



*Branchons nos communautés  
Connecting our communities*

Ottawa, October 2<sup>nd</sup> 2017

Senior Director  
Spectrum Licensing and Auction Operations  
Innovation Science and Economic Development  
235 Queen Street  
Ottawa, K1A 0H5

SUBJECT: Consultation on a Technical, Policy and Licensing Framework for Spectrum in the  
600MHz Band -- CanWISP Submission

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Madam, Sir,

Please find below the comments from CanWISP, the Canadian Association of the Wireless ISPs.

For any questions or inquiries, please contact me.

Truly yours,

Dan Barnes  
Chairman of the Board  
Canwisp  
dan@canwisp.ca

## **Introduction:**

1. CanWISP is an organization representing Canadian Wireless Internet Service Providers. Our members operate networks providing Internet access to households in rural areas throughout Canada – areas that the large telecom operators are not servicing. Our members' business model allows them to serve areas of low density profitably and at low cost, unlike the large telecom service providers, whose business model is usually designed to optimize return to shareholders, and is not suited to provide service in these areas, even if they are close to large population centers.
2. Our members' networks range in size from hundreds up to 25,000 subscribers, and supply high speed internet service as well as VoIP-based voice services, and video services. Some even provide mobile roaming services over LTE. Overall, our 50 members provide service to around 160,000 subscribers in hard to reach rural areas. We estimate that the total number of subscribers serviced by similar wireless operators (more than 40 others) is around 150,000. This represents a niche market of over 100M\$ a year. More than 98% of the connections are wireless.

## **Position of CanWISP:**

3. Even if our members provide excellent service to populations that are left aside by the large providers, our members feel that they don't have access to the tools to continue and expand their services. One of the most important tool is access to spectrum.
4. CanWISP participated in CRTC's hearing in 2016 about access to internet in rural areas where the lack of access to high speed internet and mobile was largely exposed and agreed by all. Furthermore, the CRTC in its decision put forward a target of throughput to household customers of 50Mbps/10Mbps at a reasonable price.
5. This is why during the hearing CanWISP highlighted the fact that more spectrum is needed in the rural areas. To help the rural areas get up to speed with the rest of the urban areas. As a matter of fact, it was our main issue.
6. Let's remember that spectrum is a public resource and should profit everyone. It is especially well suited to be used to cover long distance where the population density is low. It is even more applicable to the lower frequency bands like 600MHz.
7. CanWISP members need to have access to spectrum that covers large distances and where higher power can be used. They also need to have access to spectrum for which technology exists (or will exist soon) to profit from the lower prices brought by the large volume of manufacturing... Like in the mobile world.

## **The Auction:**

8. This auction is designed to eliminate the small players.
  - Large area to be auctioned so the deposit will be high and the starting bid even higher
  - High price per pop/MHz
  
9. CanWISP would prefer the auction to be in smaller tiered areas but even that would not stop large corporations to overbid to reserve the spectrum for later or to prevent any competition. The proposed licence terms would force them to deploy in the next 20 years. Kids would have time to be born and go through schooling without even getting the service. Kids need the service today. Our members could put this spectrum to use within 5 years.
  
10. As for the initial bid price per pop/MHz, if the Canadian government really wants service at 50Mbps/10Mbps in rural areas, then the initial price is just too high. Although the spectrum can service the most remote areas, it would not be suitable to service everyone because of the low amount of spectrum (15MHz + 15MHz in the set-aside). So paying a price per pop for a pop that can't be serviced is not justifiable.

## **11. Partial Solutions:**

- a. CanWISP is proposing to explore other ways of paying for the spectrum. For example, a price per pop/MHz connected (in a fixed wireless service) like it is being done in other countries. This would have the advantage to have a pay per use. This type of licence could be assigned for 10 years and paid for on a yearly basis.

## **Spectrum Requirement:**

12. CanWISP members fully recognize that by issuing an auction in the 600MHz, ISED is making sure that Canadians in dense areas will be well served and that spectrum will be sufficient.
  
13. However, we have to realize that large operators will be owning the same amount of spectrum in high density areas like Montreal, Toronto or Vancouver than they will in rural areas (even if there is more re-use of the spectrum in dense areas). It is clear that there is already underutilized spectrum at this time in rural areas that our members can't access. Why allocate more spectrum in rural areas?
  
14. In a logical world, this spectrum should be allocated to the rural areas first since they need it the most. The fact that the 600MHz propagation is so good would help the business cases of the rural operators.

## **Cognitive radios and dynamic spectrum usage**

15. CanWISP also notes in the ISED Consultation Paper at paragraph 120 that ISED will launch a consultation to explore cognitive radio technologies and dynamic spectrum access.

16. CanWISP is in favor of using these technologies to increase spectrum accessibility. However, the horizon of availability of the technology is too far and the government is requesting service in all the Canadian homes at 50Mbps in a short time frame. Furthermore, it is likely that the cognitive radio technology will be expensive at early implementation stage and only accessible by large players. Therefore, these technologies will benefit the large players who will have, again, access to more spectrum.

### **17. Partial Solution:**

- a. CanWISP is therefore proposing that better mechanisms of spectrum sharing be put in place in a short time frame. It is not acceptable that large operators be leaving spectrum unused while the general population is lacking service.

Large operators receiving requests for spectrum sub-licensing must respond in a timely manner with a reasonable offer to the demand. Technical issues should be addressed reasonably. The goal should be to share and not for the large operator to keep spectrum. This must be part of the licence conditions.

18. CanWISP also realizes that the new database driven frequency allocation for the TV White Space frequencies is probably the initial step to cognitive radios. This spectrum is in the 600MHz but is limited in reach and quantity.

### **19. Partial Solution:**

- a. To help anywhere possible and to use all the resources, as a first step, CanWISP proposes to include RRBS type rules in the White Space allocations driven by the database. Higher power would be available in areas where it would not disturb other users and where coordination with the US would allow it.

## **Regional investments:**

20. Allowing smaller operators to get access to spectrum is also a great incentive to promote local economy. Our members have their business places in small cities or villages and they employ local skilled workers.

21. Let's also not forget that ISED is investing in rural areas to help deploy high speed internet through its Canada 150 program: \$500M. Spectrum is needed to make sure that these projects will see the light of day.
  
22. CanWISP feels that it's time for the government to include spectrum as part of its investments in small communities and give a chance to smaller companies to expand. It's a matter of planning for the needs of the rural communities in the same manner as ISED is planning for the needs of the dense areas by working hard to make new spectrum bands available. And this can be done without any impairment to the present plan.

A handwritten signature in black ink, appearing to read 'Dan Barnes', with a horizontal line extending to the right.

Dan Barnes  
Chairman of the Board  
Canwisp  
dan@canwisp.ca