by the load capacity, design or power supply of targeted infrastructure. Backhaul

[15] https://crtc.gc.ca/eng/archive/2001/dt2001-23.htm
[16] https://albertacourts.ca/qb/resources/judgments
[17] https://innovation.calgary.ca/a/dtd/Smart-City-Connectivity-%E2%80%93-The-5G-ready-City-by-2020/305496-39235
[18] Emily Jackson. "Network challenges loom large for Telecom's 4G on Steroids." Financial Post, October 2018 https://business.financialpost.com/telecom/network-challenges-loom-large-for-telecoms-4g-on-steroids

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infrastructure and cabinets will also need to be deployed, which, as both above and below the ground infrastructure, will inevitably place increased stress on ROW management.

7. Due to the network density required for such infrastructure, issues related to ROW and passive infrastructure access will pose complicated concerns around jurisdiction, ethics and governance. It is Cybera's position that the federal government should pursue a multi-stakeholder approach to address such concerns that allows all relevant stakeholders to fully understand potential impacts of deployment under uniform standards.

8. For this reason, Cybera asks that the panel be cognizant of unnecessary duplication of infrastructure when considering 5G. Increased network densification will make this a primary concern for municipalities. Many of the costs of telecommunications infrastructure deployment to municipalities are unrecovered, including those stemming from comprised infrastructure resiliency and productivity loss. A 2008 Federation of Canadian Municipalities study found that telecommunications infrastructure deployment cost Canadian municipalities $107 million a year in such unrecovered costs.[19]

9. As such, a facilities-based competitive model will not be appropriate to deal with the increased network densification required by 5G. Cybera proposes instead that an open-access, service-based model for the rollout of 5G would be better suited to mitigate these concerns. As mentioned previously in this submission, facilities-based competition is not appropriate to the modern telecommunications context

[19]Federation of Canadian Municipalities. "Highway Robbery: How Federal Telecom Rules Cost Taxpayers and Damage Public Roads." June 2008: https://fcm.ca/Documents/reports/Highway_robbery_how_federal_telecom_rules_cost_taxpayers_and_damage_public_roads_EN.pdf

and should be revisited as an overarching principle of future telecommunications legislation. Due to the required network densification, it is particularly problematic for modern wireless needs.

10. Cybera also calls on the legislative panel to view 5G rollout from the digital divide lens advocated by this submission.

11. The deployment of high capacity wireless broadband services at gigabit speeds and the connection of many untethered digital devices will have widespread implications for Canadians across numerous sectors including health, commerce, agriculture, and entertainment.[20]

12. Given the importance of 5G, ensuring equitable and universal access to next generation networks for all Canadians should be seen as a top priority by this panel. Concerns exist regarding how deployable dense networks of small cells will be in rural geography.[21] Along with local-federal partnerships, this will require effective spectrum regulation with sufficient 5G-compatible, long-distance spectrum being reserved for rural and remote communities.

13. Concerns regarding deployment to First Nations communities must also be carefully considered. Here, the need for proper consultation processes will need to be balanced with the necessity of the technology to a given community. 5G enabled technologies such as telehealth could revolutionize First Nations access to essential services, though such deployment must be consensual and collaborative. Where possible, it is Cybera's view that both ISED and the CRTC should support community network initiatives with respect to 5G deployment in First Nations communities and revisit spectrum auctioning policies to this effect.

[20] European Commission. "5G for Europe Action A Plan", 2016. https://ec.europa.eu/digital-single-market/en/5g-europe-action-plan,
[21] Chiaraviglio, Luca. "5G in rural and low-income areas; Are We ready?". IEEE Communications Journal, 2015.

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Recommendations;

- Pursue a multi-stakeholder approach with respect to municipal consultation
- Reject proposals to delegate regulatory authority of utility structures to CRTC unless a federal-provincial task force studying its effects on consumer costs can be implemented
- Rely on local, community driven solutions to First Nations 5G deployment and incorporate such initiatives into spectrum auctioning regulations

Are legislative changes warranted to better promote competition, innovation and affordability?

1. Yes, legislative changes are warranted to better promote competition, innovation and affordability. As stated previously in this submission, facilities-based competition has not been successful in pursuing these and has failed in several key areas.

2. Cybera finds that the affordability of communications services in Canada correlates heavily with the degree of sector competition. Competitive prices in general, both rural and urban, correlate strongly with the number of ISPs available and the availability of wholesale broadband services within a service area.[22] While Cybera's supports the federal government's Basic Service Objective related funding structures, it is Cybera's view that such piecemeal initiatives cannot substitute those price reductions that would result from increased competitiveness within the sector. As such, Cybera recommends that the panel consider whether foreign ownership restrictions, as defined under Section 16(2)(a) of the Telecommunications Act, continue to be relevant in a modern, globalized context. The OECD finds a strong correlation between foreign ownership regulations and

[22] Canadian Radio-television and Telecommunications Commission. Communications Monitoring Report 2017: https://crtc.gc.ca/eng/publications/reports/policymonitoring/2017/cmr.htm

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increased prices.[23] In addition, the majority of developed countries have unregulated telecommunications regimes with respect to foreign ownership. For example, Australia's three largest communications service providers – Optus, Vodafone and Hutchinson – are foreign owned. [24]

3. Cybera recommends, as well, that safeguards against anticompetitive practices by large incumbent ISPs should be strengthened in telecommunications legislation. While relevant sections of the Competition Act prohibit agreements between two or more persons to lessen competition in a sector, such cases hard to prove. In particular, Cybera sees value in strengthening safeguards against anticompetitive agreements related to price-fixing and the self-serving division of geographic markets in the telecommunications sector.

4. In addition, Canada's existing legislative and policy framework has been problematic in many instances. The 2006 Policy Directive referencing Section 7f of the Act was, in Cybera's view premature in determining that the Canadian telecommunications sector was sufficiently competitive to justify forbearance. In addition, section 7f of the Act has been referenced by CRTC in rejecting proposals that would improve affordability and competition. For example, it was based on this reasoning that CRTC rejected the Association of Community Associations for Reform Now Canada (ACORN) proposal to mandate a legally enforceable affordability subsidy in the basic services regulation.[25]

5. Part of the problem is in the imprecise language of Section 34(a) Act. As of now, there is no recent, agreed upon standard to determine when competition is sufficient to justify forbearance. In addition, the overarching policy objectives of the

[23] Organization for Economic Co-Operation and Development. "Regulatory Reform in Canada, From Transition to New Regulation Challenges." 2002
[24] http://www.cesifo-group.de/ifoHome/facts/DICE/Infrastructure/Communication-Networks/Liberalisation-Process/forei-own-rest/fileBinary/forei-own-rest.pdf
[25] https://crtc.gc.ca/eng/archive/2018/2018-31.htm

Telecommunications Act are, as stated, too numerous and conflicting to give the CRTC effective direction on this point.

6. It is Cybera's view that, at this time, the CRTC should exercise greater intervention in pursuit of public interest goals and to promote an open-access network model governing telecommunications infrastructure. In Alberta, the deployment of the SuperNet has resulted in an increase from 7 service providers outside of Calgary and Edmonton to 47 that utilize SuperNet infrastructure.[26] An open-access network model has the potential to be transformative with respect to competition and affordability. In this sense, affordable access to all, fostering open access infrastructure as a policy objective should be enshrined in the Telecommunications Act in clear and mandatory language.

Recommendations;

- Revisit facilities-based competition and enshrine affordable open access solutions within legislation
- Repeal Section 16(2)(a) of the Telecommunications Act - restrictions to foreign ownership

Are current legislative provisions well-positioned to protect net neutrality in the future?

1. Yes, net neutrality is relatively well protected in current legislative provisions.

2. Cybera is fully committed the principle of net neutrality and sees it as essential to ensuring fair, equitable and ethical access to the internet by all Canadians.

[26] Axia SuperNet Ltd. "Residents". Accessed on July 13, 2015 http://www.thealbertasupernet.com/connect/providers/residents.aspx

Concerns surrounding net neutrality as a principle will increase in significance as new technologies will be adopted by Canadians in a variety of sectors and contexts. In addition, future ultra-reliable low-latency communication at gigabit speeds will enable a plethora of technologies with hitherto unknown consequences for Canadian carriage principles. These will include remote-surgeries, distance learning, automated cars, etc.[27] Cybera sees it as paramount that the ability to utilize connectivity for innovation be structurally separated from network ownership.

3. For these reasons, Cybera seconds the recommendations of the 2018 Report by the House of Commons Standing Committee on Access to Information, Privacy and Ethics. Recommendation 1 of that Report reads;

> That the government of Canada consider enshrining the principle of net neutrality in the Telecommunications Act, as proposed in private Member's motion M-168 which is currently considered by the House of Commons.[28]

4. Doing so, Cybera believes, will prevent the potential erosion of net neutrality in the future.

5. Canada is somewhat unique among developed countries in protecting the principle of common carriage within governing telecommunications legislation. Prior to its 2015 repeal the United States pursued a regulatory, as opposed to legislative regime with respect to net neutrality, while in Australia there are neither regulatory nor legal protections for net neutrality. Contrary to its US counterpart, the CRTC has established a framework of regulation to evaluate net neutrality.

[27] European Commission. "5G for Europe Action A Plan", 2016. https://ec.europa.eu/digital-single-market/en/5g-europe-action-plan,
[28] Standing Committee on Access to Information and Ethics. "The Protection of Net Neutrality in Canada.": http://www.ourcommons.ca/Content/Committee/421/ETHI/Reports/RP9840575/ethirp14/ethirp14-e.pdf

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6. Based on relevant sections of the Telecommunications Act, Sections 27(2) and 36, it is Cybera's position that net neutrality is relatively well protected in current legislation. Section 27(2) of the Telecommunications Act has been referenced to establish important regulatory precedents enshrining net neutrality, including CRTC Policy 2017-104 against differential pricing and CRTC Decision 2015-26 against preferential treatment of OTT data.[29] [30] In addition, it forms the basis of CRTC's ITMP Framework which has proven useful to enshrining important net neutrality principles in Canadian telecommunications policy.

7. However, this framework may be tested by evolving technologies. Concerns around net neutrality's applicability and appropriateness to next generation technologies such as automated vehicles and remote surgery have recently arisen. In this respect, the Commission has indicated that it sees value in leaving a degree of flexibility in legislation in order to deal with such issues. On this basis, the House of Commons Standing Committee on Access to Information, Privacy and Ethics heard from Christopher Seidl, Executive Director of the CRTC, that the commission does not want to see net neutrality enshrined within legislation.[31]

8. Cybera rejects this view. Evaluating, defining and protecting net neutrality in Canada rests on the CRTC's interpretation of the Telecommunications Act. As such, the principle of net neutrality should be clearly defined within Canada's telecommunications legislation and enshrined as a mandatory policy objective.

Recommendations

- Retain and strengthen existing net neutrality rules in legislation

[29] https://crtc.gc.ca/eng/archive/2017/2017-104.htm
[30] https://crtc.gc.ca/eng/archive/2015/2015-26.htm
[31] http://www.ourcommons.ca/Content/Committee/421/ETHI/Reports/RP9840575/ethirp14/ethirp14-e.pdf

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- Enshrine Section 27(2) and Section 36 of the Telecommunications Act within the Act's policy objectives

Are further improvements pertaining to consumer protection, rights and accessibility required in legislation?

1. Yes, further improvement pertaining to consumer protection, rights and accessibility are required in legislation. In the Canadian context, Cybera views accessibility to alternative services for those with special needs and accessibility of services in multiple languages as high priorities.

2. Based on policy objectives within the Telecommunications Act, the CRTC has established regulatory rules surrounding accessibility in numerous areas.[32] Cybera supports the regulatory framework the CRTC has established for this purpose. While the Telecommunications Act facilitated the adoption of this framework, further legislative developments make it difficult to determine, at this time, how the Act can be improved with respect to accessibility. As the panel is aware, the tabling of Bill C-81, an Act to ensure a barrier free Canada, will delegate new authorities with consequences for the telecommunications sector. This will include, as well, the creation of the Office of the Accessibility Commissioner. Canadian broadcasting distribution undertakings will also be required to table an accessibility plan with some administrative jurisdiction of this process falling to CRTC.[33]

3. Cybera supports this approach. As emerging technologies will make such issues surrounding accessibility and digital literacy increasingly important, delegating such authority to a designated authority is an important step in the right direction.

[32] https://crtc.gc.ca/eng/archive/2009/2009-430.htm
[33] http://www.parl.ca/DocumentViewer/en/42-1/bill/C-81/first-reading

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However, Cybera sees several places where consumer rights and protection can be improved within Telecommunications Legislation.

4. As stated previously, the price of Canadian telecommunications services remains high relative to other developed countries. Because telecommunications services are an essential service, prohibitively high prices, especially for rural and remote communities, should be viewed by the panel as a fundamental challenge to the consumer rights of Canadians. For this reason, Cybera seconds the recommendation of ACORN to seriously consider the an Affordability Funding Mechanism within telecommunication legislation.[34]

Governance and Effective Administration

Is the current Allocation of Responsibilities among the CRTC and other government departments appropriate in the modern context and able to support competition in the telecommunications market?

1. No, the current allocation of responsibilities among the CRTC and other government departments is not appropriate in the modern context.

2. It is Cybera's view that current allocation of responsibilities between CRTC and other relevant government departments, including ISED and Heritage, is outdated and inefficient. A clear structural distinction between regulatory authority and policymaking is lacking and should be rectified in future legislation. Currently, the CRTC is responsible for broadcasting and carriage regulation while ISED is responsible for spectrum management. In many cases as well, issues related to sector competition should receive greater oversight from the Competition Bureau where such matters have been solely delegated to the CRTC.

[34] https://crtc.gc.ca/eng/archive/2018/2018-31.htm

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3. Further, Canada's division of regulatory and policymaking responsibilities is unique among G7 countries. Few developed countries have an executive level position with as numerous and as diverse a set of responsibilities as the Minister of Innovation, Science and Economic Development. In reality, the ISED minister is simultaneously a regulator and policymaker responsible for issues related to copyright law, manufacturing, intellectual property, privacy, science, infrastructure, broadcasting, among others. Consultation and review of all issues relevant to the ISED Minister's portfolio must, however, be undertaken by only one Parliamentary Committee, the Standing Committee on Industry, Science and Technology which cannot investigate all concerns relevant to ISED's mandate. It is Cybera's view that these responsibilities are too numerous to be handled by one ministerial position and should be divided. In addition to these, the ISED Minister is also responsible for spectrum management. The CRTC, in turn, must license the winners of ISED directed spectrum auctions.

4. The auctioning of spectrum is a relatively recent framework for allocating the finite radiowave resources. Prior to the auctioning process, spectrum was allocated based on the capacity and competence of providers to maximize its use for Canadians' benefit.[35] The auctioning of spectrum is especially problematic in the Canadian system in that it is tied to the government's budget-making considerations. The potential for conflicting incentives within ISED is important to consider. Among developed countries spectrum auctioning is most commonly delegated to arms-length federal regulators. Both the FCC in the United States and OFCOM in the United Kingdom are delegated the responsibility for spectrum. In Cybera's view, such policy objectives should be enshrined in telecommunications legislation and inform CRTC decision-making. In addition, considering the convergence of wired and wireless telecommunications in the

[35] Taylor, Gregory. "Oil in the Ether: a Critical History or Spectrum Auctions in Canada." Canadian Journal of Communication, Sept 2013. 121-137

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modern context, there exists little need for Canada to have a separate Telecommunications and Radiocommunications Acts. As it stands both Acts are subject to shared policy objectives. Cybera recommends that both acts be converged into a single communications Act.

5. Cybera also sees problems with the breadth of responsibility delegated to CRTC. While broadcasting is most commonly delegated to the same federal regulator responsible for carriage in developed countries, Cybera feels that the panel should assess the appropriateness of this framework to the Canadian context. With respect to policymaking, Canadian broadcasting is unique in its structurally competitive relationship to US content while also being required to consider issues related to bilingualism, First Nations culture, and multiculturalism. The CRTC has extraordinary powers and responsibilities with respect to such policy matters. Over time, carriage issues related to both wire and wireline service delivery will become increasingly complicated as new technologies and OTT applications are developed. Cybera respects the Commission's position as an expert regulator within Canada's telecommunications sphere but recommends a greater regulatory separation between broadcasting issues and carriage issues. Creating such a structural separation would, in Cybera's view, allow for a greater degree of expert specialization in each area. As such, Cybera recommends that the panel investigate the possibility of delegating the regulatory authority over broadcasting to Heritage or else to a separate Minister.

6. In addition, Cybera recommends that future telecommunications legislation seek to safeguard against the potential for conflict of interest and regulatory capture within telecommunications regulatory bodies. Fostering greater transparency, openness and fairness are essential to maximizing public trust in the CRTC's decision-making process.

7. While many safeguards related to conflict of interest are well-established in law, in a regulatory context special interest influence can operate in subtle ways, including through the “revolving door phenomenon” and asymmetric access to information. The revolving door phenomenon applies both to the tendency of regulators to have extensive private sector experience in the industry they are tasked with regulating and for regulators to gain high-paying employment in relevant sectors at the end of their tenures. While expert experience is important in technical sectors, as is the case with telecommunications, safeguards should be in place to ensure regulators centre decision-making around public interest goals rather than self-interest.

8. In addition, the highly technical nature of telecommunications regulation and the relative difficulty of accessing information severely disadvantages non-incumbent stakeholders. In many cases small providers, not-for-profits and individuals do not have the resources or staff to engage with the CRTC’s decision-making process as thoroughly as large incumbent carriers. As a result, there is a risk that those with access to greater legal and technical expertise can dominate the policymaking process. Such matters should be taken seriously by the panel, and Cybera proposes that a framework establishing a post-employment code for CRTC Commissioners be implemented to minimize the possibility of sector influence in decision-making in the future. These steps and others to prevent regulatory capture would increase public trust in regulatory bodies.

Recommendations;

- Turn over spectrum regulation to CRTC
- Clarify relationship between CRTC and the Competition Bureau
- Separate authority of broadcasting and carriage to two separate regulatory bodies
- Strengthen safeguards against conflict of interest and regulatory capture
- Improve access to information for all stakeholders

Conclusion

In summary Cybera is advocating that the panel consider the following recommendations at the conclusion of this legislative review process:

- Reference First Nations, Rural and Remote Connectivity specifically within any Act's policy objectives
- Keep the Act's Section 7 Policy Objectives while making them mandatory obligations
- Remove Section 7(f) of the Act
- Revisit facilities-based competition and support open-access network models
- Pursue a multi-stakeholder approach with respect to municipal consultation
- Reject proposals to delegate regulatory authority of utility structures to CRTC unless a federal-provincial task force studying its effects on consumer costs can be implemented
- Rely on local, community driven solutions to First Nations 5G deployment and incorporate such initiatives into spectrum auctioning regulations
- Revisit facilities-based competition and enshrine affordable open access solutions within legislation
- Repeal Section 16(2)(a) of the Telecommunications Act - restrictions to foreign ownership
- Retain and strengthen existing net neutrality rules in legislation
- Enshrine Section 27(2) and Section 36 of the Telecommunications Act within the Act's policy objectives
- Turn over spectrum regulation to CRTC
- Clarify relationship between CRTC and the Competition Bureau
- Separate authority of broadcasting and carriage to two separate regulatory bodies
- Strengthen safeguards against conflict of interest and regulatory capture
- Improve access to information for all stakeholders