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Innovation, Science and Economic Development Canada  
Engineering, Planning and Standards Branch  
Senior Director, Terrestrial Engineering Standards  
6th Floor, East Tower  
235 Queen Street  
Ottawa ON K1A 0H5  
(Submitted by email - consultationradiostandards-consultationnormesradio@ised-isde.gc.ca)

**Subject: SMSE-007-25 - Consultation on the Policy, Technical and Licensing Framework for the Use of the Frequency Bands 21.2–21.8 GHz and 22.4–23.0 GHz by Fixed Services**

Please find attached the RABC response to the above noted consultation. This response was sent to RABC Sponsor Members for ballot. Of the Board's 19 Sponsor Members, 7 voted to approve the response (Bell, Canadian Association of Broadcasters, CBC/Radio Canada, National Defence, Railway Association of Canada, Rogers and TELUS); 1 voted to approve the response with comment (Canadian Electronics and Communications Association "CECA"); and 4 abstained (Canadian Association of Broadcast Consultants, Canadian Satellite and Space Industry Forum, Model Aeronautics Association of Canada, and NAV CANADA).

CECA's comments are as follows and should be considered part of the Board's response. CECA would propose to modify paragraphs 4 and 8 of RABC's submission as highlighted below.

4. *To further optimize system utilization, particularly for high-capacity network access and 5G (and future 6G) backhaul, ISED should consider revising channelization planning to accommodate larger channel sizes. **In addition to existing channels**, options such as 60, 80, 100 and 120 MHz channels under American National Standards Institute (ANSI) standards, would enable higher throughput and better spectral efficiency. **Further discussion to determine the exact channel plans would be take place during the writing of the SRSP.** These configurations are already supported by many modern microwave systems and would align Canadian spectrum policy with international best practices. RABC would note as well, that larger channel bandwidths (112 MHz and 224 MHz) are also supported under European Telecommunications Standards Institute (ETSI) standards. **However, it is strongly not recommended to mix ANSI and ETSI channel plans.***

8. *To further enhance spectral efficiency and network performance, RABC recommends that ISED recognize the role of advanced technologies such as Multiple Input Multiple Output (MIMO) ~~and beamforming.~~ In particular, ~~beamforming enables the creation of multiple directional backhaul links to a single hub, supporting more flexible and scalable network architectures that are well suited to evolving broadband and 5G and future 6G demands.~~*

*CECA provides the reason to remove “beamforming” from the text: The purpose of the SRSP review is to remove point-to-multipoint services and beamforming is not applicable to fixed services.*

We appreciate having had the opportunity to provide comments to this important consultation.

Sincerely,



J. David Farnes  
General Manager

Attachment

*Question 1: ISED is seeking comments on the availability of an existing fixed backhaul equipment ecosystem in the 21.2-21.8 GHz and 22.4-23.0 GHz bands that would also be appropriate for the Canadian market.*

1. There is a well-established fixed backhaul equipment ecosystem operating in the 23 GHz band, particularly within the ranges currently covered by SRSP-321.8 Technical Requirements for the Fixed Line-of-Sight Radio Systems Operating in the Bands 21.8-22.4 GHz and 23.0-23.6 GHz. This equipment is widely deployed across Canada and internationally, supporting a variety of network configurations and service providers. Notably, existing systems are designed to operate with a transmit/receive (T/R) spacing of 1200 MHz and support channel sizes up to 50 MHz, which aligns with current deployment practices and spectrum planning.
2. Although other international users of this spectrum support different T/R spacings, RABC recommends that the T/R Spacing of 1200 MHz be utilized, to facilitate co-ordination at band edges with the existing SRSP 321.8 channel plan, and also to promote cross-border co-ordination with US users that operate under FCC rules. If the new spectrum is logically implemented using the 1200MHz T/R spacing, then the existing microwave hardware ecosystem for the current Canadian market under SRSP 321.8, and the US market 23 GHz band plan, can be easily adapted & used for Canada without delay, assuming the same TX Emission mask requirements as the current SRSP 321.8 are implemented. Commonality of hardware and bands for the North American market is key.
3. The proposed extension of the 23 GHz band to include the 21.2-21.8 GHz and 22.4-23.0 GHz ranges would be highly beneficial to the Canadian market. These additional sub-bands are already supported by many international equipment vendors, and their inclusion would allow Canadian operators to leverage a broader product ecosystem without requiring significant redesign or re-certification. This would enhance spectrum efficiency, reduce deployment costs, and improve supply chain flexibility.
4. To further optimize system utilization, particularly for high-capacity network access and 5G (and future 6G) backhaul, ISED should consider revising channelization planning to accommodate larger channel sizes. Options such as 60, 80, 100 and 120 MHz channels under American National Standards Institute (ANSI) standards, would enable higher throughput and better spectral efficiency. These configurations are already supported by many modern microwave systems and would align Canadian spectrum policy with international best practices. RABC would note as well, that larger channel bandwidths (112 MHz and 224 MHz) are also supported under European Telecommunications Standards Institute (ETSI) standards.
5. As such, the existing Canadian fixed backhaul equipment ecosystem is well-positioned to support the proposed spectrum extension. The availability of compatible hardware, combined with the potential for enhanced channelization, presents a strong case for expanding the 23 GHz band to include the 21.2-21.8 GHz and 22.4-23.0 GHz ranges. This approach would promote innovation, improve network performance, and ensure continued alignment with global technology trends.

*Question 2: ISED is seeking comments on its proposal to rescind the MCS designation from the frequency bands 21.2-21.6 GHz and 22.4-22.8 GHz.*

6. The RABC supports the Department's proposal to rescind the multipoint communication systems (MCS) designation from the 21.2-21.6 GHz and 22.4-22.8 GHz frequency bands. This change would enable harmonization with the existing 23 GHz fixed service framework, facilitating more efficient spectrum use and simplifying equipment deployment across adjacent bands. Removing the MCS designation allows these frequencies to be repurposed for high-capacity fixed backhaul applications, which are increasingly critical for supporting modern broadband and 5G (and future 6G) networks. Furthermore, rescinding the MCS designation would support the enablement and deployment of advanced technologies that require wider channel bandwidths and higher throughput, thereby enhancing network performance and scalability across Canada.

*Question 3: ISED is seeking comments on its proposal to designate the frequency bands 21.2-21.8 GHz and 22.4-23.0 GHz for fixed point-to-point systems.*

7. The RABC supports ISED's proposal to designate the 21.2-21.8 GHz and 22.4-23.0 GHz frequency bands for fixed point-to-point systems. This designation aligns with international trends and will allow Canadian operators to leverage a mature equipment ecosystem already supporting the adjacent 23 GHz band. This additional "backhaul" spectrum is both welcomed and needed to keep pace with the increasing demand from mobile 5G & future 6G networks, especially since the moratorium in 38GHz prevents its use for new fixed point-to-point services.

8. To further enhance spectral efficiency and network performance, RABC recommends that ISED recognize the role of advanced technologies such as Multiple Input Multiple Output (MIMO) and beamforming. In particular, beamforming enables the creation of multiple directional backhaul links to a single hub, supporting more flexible and scalable network architectures that are well-suited to evolving broadband and 5G and future 6G demands.

9. Allowing larger channel sizes in this new spectrum (e.g., 60, 80, 100, or 120 MHz) would enable Canadian operators and enterprise licensees to deliver the required microwave backhaul capacity more cost-effectively compared to the current N x 50 MHz maximum channel plan. To meet typical backhaul requirements of 1 Gbps or 2 Gbps, operators currently deploy configurations such as 4 x 50 MHz or 8 x 50 MHz channels. By introducing larger channel sizes, similar capacity can be achieved with fewer transceivers, resulting in lower costs and reduced complexity. Additionally, the current EIRP limit should be reviewed. RABC advocates maintaining the EIRP limit in SRSP-321.8 to the expanded band and to harmonize with the FCC.

*Question 4: ISED is seeking comments on the proposed footnote Cxx and the changes to the CTFA as show in table 3.*

10. The RABC generally supports the proposed footnote Cxx and changes to the Canadian Table of Frequency Allocations (CTFA) for the 21.2-21.4 GHz band as shown in table 3, as it promotes efficient spectrum use, facilitates technological innovation, and ensures regulatory

consistency with key international partners. The RABC recommends that the proposed footnote should be adopted with additional changes in bold.

ADD Cxx: The use of the band 21.2-21.4 GHz by the Earth exploration-satellite (passive) and space research (passive) services shall not impose constraints upon the fixed **and mobile** services.

11. As per the CTFA, footnote 5.532, “The use of the band 22.21-22.5 GHz by the Earth exploration-satellite (passive) and space research (passive) services shall not impose constraints upon the fixed **and mobile**, except aeronautical mobile, services.” [Emphasis added.]

12. The use of similar coexistence requirements to those outlined in footnote 5.532 for the 22.21-22.5 GHz band is a prudent approach that facilitates the seamless operation of systems across both portions of the proposed extended 23 GHz band plan. This consistency in coexistence provisions ensures technical alignment and simplifies deployment strategies for operators utilizing equipment across the full band range.

13. Moreover, the proposed changes, including the addition of mobile services, to the CTFA footnote will provide alignment with coexistence restrictions already defined in the United States for the same frequency ranges. This harmonization will benefit Canada and Canadian operators by enabling access to a well-established and globally supported equipment ecosystem, reducing barriers to deployment and fostering cross-border compatibility.