UNIVERSITY OF CALGARY

FACULTY OF ARTS

Department of Communication, Media and Film
2500 University Drive NW
Calgary, AB, Canada T2N 1N4
ucalgary.ca

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To: Secretary General
Canadian Radio-television and
Telecommunications Commission
Ottawa, Ontario
K1A 0N2

Subject: **Broadcasting Notice of Consultation CRTC 2017-359 - Call for comments on the Governor in Council's request for a report on future programming distribution models**

1. Summary: This submission explores questions four, five and six in the call for comments. The main argument of this paper is that distribution must be looked upon as an ecosystem where no one system is completely dominant. For question four this submission requests that the government reassess the effectiveness of Rural Remote Broadband Systems. It is my position that this policy holds underdeveloped promise to expand mobile broadband access in rural Canada. For questions five and six, this submission argues for the continuing strong presence of legacy media despite increased competition from new digital services. Finally the submission argues that over-the-air television distribution offers new possibilities for programming access. Finally I argue the effectiveness of CBC News Network and ICI RDI is limited by their current distribution model.

2. Thank you for this opportunity to submit my comments on this wide ranging exploration of the current state of Canadian programming distribution models. I am a faculty member at the University of Calgary in the Department of Communication, Media and Film. I am also the principal investigator of Canadian Spectrum Policy Research, a SSHRC-funded research project exploring the economic and social potentials of public radio frequencies, and I am the author of the book Shut Off: the Canadian Digital Television Transition.

3. I view this proposal as a response to the following questions put forth in CRTC 2017-359:

   Q.4 Given Canadians' ever-increasing demand for data to stream audio and video content on fixed and mobile broadband networks, how will these networks keep pace with future capacity requirements, particularly in rural and remote areas?

   Q.5 Canadians currently enjoy audio and video content through a combination of traditional broadcast and Internet-based services. How will consumer behaviour evolve in the next five years? What factors will influence this evolution?

   Q6. From whom will Canadians access programming in the future? For instance, will Canadians look to traditional or online providers? Global or domestic providers? Content aggregators or multiple distributors?

4. **Q.4** Given Canadians' ever-increasing demand for data to stream audio and video content on fixed and mobile broadband networks, how will these networks keep pace with future capacity requirements, particularly in rural and remote areas?

5. To a degree, this is a technological question, but not exclusively. For fixed wire access, the obvious answer to this is the expansion of fibre networks, which is underway in many parts of the country. A fibre backbone also increases mobile speeds. New generations of mobile technology show great promise with some claims of 4G LTE Advanced reaching over 100 Mbps and the still developing 5G showing potentials of 10-20 Gbps. However, broadband development in rural areas will continue to be a policy problem, not a technological one. New technologies will be deployed in cities, where the return on investment is much stronger. The government must stop waiting for large ISP providers to provide in areas of the country that hold little or no promise of economic return. This is not new. Government has had to take a lead role in virtually every major communication infrastructure investment since the birth of radio.
6. Earlier efforts by the Canadian government to promote wired broadband access in underserved areas, include the *Broadband for Rural and Northern Development* (BRAND) program which ran from 2002-2007; which was was in turn superseded by the 2009 announcement of the *Broadband Canada: Connecting Rural Canadians* program, which ran until 2012. I propose that instead of a brand new initiative, the government give support to a bold already existing program that has received insufficient regulatory backing.
7. Canada has a unique program regarding rural broadband that has enjoyed some success but currently struggles under an uncertain regulatory future. “Remote Rural

Broadband Systems" (RRBS) is a Canadian wireless policy initiative that I believe still holds great promise: it encourages and supports new entrants into the wireless broadband sector; it makes use of spectrum that is by and large idle; it explicitly seeks to expand service into underserved areas; and the signal provided by these frequencies offers strong propagation qualities. I conducted research on RRBS in 2015-2016 and remain convinced it is a strong policy for providing broadband service in Canada's rural areas.

8. RRBS systems provide fixed wireless broadband access to rural and remote areas via unutilized television frequencies in the 614-698 MHz frequency bands. In interviews I conducted with providers, they noted that RRBS offered a range of performance, from a lower end download speed of 10 megabits per second (Mbps); to higher end reports of 27 – 30 Mbps download speeds. These offerings more than met the CRTC's aspirational goal of 5 Mbps for all Canadians established in 2011 (though still short of the upgraded 2016 targets) and providers told me much faster speeds could be offered if they could access enough spectrum to deploy LTE.

9. RRBS service providers operate under strict license conditions (Industry Canada, August 2011):

1) in rural remote communications where applied-for spectrum is not being used for broadcasting service, and
2) in locations that are more than 121 km from the Canada-US border, and

3) at a sufficient distance away from major urban areas and broadcasting facilities
4) any RRBS service within 400 km of the US border means RRBS must not interfere with US signals as well – a major headache for RRBS providers, which is one reason many providers are further north than the required 121 km. RRBS offered a rare case in Canadian communications of the north being advantaged.

10. RRBS utilizes underused OTA television spectrum and has been a way for new entrants to gain a foothold in the competitive mobile market. The service provided is often in the very areas that market-based models fail to provide for.

11. I have conducted interviews with many RRBS providers in the province of Alberta, where the overwhelming majority of RRBS is available. The vast majority of RRBS providers were small businesses looking to serve a limited local market. The results of my interviews with RRBS providers showed a firm belief in the potentials of RRBS but a concern for the continued government support for the policy. RRBS providers were clear that they could provide service if they could access more spectrum but often felt blocked by government officials who limited their access.

12. In anticipation of the upcoming 600 MHz auction, in 2014 Industry Canada placed a moratorium on new RRBS licenses as well as modifications to any existing licenses. This announcement halted any further development in a policy initiative that once held promise. The government should ensure that these small providers have access to quality spectrum with terms that would encourage investment (current spectrum auction licenses are for 20 years). These small providers do not have the capital to participate in spectrum auctions. Canada has held many spectrum auctions

over the last two decades yet rural mobile broadband access remains a problem. It is time to try another approach.

13. I call on the government to re-examine the RRBS model as a way to encourage new entrants in the mobile sector and provide mobile broadband service to rural and remote regions.

14. **Q.5** Canadians currently enjoy audio and video content through a combination of traditional broadcast and Internet-based services. How will consumer behaviour evolve in the next five years? What factors will influence this evolution?

15. **Q6**. From whom will Canadians access programming in the future? For instance, will Canadians look to traditional or online providers? Global or domestic providers? Content aggregators or multiple distributors?

16. The overall goal of Internet policy must remain net neutrality. In 2017, the CRTC strengthened Canada's earlier support for net neutrality (CRTC 2017-104). This remains the correct direction and should not change if the United States chooses to pursue a different approach. While the bulk of my response to this question does not concern net neutrality, I wan to be clear that I believe this is a fundamental principle for Canadian Internet distribution.

17. The new media landscape must be looked upon as an ecosystem that will rely on a range of distribution models. Certainly online distribution will grow, but policy structures must not abandon legacy media just yet. No one has the crystal ball for consumer behavior. I have argued that far from being "old media", traditional television and radio have shown great resiliency in the face of new competitors such as Netflix and Youtube. According to recent CRTC data, there has been a small drop

in traditional television viewership since Netflix arrived in Canada in 2010 from 29.8 weekly viewing hours to 28.6. This does not show a dying industry. The data reveals that traditional television is still very strong in the face of new distribution models. Radio has been similarly consistent.

18. Much is made about user generated streaming services such as Youtube as the future of media consumption. There is no doubt that Youtube has opened intriguing new and successful options for international content distribution; however, of the 18 top independent Youtube channels in 2017, the majority involve people discussing video games (http://www.businessinsider.com/most-popular-youtuber-stars-salaries-2017). That is fine for a certain audience but demonstrates that Youtube is not yet a forum for the civic engagement that is necessary in a democracy. Youtube and online streaming services made allow access to video that people enjoy, however, the government must be concerned with ensuring Canadians receive information required for civic participation. With this in mind, it is necessary to explore the place of the CBC in this new environment.

19. Canada's public broadcaster has been clear that they are rapidly embracing online distribution in place of of traditional broadcasting. The CBC's 2014 strategic plan, *A Space for Us All*, states *"At the heart of the plan is flipping content priorities from a traditional approach to mobile- first*" (p. 14). I have argued this is premature. I

support growth of digital platforms for the CBC, however there is still continued life in legacy media.

20. A distribution model I have advocated for in the past, and continue to do so, is over-the-air (OTA) television. With forward thinking policy, OTA can be an essential component of Canada's programming distribution ecosystem. In the fall of 2017, the FCC approved the next generation of OTA technology, ATSC 3.0, which may lead to exciting new developments in OTA TV. Under this new technology, OTA can provide a stronger role in Canada's content delivery, with potentials for more channels on less spectrum, 4K broadcasts, transmission to mobile devices, and potential broadband access (www.atsc.org). For Canada, the problem is that OTA was shortsightedly scaled back during the 2011 digital television transition. I believe that decision should be reexamined as OTA services are accessible to all people and OTA signals are not subject to data flow restrictions that can limit some content streaming and can prove dangerous in the case of an emergency announcement.

21. Special emphasis should be placed upon the need to make the CBC News Network and ICI RDI content much more accessible. I propose using OTA technology to ensure access to these services. Under new ATSC 3.0 technology, this approach may also fulfill the CBC's stated desire to be "mobile first".

22. CBC Newsworld currently charges $6.95 a month to stream their online service. That same price will cover five international news channels or eight North American news channels in a Telus cable bundle, or eight news channels in a Rogers cable news bundle. This is not acceptable for a service receives a great deal of cross-subsidy via the national public broadcaster. I realize CBC News Network has a different license from CBC TV and generates revenue via distribution fees; however, it is clear the News Network and the main CBC channel share resources, content and employees. The original license awarded to this 24 hour news service (CRTC 87-904) notes the plan to “make extensive use of the material already produced using the Corporation’s existing technical and human newsgathering resources”.

23. CBC News Network needs to be making a stronger contribution to keeping Canadian citizens informed. As the CBC moves forward with its plan to make content accessible to mobile devices, CBC News Network and ICI RDI cannot be limited to those decreasing numbers of Canadians with a BDU subscription or others who will pay a premium price to stream it. Offering these dedicated news channels as sub-channels on the OTA signal would ensure access for the overwhelming majority of Canadians either via television or perhaps mobile device under ATSC 3.0. The current distribution structure for CBC Newsworld and ICI RDI is not in the public interest and must be reassessed.

24. I thank the CRTC for the chance to participate and hope I can discuss this further in the public hearing.

25. I request to appear at the public hearing.

Sincerely,

Dr. Gregory Taylor
Assistant Professor
Department of Communication, Media and Film
University of Calgary
gregory.taylor2@ucalgary.ca

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