Dynamic Spectrum Alliance Limited
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June 4, 2021

Mr. Martin Proulx D
Director General
Engineering, Planning and Standards Branch
Innovation, Science and Economic Development Canada
235 Queen Street (6th Floor, East Tower)
Ottawa ON K1A OH5

Re: Comments on Radio Standard Specifications RSS-222, issue 3 (May 2021) and Database Specifications DBS-01, issue 3 (May 2021)

Dear Sir/Madam,

The Dynamic Spectrum Alliance (DSA)[1] submits these comments in response to the May 2021 revisions to Innovation, Science and Economic Development Canada's (ISED) proposed update of its two key regulatory documents regarding licence-exempt operations in the broadcast television white space (WS) based on the initial round of comments. These two proposed updated documents are *RSS-222, issue 3 – White Space Devices (WSDs)*[2] and *DBS-01, issue 3 —*

[1] The Dynamic Spectrum Alliance is a global, cross-industry alliance focused on increasing dynamic access to unused radio frequencies. The membership spans multinational companies, small- and medium-sized enterprises, academic, research, and other organizations from around the world, all working to create innovative solutions that will increase the utilization of available spectrum to the benefit of consumers and businesses alike. A full list of DSA members is available on the DSA's website at www.dynamicspectrumalliance.org/members.

[2] Radio Standard Specification RSS-222, issue 3, *White Space Devices (WSDs)*, Innovation, Science and Economic Development Canada, released May 28, 2021. https://www.rabc-cccr.ca/ised-radio-standard-specifications-rss-222-issue-3-february-2021-draft-white-space-devices-wsds/ (RSS-222).

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White Space Database Specifications.[3] As with its previous comments, DSA's submission will cover both documents.

Overall, DSA supports the proposed changes to both RSS-222 and DBS-01, including the removal of the emissions limit for channels 35 through 39 and permitting greater flexibility in the treatment of narrowband WSDs. The removal of the emissions limit requirement eliminates a real barrier to entry for fixed WSD manufacturers interested in entering the Canadian market.

The DSA offers the following suggestions on the updated regulatory proposal:

White Space Database Specifications (DBS-01, issue 3, May 2021)

Section 13 - WSD Power, height limits, and available channels

The DSA's understanding is that the WSD's geo-coordinates will provide the WSDB with the WSD's x and y coordinates (and uncertainty in its position). The DSA suggests that ISED include a sentence also requiring the device to provide its height above ground level (AGL) and uncertainty, so that the WSBD can calculate its Effective Height Above Average Terrain (EHAAT) and the Height Above Average Terrain in the direction of the affected TV Station (dirHAAT).

[3] Database Specification DBS-01, issue 3, *White Space Database Specifications*, Innovation, Science and Economic Development Canada, released May 28, 2021. https://www.rabc-cccr.ca/ised-white-space-database-specification-dbs-01-issue-3-february-2021-draft-white-space-database-specifications/ (DBS-01).

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Section 14.2 – Protection Criteria to Registered Licensed LPA

The DSA suggests that ISED consider harmonizing with the United States, rules regarding protection criteria to registered licensed LPA with protecting "Low power auxiliary services, including wireless microphones".[4] The United States' WSD rules protect licensed wireless microphone using the same criteria in the first paragraph of Section 16. ISED's proposed new language significantly increases the separation distance when a fixed, mobile, or mode II personal / portable device communicates with a mode I personal / portable device. Presumably, these additional separation distances are for co-channel operations, not also for adjacent channel operations.

For personal / portable (mode II) WSDs, the minimum separation distance is 400 meters. If the mode II personal / portable device communicates with a mode I personal / portable device, then the separation distance will either more than triple or quadruple, depending on the e.i.r.p. level of the mode I personal / portable device. Even if there are a limited number of registered licensed LPAs within an urban core, a 1.3 km or 1.7 km separation distance (depending on the mode I personal / portable WSD's e.i.r.p. level) will block out the use of mode I personal /portable devices in Canadian cities. Effectively, all personal / portable devices in Canada will have to be mode II, as the importer will not want to run the risk of having devices that cannot be operated.

[4] United States Code of Federal Regulations, Title 47, Part 15, Section 712(f).

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White Space Devices (RSS 222, issue 3, May 2021)

Section 3 – Coming into force and transition period

The DSA understands that ISED has certified some fixed WSD devices for marketing and operations in Canada. The new proposed text in Section 3 can be interpreted to mean that WSDs already certified for the Canadian market under an earlier issue of RSS-222, will have to be recertified under RSS-222, issue 3. The DSA wonders (given the limited number of certified devices) if these models can preferably be grandfathered in, or in the alternative, have a shorter path to recertification.

Section 8 – Definitions

Update the definition of "geolocation capability" to conform to that used in DBS-01, issue 3 (May 2021).

Section 11.7.1 – Transmitter band edge and adjacent channel power limits

Under the United States' rules, for fixed and mobile WSD operations at e.i.r.p. levels of 36 dBm or less, the WSDs may operate at e.i.r.p. levels between the values in a table that is identical to Table 4, provided that the conducted power and the conducted power spectral density (PSD) limits are linearly interpolated between the values shown and the adjacent channel

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emission limit of the higher value shown in the table is met.[5] The DSA suggests ISED consider incorporating similar language in Section 11.7.1.

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Respectfully submitted,

Martha SUAREZ
President
Dynamic Spectrum Alliance

[5] United States Code of Federal Regulations, Title 47, Part 15, Section 709(b)(1), Table 1 to Paragraph (b)(1)(iii).