



## Second-Round Response to Industry Canada Paper Entitled

*Consultation on a Policy and Technical Framework for the  
700 MHz Band and Aspects Related to Commercial Mobile Spectrum*  
as published in the  
Canada Gazette, Part I (SMSE-018-10),  
on November 30, 2010.

**Attention: Manager, Mobile Technology and Services, DGEPS,**  
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**April 6, 2011**

**Prepared by  
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with input from and the endorsement of:

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Media Access Canada  
The Canadian Media Guild  
The Community Media Education Society  
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The Canadian Conference of the Arts



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## **IDENTIFICATION OF PARTIES PREPARING THESE COMMENTS**

- 1) The Canadian Association for Community Television Users and Stations (CACTUS) was created to help ensure that ordinary Canadians have a voice within their broadcasting system. We represent independent non-profit community TV broadcasters and producing corporations, and the Canadians that use and watch them.<sup>1</sup>

We consider that our mandate refers to all video and multi-media produced by community non-profit corporations and distributed by any means, including new media and wireless networks.

- 2) Parties that support this second-round submission include:

- Randy Bruce, a founding member of the Inukshuk Learning Advisory Committee for British Columbia
- The City of Fredericton's E-Novations free public WiFi network
- The Canadian Media Guild, whose nearly six thousand members work for the [CBC/SRC](#), [The Canadian Press](#), [Reuters](#), Agence France-Presse ([AFP](#)), TVO, APTN, [VisionTV](#), [CW Television \(formerly Alliance Atlantis Communications\)](#) and CJRC Radio Gatineau
- Media Access Canada (MAC), a not-for-profit organization working towards a system of fully accessible broadcast content by 2020.
- The Community Media Education Society (CMES), which promotes neighbourhood television, including the principles of participation, public access, and independent administration of the community channel. Its members are primarily located in B.C.
- The Canadian Conference of the Arts, the national forum for the arts and cultural community in Canada. The CCA provides research, analysis and consultations on public policies affecting the arts and Canadian cultural institutions and industries.
- Steven James May, 2nd year PhD Student in Communication & Culture, Ryerson and York Universities

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<sup>1</sup> For more information about CACTUS, see [cactus.independentmedia.ca](http://cactus.independentmedia.ca).

## SCOPE OF SECOND-ROUND COMMENTS

- 3) Most of the parties listed above made individual submissions to the first round in this consultation (with the exception of CACTUS, E-novations, and Randy Bruce, who made a combined submission), on February 28<sup>th</sup>, 2011. While there were different nuances and reasons for supporting these recommendations in our individual submissions, our common recommendations were as follows:
- Reserve from auction a band of at least two contiguous blocks of 5 MHz in the 700 MHz band for Public Innovation.
  - Set aside one-quarter of the available spectrum for carriers with less than 5% of market share to enable the development of more carriers and more consumer choice.
  - Set a lease term of no more than 10 years on the spectrum to be auctioned, and pay 1/10<sup>th</sup> of the lease fee yearly.
  - Establish usage-based criteria for the auction, so that would-be spectrum users must make both a business case that demonstrates the public-service value of the services to be offered with the spectrum, as well as meet a minimum dollar bid.
  - Impose a use-it-or-lose-it clause that requires successful bidders to launch the proposed services within two years, or give up the spectrum.
  - To ensure that Canadians can participate fully as citizens, producers and entrepreneurs in the digital economy, we asked that a portion of the proceeds of the spectrum auction be used to establish digital skills training centres within reach of all Canadians.
- 4) We have been pleased to review the submissions of other parties, many of which identify similar issues to ours, and whose suggestions overlap ours in many cases.
- 5) Our intent in this second round is to state as a group that the data submitted by other parties confirm our belief that the measures we recommended will promote healthy competition, innovation and access by public and community entities, and universal participation in the digital economy. In addition, we would like to:
- Add a comment regarding the likely future relationship between what was traditionally thought of as “broadcasting” spectrum versus the “mobile” spectrum currently under discussion.
  - Comment at more length on the definition of “public safety”, who should be considered “public safety” users, and to once again challenge the notion that

- Comment on how we believe our recommendations address the needs of other stakeholders, or are complementary to their recommendations.
- Elaborate on our final recommendation that the proceeds of any auction of public spectrum should be reinvested in public infrastructure that offers all Canadians equal benefits and opportunities in the digital economy.

### **ADDENDUM REGARDING “BROADCASTING” AND SPECTRAL EFFICIENCY**

- 6) The original combined submission by CACTUS, E-Novations and Randy Bruce argued that the widely held idea that broadcasting is a relatively inefficient use of spectrum—and that therefore the spectrum dedicated for “broadcasting” should be repurposed for mobile use over both the short and long term—is not necessarily valid and should be regarded with caution as a motivator for this and future spectrum auctions.
- 7) We argued that broadcasting as a one-to-many transfer of audio-visual programming may in fact be a much more efficient use of spectrum for aggregating large and live audiences to popular, culturally or politically significant events and content.
- 8) We were therefore interested to come across an article in *TVNewsCheck*, dated November 12, 2010, in which Verizon Wireless CTO Tony Melone is reported to have said that the best way of handling some of the expected demand for video on its new super-fast broadband network is broadcasting— that is, pumping one signal to many users simultaneously rather than millions of signals one at a time.
- 9) We include the full article as Appendix I. The article demonstrates that even the stakeholders that are pushing for more broadcasting spectrum to be repurposed for mobile use are aware that there is no clear-cut distinction between the two, and that there will be less the more technologies converge. The use of *broadcasting* technology does not preclude *mobile* applications; state-of-the-art use of ATSC involves transmitting signals to mobile devices. It therefore becomes less a contest between two uses for spectrum than between two user groups.

- 10) In Canada, this matters because spectrum designated as “broadcasting” is subject to public scrutiny regarding its content and use, and mobile spectrum is not, so far. Both providers and consumers of Canadian content fear that:
- As broadcasting functions (audio-visual content) are delivered to mass audiences more and more using mobile spectrum, that access to Canadian content will become more difficult.
  - Mobile broadcasting will further fragment audiences, making it difficult for Canadians to share significant cultural and political content in real time. Traditional “broadcasting” content that can be shared by mass audiences in real time is a powerful means of maintaining our nationhood across vast distances.
- 11) Repurposing of spectrum that threatens either the availability of Canadian content or the ability of Canadians to gather en masse in media spaces should not occur. Technological shifts imply cultural shifts. Appropriate policy adjustments must be made simultaneous with technological shifts to make sure they serve Canadians and our cultural identity and sovereignty, rather than undermining them. Bits and bytes and “the digital economy” don’t automatically signify progress. It’s how we apply them.

### **THE DEFINITION OF PUBLIC SAFETY**

- 12) A considerable number of stakeholders recommend that the IC definition of “public safety” and the three categories of such users defined in the consultation document be expanded so that they could share in any allocation for public safety, either by
- Pointing out how their members or organizations also safeguard “life and property” (for example, the submission by the Canadian Electricity Association).
  - Arguing that the notion of a spectrum allocation for public safety is too narrow, and that spectrum should be set aside for other public functions as well. They point out that such allocations would logically be administered by the same local or regional governments as would likely administer an allocation for public safety in any case (for example; the submission by the City of Calgary).
- 13) Whichever approach IC adopts, it’s clear that:
- a range of public and community stakeholders need spectrum, and acknowledge that the most efficient use of such a public allocation may be to share it (since the public safety community needs large quantities of dedicated spectrum only during emergencies)

- the logical way to manage an allocation for public use is at the local or regional level (and several parties suggest which geographic boundaries should be used, whether provincial districts, urban and rural divisions within Tier 4, and so on).

14) Community media should be included among any such list of priority public users under either scenario (the expanded public safety definition OR the rationale for a more general public allocation):

- ***As a key link in the public safety chain:*** In many jurisdictions, especially where there is no other source of live media (i.e. outside major Canadian cities), community television and radio provide the only local real-time reporting on emergencies such as forest fires, power outages, storms, and flooding. A few examples:
  - Valemount B.C. offers both a community TV and radio service, and is equipped to continue broadcasting even during power outages to make sure residents get vital information.
  - Neepawa Access Community TV in Manitoba collaborates with Manitoba's Emergency Measures Organization to relay safety and emergency information, routinely broadcasts information about issues such as scooter safety for the elderly and disabled, and cooperates with the RCMP to transmit information about scams and frauds.
  - CHET-TV and radio in Chetwynd and Dawson Creek, BC has broadcast emergency information provided by the RCMP 219 times over the past 10 years, often for hours or days at a time. Recent examples include notices of road closures due to accidents, avalanche, pipeline oilspills, blizzards, and forest fires, including co-ordination to assist with emergency evacuations of residents.
  - CIHC-TV in Hay River, NWT provides live continuous television coverage during the spring ice break-up as part of the town is situated on an island and subject to yearly flooding, as well as fire warnings throughout the summer.
  - CHCT-TV in St. Andrews, NB, recently hosted a series of programs and televised community townhall debates about the potential siting of a chemical storage facility near the town, to air fears that container ships serving the facility might pose health and economic risks to the fishing village. Community TV frequently enables not only emergency responses but also long-term planning and prevention of potential threats to life and property.

In remote communities that may be far from emergency response teams and support, timely information is especially crucial.

In many jurisdictions, such as in the US and Israel, municipalities themselves operate community media channels precisely because they want to transmit public safety information to residents in real time. As such, community media is a key link in the chain to safeguard life and property, and has an even larger role to play on mobile platforms. The public safety community itself often has no direct link with local media or the public by which it could transmit information in real time, even if its members on the ground are in contact with one another.

- ***To ensure local information of all kinds*** (political, cultural, social, environmental and meteorological) ***is available on mobile devices***, alongside national and international sources.

## **A RESERVE FOR PUBLIC INNOVATION SERVES A VARIETY OF STAKEHOLDERS**

15) Since our main recommendation as a group is that 10 MHz in the 700 MHz band be reserved from the auction for public innovation, we wish to comment on how we believe our proposal meets the needs of other stakeholders who submitted comments, (although their proposed solutions sometimes differ in the details).

- Perhaps it's useful to frame the debate by referring to the second-round submission by PIAC. As PIAC observes, most respondents in the first round focussed on existing types of wireless services (broadband and/or cell) to communities that are not well served by commercial carriers. As PIAC points out, the call for a public reserve—while in part seeking to offer a last-resort measure for rural jurisdictions to offer wireless broadband and cell service where commercial providers will not do it—also anticipates the development of new applications that we can't yet envision. What's important is that the exact use of the 10 MHz reserve for public innovation will vary by locality, as an evolving response to local needs.
- The Assembly of First Nations' submission asks that IC "*clearly define spectrum allocations to be set aside for First Nations*". The submission goes on to observe "*First Nations service providers, generally, must obtain wireless spectrum from telecommunications companies. Some First Nations have been attempting to obtain their own spectrum but find it impossible to compete.*" This is an instance of a rural area that cannot be served via the incumbents' business model having to then "buy back" spectrum from those incumbents (which we described in our February 28<sup>th</sup> submission), even though the incumbents are not employing the spectrum in those First Nations territories. If our proposal for a public spectrum reserve is implemented, First Nations communities would be able to apply directly to IC for the public 10 MHz available in their area, at no cost, in order to offer wireless and cell service (or to innovate other services) to First Nations residents.

- Axia NetMedia Corporation asks in paragraphs 15 through 19 of its submission that spectrum be set aside for rural areas since *“paying for spectrum”* is *“commercially untenable in rural Canada”*. It argues that spectrum should instead be assigned to parties that will commit to reach a certain percentage of the population at certain speeds, for a certain cost. The submission states, *“Eligible bidders should be limited to those who will make the above commitments, and should explicitly include jurisdictional governments or other entities focussed on the public interest.”* This proposal is fully compatible with the concept of a 10 MHz public reserve, since we anticipate that jurisdictional governments (perhaps working in coalitions with local stakeholders) would administer the 10 MHz, and could allocate it to local public or private entities in partnership to meet local service needs. Axia goes on to give the example of the province of Alberta, which is already well advanced in providing a province-wide backbone for such service. Axia asks for the full 700 MHz band for rural areas, while our proposal was that AT LEAST 10 MHz be available for public use and administration in every jurisdiction, whether urban or rural.
- Barrett Explore Inc. proposes unbundling “two to four blocks in the 700 MHz band” within Tier 4 service areas following Statistics Canada census boundaries, to separate spectrum allocations for urban and rural areas, with the goal of creating favorable conditions for companies that wish to serve those rural areas. Again, this is compatible with our suggestion that 10 MHz (or two blocks) be set aside for allocation by local public authorities. They could elect to partner with private entities such as Barrett to serve their rural areas, while retaining governance and the ability to give access on the resulting local network to public, community and non-profit entities that need such access on favorable terms.

We note that a pattern emerges in the submissions in which various parties suggest various kinds of rural geographical boundaries to tackle the challenges of providing rural broadband. In our view, what is required to best serve each area should be determined by residents and jurisdictions themselves. For example, if a 10 MHz public reserve is created at a national level, public jurisdictions of different sizes could apply to function as the local “Public Spectrum Reserve Administrative Council.” In the case of Alberta, that jurisdiction might be the province. In other areas with unique geographic, economic or social challenges that affect wireless and cellular service deployment, that area could be as small as it needs to be. Where contests between a smaller and a larger jurisdiction arise, we suggest that the smaller jurisdiction prevail as a “carve out” of the larger one, on the assumption that that jurisdiction wouldn’t have applied for the carve out had the larger jurisdiction’s plan met their needs. The important point is that the 10 MHz should be used to best purpose in each area to meet needs not met via the private sector alone, functioning under a solely commercial model.

- Various new and smaller wireless and cellular service providers advocate that a percentage of spectrum (up to 100%) in the 700 MHz band be set aside for allocation under more favorable conditions, citing either the need for more competition in urban areas or better service in rural areas. We suggested that, at a minimum, 25% of spectrum available for auction be set aside for new entrants. We are not opposed to a higher percentage and support the creation of significant competition for the incumbents and diversity of service offerings for Canadians. We believe the set aside amount should be high enough to guarantee that competition and diversity, but feel that other commercial parties, (both big and small) are in the best position to present data regarding what the exact percentage should be.

We reiterate, however, that in addition to such a set-aside, there also needs to be a 10 MHz allocation for public use, to stimulate different sources of innovation and competition, such as the City of Fredericton's Wifi network, rural broadband where no private entity will undertake service, and to ensure access for and the development of applications by public and community entities over the long term.

- The new and smaller wireless and cellular service providers almost universally called for tower-sharing, roaming, and open access, for which we reiterate our support. As several of them state, tower-sharing will encourage competition by lowering the barriers for new entrants and reduce duplication of facilities and sites, especially in urban areas where competition for sites is already fierce. As others noted, facility duplication seems especially wasteful in the context of Canada's sparse population and enormous geography. The concept has also been used by the CRTC, which has ordered Shaw to share TV transmitter towers with other broadcasters as part of the public benefits package flowing from the purchase of Canwest assets in 2010.
- Peace Region Internet Society (and the BC Broadband Association): As we do, the Peace Region Internet Society asks that 10 MHz be licensed rather than auctioned to meet the needs of rural broadband. The Society observes that just as *"public service functions are best met by a mix of federal, regional, and local governments, spectrum can best be managed by having some, but not all portions of it controlled at a local level, with a granularity exceeding even that defined by Tier 4...Local segmentation leads to greater attention to local conditions, local needs, local innovation, local egalitarianism of access, and uniquely individualized solutions."* The BC Broadband Society, of which the Peace River Internet Society is a member, accepts the idea that their members may have to pay for spectrum within a set-aside category, but presumably could offer better, wider ranging, and lower cost service if that spectrum were free or offered at a low fixed cost, as advocated by the Peace Region Internet Society, and obtained from a public reserve and developed in partnership with local public authorities. The Society proposes—just as we do—that a *"local body representing the interests of roughly a Tier 4 area apply for permission to manage that portion of spectrum: Such a group could be a Regional District Government, a First Nations body,*

- Tbaytel's submission reaffirms the need for more granular spectrum management than Tier 4s in order to meet the need for rural broadband. As a public telephone company, Tbaytel notes that it has been unsuccessful acquiring spectrum in previous auctions, and advocates (as we do) not only set-asides for smaller players but also that specific service criteria be met by winning bidders.
- A range of other public and co-operative telephone companies and Internet service providers belong to the Ontario Telecommunications Association but did not make independent submissions. The OTA submits that even with set-asides, its members (private, public, or co-op) may not be able to compete unless smaller tiers than tier 4 are made available, and with a somewhat complex range of other rules and modifications that could favour them. We therefore note that if 10 MHz is set aside for local administration by public entities, public and co-op service providers would be obvious choices as service providers for that spectrum, as would small private OTA members willing to work in partnership with the public/municipal/regional spectrum administrator.
- The Tri-Services Special Purpose Committee (and other submissions from public safety entities) as well as the City of Calgary advocate that broadband networks used by public safety agencies would necessarily be linked with and shared with municipalities, regional, provincial, and territorial governments, and be deployed with assistance from the private sector (P3).

The City of Calgary asks that spectrum be reserved for non-public safety users in an urban setting, citing multiple examples of the city's current and future needs. So while rural and urban stakeholders make different cases for the need for spectrum, the notion of a public allocation or an allocation with private-public partnerships to meet public needs is the same. The important point is that it is the local authority that can best deploy the spectrum to meet the particular local needs.

- Telecommunities Canada supported our first-round recommendations, with the additional stipulation that ***“all proceeds generated by the auction be used to support broadband initiatives, digital content creation and digital skills programs”*** (bold is theirs). In reading submissions by other parties and in through on-going discussions of the implications of the reassignment of the 700 MHz band, we have decided that we agree with this recommendation, and elaborate on the particular “broadband initiatives”, “digital content creation” and “digital skills programs” that we envision can be made possible and should be made possible to ensure Canada's competitiveness and inclusiveness as a digital economy.

We also agree with Telecommunities Canada’s assessment of why this investment in Canada’s digital infrastructure is necessary, and with its request that its member CAP sites (community-access portals) be considered as recipients of funding to stimulate digital skills training and access. CACTUS envisions working with CAP sites, our member community TV channels, and other similar organizations to develop the network of such skill training and digital media production centres that are needed. Our proposal and theirs has always assumed building on existing infrastructure, not starting from scratch.

- Drs. Gregory Taylor and Catherine Middleton make many of the same recommendations that we make, including the importance of universal access by Canadians to critical educational, governmental, and community information via broadband, and the important role of government in ensuring that spectrum serves Canadians’ needs. Their submission also recognizes public and community users and their needs for priority access to spectrum, beyond the limited definition of “public safety” users, while recognizing that these two categories could share a single network or spectrum allocation.

Our proposal is not in conflict with this approach, in that wireless laptop users (for example), could connect to the Canada Broadband Portal and access content from community and public sources as described in the proposal, and then log out of that “walled-garden” network to access Canadian commercial sites and sites outside Canada. At this stage, our main question might be how the “walled-garden” approach would assist rural users who want access to the rich variety of information available on the Internet at large. Perhaps the walled-garden approach can co-exist with measures to promote rural broadband. We note that the proposal advocates tower-sharing and does not imply separate infrastructure.

- While few individual Canadians submitted comments in this consultation, those that did emphasized the need for “*municipally owned networks*”, “*potential public use in the future*”, and “*unlicensed spectrum*” to “*allow innovation in the public space.*” Our proposal embodies these ideas within a practical framework.

## **USE AUCTION PROCEEDS TO DEVELOP THE DIGITAL ECONOMY**

16) We were gratified to note that many submissions by other stakeholders, big and small, private and public, refer to the “digital divide” and the importance that this divide be bridged with enlightened policy. We note however that the term “digital divide” was used almost exclusively with reference to the difference in cellular and wireless service availability and pricing in urban versus rural areas.

17) There are other equally important elements to the digital divide, that attracted little or no attention from other stakeholders. These are:

- Lack of Access to Skills Training, Awareness, and Infrastructure: All Canadians must be able to participate equally in the social and economic benefits offered by digital technologies. Barriers that prevent such full participation include lack of skills, lack of awareness that new tools exist or how they could be put to use, and lack of facilities and infrastructure to help Canadians innovate and create new media content as well as just to consume them.
- Lack of Economic Means to Access Digital Television Platforms: Canada's transition to digital over-the-air television will be far from complete on August 31, 2011. Many Canadians will be left without free access to Canadian public, educational, and community broadcasters.
- Lack of Adaption of Digital Technologies for the Disabled

18) Consequently, we wish to restate the importance of using the proceeds of any auction of this scarce public resource to enable the public that owns that resource to participate in and contribute fully to the digital economy, as follows:

***Fund Digital Multi-Media Training and Production Centres***

- 19) In our February 28<sup>th</sup> submission, we elaborated on the need for Multi-media Digital Skills Training and Production Hubs within reach of all Canadians. We estimated that approximately \$113,000,000 is needed annually to support such centres (based on research previously undertaken for the community television review in 2010, an abridged version of which was attached to our submission). We advocated that this amount could be taken out of the proceeds of the auction (which we recommended should be paid yearly rather than in a lump sum). If the auction yielded in the neighbourhood of \$5 billion in total and were paid in yearly increments of \$500 million over the ten-year licence term we recommend, the expenditure on country-wide digital skills training centres would represent about 20% of the proceeds.
- 20) These centres could become not only nuclei for public innovation and digital content creation, but could also function as part of or AS the co-ordinating organization that administers a public spectrum reserve in small communities where no other obvious organization has the focus or experience to do it.

**Fund Rural Broadband Infrastructure Where Private and Public Entities Cannot Reach 90% of Canadians**

- 21) As a group pooling our ideas, we would also like to add three further recommendations to our February 28<sup>th</sup> submission. An additional portion of the proceeds should be set aside to fund the roll-out of rural wireless broadband and cell service in areas where:
- Neither incumbents nor smaller service providers competing for set-aside spectrum can make a business case to reach 90% of residents in the tiers they win at auction
  - Public entities accessing the free 10 MHz public band also cannot raise funds for the towers and other physical infrastructure necessary to reach 90% of residents in the areas in which they administer the public spectrum reserve
- 22) Since it is difficult to estimate how much might be required until the auction takes place and the combination of other incentives have been monitored for their effects, we note that the recently published Liberal party platform advocates \$500 million for such a fund, which we will call the “Rural Broadband Fund”<sup>2</sup>.
- 23) The need to monitor and adjust policy for rural broadband as the results of the auction play out provides another excellent reason for leasees to pay in yearly installments. If after years 2, 3, and 4 of the leases, it appears that set asides and a public spectrum allocation are not on their own effective in reaching the most remote parts of the country, amounts approaching \$500 million could be directed from the following’s year lease payments to assist the roll-out of rural broadband. If the amount were not sufficient, an additional \$500 million could be allocated in each subsequent year until the goal of 90% accessibility is reached.

**Complete the Transition to Digital OTA TV for Public, Educational, and Community Broadcasters**

- 24) Second, many of Canada’s public, educational, and community broadcasters lack the resources to complete the transition to digital over-the-air television outside major population centres (the so-called “mandatory” markets), leaving many rural Canadians without free access to basic sources of Canadian, educational, and local content. We therefore advocate that proceeds from the auction be directed toward such upgrades.

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<sup>2</sup> As Telecommunities Canada noted in its February 28<sup>th</sup> submission, during the recent CRTC hearings reconsidering basic service obligations, telephone companies estimated that it would cost \$700-million per year for 10 years to bring high-speed internet to all Canadians including those who live in the country’s most remote areas. “It’s a task that can never be achieved by market forces alone, [MTS Allstream Inc] told the CRTC, in one of the first such estimates to be made for Canada.” For more information, see Marlow, Iain. (2010). “High speed internet for rural areas.” *The Globe and Mail* Oct. 27. <http://www.theglobeandmail.com/news/technology/high-speed-internet-for-rural-areas-pegged-at-7-billion/article1774621/>

- 25) After August 31, 2011, there will remain 685 CBC/Radio-Canada analog transmitters, 80 analog transmitters in British Columbia rebroadcasting the Knowledge Network to remote communities, 111 analog TVO transmitters, and 7 OTA community broadcasters. Using the Canadian Media Guild's estimate of \$235,000 to upgrade each, this comes to a total of just under \$210 million to complete Canada's transition to digital OTA television. This initiative would level the playing field for rural and urban Canadians, and put Canada on par with most other industrialized countries that have transitioned to digital.
- 26) For their part, recipients of such upgrade funding must be willing to multiplex their main signal with at least one other local or new entrant broadcaster within the auction licence term (ten years) to maximize efficient use of broadcasting spectrum. We note that this principal was established by the CRTC in the fall of 2010 in the tangible benefits package for the Shaw purchase of Canwest.

**Contribute to the Broadcasting Accessibility Fund**

- 27) Finally, we endorse the request by Media Access Canada that a portion of the proceeds of the auction be directed toward research and implementation of accessibility tools and technology features to assist Canadians with disabilities to participate fully in the digital economy, as described in MAC's February submission to this consultation.
- 28) We note that Media Access Canada endorses a 10% bidder's premium as a way to fund digital infrastructure initiatives, and suggests that 10% of such a premium (or 1% of the total auction proceeds) would be adequate to the research and technological implementation MAC seeks. MAC also endorses our suggestion as a group that proceeds from the auction should be paid yearly rather than in an up-front lump sum, and could accomplish its goals with incremental payments.
- 29) As a group, we have no preference whether some of these infrastructure upgrades are paid for from a bidder's premium or from the gross auction proceeds, although we note that a 10% bidder's premium alone can pay for only a small fraction of the upgrades needed. The concept of bidders' premiums may nonetheless be useful for Industry Canada as a partial means to achieve infrastructure upgrades that are necessary to improve the competitiveness, content production, technological expertise, and social inclusiveness of the digital economy.

30) In summary, we suggest that the proceeds of the auction be expensed in the following fashion (assuming revenues of \$5 billion, paid in 10 yearly increments of \$500,000<sup>3</sup> 4):

Year in Licence Term	Digital and Multi-Media Training and Production Hubs	Digital Upgrades for Public, Educational, and Community Broadcasters	Broadcasting Accessibility Fund	Rural Broadband Fund	Other Initiatives to Evolve the Digital Economy
1	\$113 million	\$210 million	\$5 million		\$272 million
2	\$113 million		\$5 million		\$382 million
3	\$113 million		\$5 million		\$382 million
4	\$113 million		\$5 million	Up to \$382 million, as necessary <sup>5</sup>	... the remainder
5	\$113 million		\$5 million	Up to \$382 million, as necessary	... the remainder
6	\$113 million		\$5 million	.. and so on, until rural broadband service goal of 90% acheived	... the remainder
7	\$113 million		\$5 million		
8	\$113 million		\$5 million		
9	\$113 million		\$5 million		
10	\$113 million		\$5 million		
<b>Total: ~5 billion</b>	<b>\$1.13 billion</b>	<b>\$210 million</b>	<b>\$50 million</b>	<b>~ 500 million ?</b>	<b>?</b>

31) We note that while funding for Digital Multi-Media Training and Production Hubs, and the Broadcasting Accessibility Fund would remain constant, funding to upgrade public and community broadcaster transmitters to digital would be expensed in the first year of the fund (to complete Canada’s transition to digital OTA television as soon as possible), while expenditures to the Rural Broadband Fund would take over in later years, as needed to complement the efforts of the private sector and local public bodies to build out broadband in their tiers.

<sup>3</sup> Note that we assume that even if some leasees default under the “use it or lose it clause” and their yearly payments cease, that other parties would be quick to take over those leases and lease payments.

<sup>4</sup> We also note that this total could include a 10% bidder’s premium. Since the gross auction proceeds are themselves speculative at this stage, we leave the estimate with or without such a premium at roughly \$5 billion.

<sup>5</sup> Funds for rural broadband could be allocated starting from the first year of the auction licence term; however, it may be more appropriate to wait three years to give auction winners and public entities using the 10 MHz public reserve a chance to serve rural residents in their tiers. Auction proceeds could then be more efficiently targetted at those rural areas where no other model can achieve service for 90% of residents.

32) We recommend that unexpensed funding in a given year could be directed to other initiatives to help build infrastructure for the digital economy: innovation that can't yet be envisioned as advocated by PIAC. It's logical that these will evolve along with that economy. This flexibility to adapt year by year with incremental payments by leasees is fundamental to the principle that the public should enjoy benefits accruing from the digital economy in a sustained fashion as a result of the lease of this public resource to private entities.

## **CONCLUSION**

33) We thank Industry Canada for the opportunity to participate in this consultation, and to comment on the submissions of other parties.

34) We believe the evidence and the aspirations of Canadians overwhelmingly advocate a maximally competitive and inclusive digital economy, in which all can take part both as consumers and as creators of new content, information, and applications.

35) We stand by our original recommendations, and have been pleased to elaborate further on ways to bolster Canada's digital infrastructure using the proceeds of the proposed auction.

## Appendix I:

By Harry A. Jessell

*TVNewsCheck*, November 12, 2010

As much as I like its phone service, I'm a little miffed at Verizon Wireless. It has ripped off classic broadcasting icons for its current "Rule the Air" ad campaign. I'm sure you've seen the centerpiece of the campaign many times by now: a globe topped by a tower with lightning bolts coming out of it. To me, that says broadcasting, not cell phone and certainly not wireless broadband.

But I guess it's nothing to get too worked up about. After all, most broadcasters left behind those kinds of images in the 1940s.

When I first saw the ads, I thought that Verizon just liked the retro look of the thing. But now I'm thinking that there might be something more to it.

This week, at a mobile conference in San Francisco, Verizon Wireless CTO Tony Melone said that the carrier now believes that the best way of handling some of the expected demand for video on its new super-fast broadband network is broadcasting — that is, pumping one signal to many users simultaneously rather than millions of signals one at a time.

"We're working with all of our infrastructure providers ... to develop the technology to incorporate a broadcast capability," he said.

"[A] portion of your [spectrum] capacity would have to be allocated to this broadcast capability," he continued. "We think that will be a solution to this problem down the road, that there will be a broadcast element to our 4G network that can then more efficiently deal with the live content."

It may not be broadcasting as we think of broadcasting — AM, FM and TV, but it is broadcasting. One to many.

Melone certainly doesn't speak for the entire broadband industry, but his comments should give us pause. If Verizon Wireless is thinking this way, my bet is that some of its competitor and would-be competitors are too.

So, let's recap the situation.

The FCC and its friends at the White House and on Capitol Hill want to dismantle or at least diminish TV broadcasting as an over-the-air service so that they can recover its spectrum and sell it to the wireless carriers for use in fancy wireless broadband networks.

Once they build the networks, if Melone is to be believed, the carriers may use that very same spectrum to create a broadcast service to handle bandwidth-hungry video, particularly live programs.

Other than a pay day from the spectrum auction, I'm not sure what the government gains then from its spectrum reallocation policy. Of course, the payday may be the whole point.

I understand that you don't want to make too much of something said at an industry conference, but this whole idea of broadcasting over broadband should be explored and questioned by the policymakers.

The route the FCC has mapped out appears to be circular. Mobile ends up back at broadcasting, except that it's controlled by a handful of carriers rather than hundreds of station owners.

In resisting the push to take more of their spectrum, broadcasters have been trumpeting the wonders of broadcasting.

In a written interview last January, broadcasters' spectrum watchdog David Donovan said that broadcasting should be seen as a complement to broadband. "Our system, which is a point-to-multipoint system, is the most efficient way to distribute high-quality video content in real time."

That's what you would expect a broadcast lobbyist to say. It's not what you would expect a broadband network provider to say in almost the same words as Melone did last week.

The inefficiency of using broadband for one-to-one streaming of video and audio is also evident in the trend toward pay-as-you-go pricing of broadband data plans. The more bandwidth you use, the more you pay.

The carriers have apparently concluded that it is bad business to allow customers to pay a flat fee and sit there watching TV or listening to music on their smart phones and tablets all day. Video and audio require way too much bandwidth.

Like Donovan and others have suggested, the best policy may be to preserve conventional broadcasting so that it can move ahead with its mobile plans. A thousand TV stations out there pumping video to mobile devices should satisfy much of the demand for on-the-go video and relieve broadband networks of what may be an uneconomical chore.

Perhaps Melone should cancel plans for a broadcasting component to his new broadband network. Real broadcasters, the folks with call letters, can handle the video and audio. No problem.

I have tried to maintain some skepticism about broadcasters' mobile DTV service, but I am having a more difficult time lately. All signs indicate that this is going to happen. I fully expect to see some kind of service widely available by this time next year. The big question is whether the mobile device manufacturers will be able to keep up.