November 13, 2013

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By email at: spectrum.planning@ic.gc.ca

Subject: Canada Gazette Notice No. SMSE-007-13 — Consultation on Use of the Frequency Band 25.05-25.25 GHz

The Radio Advisory Board of Canada is pleased to respond Canada Gazette Notice No. SMSE-007-13 — Consultation on Use of the Frequency Band 25.05-25.25 GHz.

The Board has undertaken a review of proposals outlined in the Consultation Paper through a working group of its Fixed Wireless Committee with broad participation from the fixed and satellite services communities.

The attached response was balloted to Board members. Seventeen of the RABC’s 20 members responded as follows: 14 approved, 1 approved with comments, 2 abstentions and 0 disapproved.

The Sponsor Member’s comments (which form an integral part of the RABC’s response) are as follows:

Comments of the Canadian Satellite and Space Industry Forum are as follows:

“CSSIF is generally supportive of the RABC Response, but opposes RABC’s proposed wording changes to footnote C44, and therefore will be submitting comments to the Department on that matter.”

Yours truly,

Roger Poirier  
General Manager
The Radio Advisory Board of Canada is pleased to respond Canada Gazette Notice No. SMSE-007-13 — Consultation on Use of the Frequency Band 25.05-25.25 GHz

The following summarizes the issues:

- The 25.05-25.25 GHz band is co-primary for both FS and FSS. Ordinarily this would imply normal coordination requirements on a first-come, first-served basis (FCFS) for both services. However, fixed services licensees (in particular where licences have been acquired through an auction process) need a level of assurance that services can be deployed within licensed areas with no harmful interference from other services or with a minimum of constraint.

- On the other hand only a small number of large antenna uplink earth stations can be expected to be deployed in the 25.05-25.25 GHz band and these installations also need a high level of assurance that they will not need to be re-located or materially constrained at a future date to protect new FS systems.

- To provide certainty to licensees of both services, Industry Canada has proposed modifications to the current footnote C44 that removes the reference to the term “interference,” and calls for the establishment of a coordination process.

In discussing sharing issues between these services, there are three scenarios that we need to consider:

1. **An FS station is licensed or proposed for a specific location for point-to-point communications.**

   The existing FCFS procedures would apply (keeping in mind that the FSS earth stations have a large aperture and that there would only be a small number). A proposed earth station would have to successfully coordinate with incumbent FS licensees or be denied a licence. Conversely, a proposed FS station would have to successfully coordinate with (or agree to accept interference from, since the interference path is only from the FSS transmitter to the FS receiver) a licensed FSS earth station. This is analogous to the situation today in other bands shared between the FSS and point-to-point FS, such as the L4 and L6 GHz bands.

2. **The FS spectrum has been auctioned or otherwise licensed on an area basis, e.g., for point-to-multipoint applications**

   FS licensees want to have freedom to build out their networks within areas for which they have an active licence without being constrained by the possibility of future FSS earth stations. Within those service areas, an FSS earth station applicant should be required to coordinate with the FS licensee(s) when the pfd density from the proposed FSS earth station exceeds the trigger limit at any point in any currently-licensed FS service area. If coordination is successful, the FSS applicant would include evidence in its submission to the Department. If coordination cannot be achieved, the FSS applicant could withdraw or modify its proposal (e.g. relocate the earth station) or appeal to the Department. Presumably, in the
event of such an appeal, the Department would review the circumstances and arguments of both parties and make a ruling based on its assessment of the facts and the public interest.

3. **There has been no FS licence (specific location or area) granted**

The FSS applicant, as part of its application, would file the contour of the pfd trigger limit and its assertion that no licensed FS site or area falls within it. Such applications would be considered in the context of footnote C44.

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5-1
Industry Canada is seeking comments, with supporting justification, on the proposal to amend footnote C44 to clarify the priority of the FS relative to the FSS.
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The Board suggests the following:

1. Remove the first sentence to the footnote, i.e., “Feeder links to broadcasting-satellite space stations operating in the band 17.3-17.8 GHz shall be implemented in the band 24.75-25.25 GHz”. We agree with the Department that this would provide flexibility for satellite operators.

2. Replace the second sentence of C44 with the following:

In the band 25.05 – 25.25 GHz, the use of spectrum for the fixed service (FS) has priority over the use of the fixed-satellite service (FSS). This priority is implemented by limiting FSS earth station deployments to a small number of large antennas for feeder links to the broadcasting-satellite service and/or for gateway applications in the FSS. Such applications and designs will impose minimal constraints upon the deployment of FS systems. To ensure this, Industry Canada may (after consultation with stakeholders) impose further limitations on the design and/or locations of proposed new earth stations. Any proposed systems in the FS or FSS will have to be coordinated with existing licensees.

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6-1
Industry Canada is seeking comments, with supporting justification, on its proposal to establish a coordination process between the FSS and the FS. The Department is also seeking comments on whether this process should be aligned with the coordination process outlined in SRSP-324.25 or if another approach should be considered.
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RABC supports the Department’s view on the necessity to establish a comprehensive coordination process to ensure fair access to both primary services. We believe it would be important that, in addition to a default coordination process, the department provides the flexibility to use an alternative process which would be agreed to between both licensees. In that regard, text similar to that found in the introduction of section 7 of SRSP-325.25 should be considered.

Regarding the coordination process itself, RABC believes that different approaches are required to address the two types of FS applications authorized:

- One to deal with point-to-point systems
- One to deal with point-to-multipoint systems

For the first case, a frequency coordination footprint (keyhole) approach similar to the one described in section 7.1 of SRSP-325.25 could be used, taking into account the technical data of
the licensed systems. The keyhole values should nevertheless be reviewed to ensure they are appropriate.

For the second case, since FS systems could be located anywhere within a licensed service area, RABC recommends the development of a coordination process based on a minimal distance between the FSS earth station and the service area, as well as a pfd value trigger at the border of the service area. In any situation where the proposed FSS earth station pfd value at the border of the licensed service area would exceed this trigger value, coordination would be required. The approach used in section 8 of the SRSP-325.25 could be used as the basis to develop such a process. In addition, the "two pfd value" process described in SRSP-324.25 should be evaluated to see whether it would be useful for the FS-FSS coordination process.

Finally, RABC notes that in the Consultation Paper and in SRSP-324.25 the proposed pfd trigger value is −114 dBW/m² in any 1 MHz band, which differs from the value of −125 dBW/m² in any 1 MHz band contained in SRSP-325.25. We recommend reviewing both SRSPs to ensure consistency.