



October 26, 2020

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Innovation, Science and Economic Development Canada 235 Queen Street, 6th floor
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(Submitted by email: ic.spectrumauctions-encheresduspectre.ic@canada.ca)

Dear Mr. Scott,

Re: Canada Gazette Notice No. SLPB-002-20
Consultation on the Technical and Policy Framework for the 3650-4200 MHz Band and
Changes to the Frequency Allocation of the 3500-3650 MHz Band

The Radio Advisory Board of Canada (RABC or the Board) is pleased to respond to the above noted consultation. The attached response was developed by the Board's Advanced Wireless Communications Subcommittee. The consultation had broad interest amongst RABC members, with approximately forty stakeholder participants actively involved in developing the response.

The response was sent to RABC Sponsor Members for ballot. All twenty of the Board's Sponsor Members voted. The breakdown of the votes is as follows: 11 approved; 5 approved with comment; and 4 abstained.

The Sponsor Member's comments (which form an integral part of the RABC response), are as follows.

Bell

Regarding paragraphs 40 – 42:

We do not believe that paragraph 41 is required. As stated in the previous paragraph (P. 40), the use of more efficient technologies (e.g. 5G and MIMO) could easily support the 50/10 service offering on 20 MHz of spectrum. Allocating more spectrum to WBS operators in order to support 50/10 utilizing older outdated technologies is not an efficient use of spectrum and does not encourage or promote the use of highly spectral efficient technologies.

With respect to paragraph 42, and in particular the phrase “allocating 80 MHz as opposed to 50 MHz to shared licensing”, while certainly use of additional spectrum is one way to provide a higher capacity service in WBS, in our view, this approach is not the optimal method. While all spectrum is a valuable and scarce resource, the mid-band spectrum being consulted on is of critical importance and should be utilized as efficiently as possible. The availability of newer technologies like MIMO and 5G can increase network capacity far beyond the currently deployed solutions employed by WBS operators. If additional spectrum is indeed required, WBS operators can supplement their additional spectrum requirements by accessing the 50 MHz set-aside spectrum available in 3500 MHz.

Canadian Association of Chiefs of Police

Regarding paragraph 50. RABC Option #5 – WBS relocated to a portion of 4900-4990 MHz

Though the comment “Public Safety use in the 4.9 GHz band is limited today”, may hold true in a vast part of the country, it should be noted that in some of the largest urban areas of Canada, public safety have invested and deployed extensive fixed (point-to-point) and MESH networks in the 4940-4990MHz band. So band use may be limited, but where used, the deployments are large.

Canadian Satellite and Space Industry Forum

The response to Question 19 c) indicates that ISED may wish to study the use of terrestrial devices in an extended shared spectrum band of 3980 – 4195 MHz. The CSSIF does not support the repurposing of this extended range, however, should the Department undertake such studies the CSSIF members would welcome the opportunity to participate.

The CSSIF wishes to clarify that the C-band utilization landscapes in Canada and the UK are quite different. The UK geographic size is relatively small compared to Canada, while the population density is significantly higher; therefore, in the UK the C-band is not generally used for domestic video contribution and distribution traffic, nor for broadband backhaul signals. Instead, in the UK the main use of the C-band is a small number of gateways for international traffic. This different usage means that in the UK, unlike in Canada, there are few earth station receivers operating across the entire 3700-4200 MHz band. In the UK consultation¹, which is referenced in the RABC response, the maps in Annex 7 indicate there is a very small portion of the UK where spectrum would not be available due to shared use terrestrial deployments, i.e. there are very few C-band earth station locations. Because of this it was relatively easy for the UK to consider allowing low and medium power shared use terrestrial deployments in C-band. The situation is quite different in North America, where most cable companies and other video distributors receive signals from a multitude of C-band GEO satellites, with up to 24 RF channels on each satellite (i.e. the entire 3700-4200 MHz band, both polarizations). With the incoming Flexible Use allocation in C-band, these signals will have to be moved to the upper

¹ Enabling opportunities for innovation: Shared access to spectrum supporting mobile technology, Dec 2018
https://www.ofcom.org.uk/data/assets/pdf_file/0022/130747/Enabling-opportunities-for-innovation.pdf

portion of C-band, or to a different frequency band altogether. Furthermore, gateways and stations in satellite -dependent areas would need to access the entire 3700-4200 MHz band and would need to be protected. Adding low and medium power FWA systems on a shared use basis would raise the earth station noise floor and could cause significant interference to satellite receive earth stations providing critical services across the country. Sharing measures, such as coordination that is being adopted by the UK, would be much more difficult, if not impossible, to implement in Canada, due to the large number of earth stations that would continue operating in all or part of the C-band.

CanWISP

- 1) CanWISP disagrees with options that require relocation outside the 3GHz band, specifically the following:
 - a) Paragraph 46 – Option #3 – WBS relocated to the 6 GHz band*
 - b) Paragraph 50 – WBS relocated to a portion of 4900-4990 MHz**
- 2) Paragraph 48 – Option #4 – WBS relocated to below the lower edge of the 3500 MHz flexible usage band (3400-3450 MHz)
 - a) CanWISP only supports this option if it is in conjunction with Option #2*
 - b) If ISSED relocates WBS services to 3400-3450, it will be hindered by exclusion zones preventing use in all areas of Canada.*
 - c) However, if paired with 3900-3980 MHz, this space could be used vacate 3650-3700 MHz sooner.**

Rogers Communications

Rogers does not support the RABC assertion that increasing the shared licensing allocation from 50 MHz to 80 MHz will allow more underserved Canadians to meet the CRTC's 50/10 Mbps service targets for broadband service (para 42). As the RABC response to Q14 clearly outlines, 50 MHz is more than enough spectrum to surpass those speeds with 4G or 5G technology. Making the 30 MHz of spectrum above shared licensing's current 50 MHz allocation available to exclusively licensed flexible use operators would be more beneficial to unserved and underserved Canadians, as these network operators will have greater capacity to extend network coverage and advanced services to Canadians.

RABC and its members appreciate the opportunity to provide input on this important consultation.

Sincerely,



J. David Farnes
General Manager