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Submitted by email: ic.spectrumengineering-genieduspectre.ic@canada.ca

Re: SMSE-018-17 – *Consultation on the Technical and Policy Framework for White Space Devices*
and SMSE-019-17 – *Consultation on the Technical, Policy and Licensing Framework for Wireless Microphones*

1. This submission is being filed to express concern about the potential negative impact on Canadian religious congregations of ISED's proposed policies and rules relating to white space devices (WSD) and wireless microphones (WM), as detailed in the above *Canada Gazette* notices.

2. Many houses of worship throughout Canada have installed public address (PA) systems in order to ensure that all attendees, especially the hearing impaired, can follow services properly. These systems often employ WM devices as a result of the mobility requirements of clergy and worship assistants during services. Usually this PA equipment has been installed professionally and systems can cost hundreds of dollars each, especially when multiple microphones are required for larger worship spaces. Few of the older transmitter/receiver systems currently in use are frequency-agile and they almost universally operate on an unprotected, unlicensed basis. If the original channel(s) of operation become untenable because they cause interference to licensed services, or because they suffer interference therefrom, they must either be scrapped entirely or returned to the supplier for re-tuning to a new channel, which may not always be possible.

3. Fortunately, the majority of unlicensed WM have been able to operate quite successfully for many years by employing UHF-TV broadcasting spectrum in the 470-698 MHz range that is not required for local broadcasting purposes. As the primary service that requires protection in this band is by nature a fixed-location, stable and long-term occupant of the band, suitable free channels could usually be found for unlicensed WM operations. In situations where other secondary users were also operating in the UHF-TV band, all WM users had the option of applying for licences in order to protect their operations against incursions from unlicensed services. Most did not find this necessary, since the 470-698 MHz band provided a very wide spectrum range within which to operate.

4. This situation changed to a certain degree in 2011, when the current Digital Television (DTV) Allotment Plan was implemented and certain local UHF-TV stations were obliged by the Department to switch their operating channels. Wireless microphones operating on newly-implemented local DTV channels had to change their channels, at the users' expense. Pursuant to the Department's decision to re-allocate 614-698 MHz to the Mobile Service, the pool of potential UHF operating channels will be reduced by about one-third.

5. The two current consultations raise new and even more serious concerns about the long-term status of all unlicensed wireless microphones, but particularly for those used by religious congregations. In addition to the fact that new unlicensed frequency-agile WSD operations will commence in the UHF-TV bands below 608 MHz the Department now intends to limit the pool of potential licensees of WM system to "professional users" only. The Radio Advisory Board of Canada (RABC) has recently clarified with the Department that the "professional" category will include broadcasters, large venue operators and users, motion picture producers & sounds companies, etc.; however, it would exclude houses of worship and presumably other smaller quasi-public venues, such as local community centres, meeting halls, etc.

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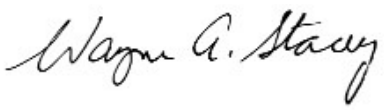
6. In 2012, when the Industry Canada (now ISED) set out its policy framework for the use of certain non-broadcasting applications in the television broadcasting bands below 698 MHz (Ref: Gazette Notice SMSE-012-12), it stated that, "*Industry Canada will allow LPA (Low Power Radio Apparatus, such as WM) on both a voluntary licensed and licence-exempt basis. Operators of licensed LPA will be asked to register their operation with the TVWS (now called WSD) databases in order to receive protection from harmful interference from TVWS devices."*

7. Moreover, on 5 February 2015, the Department published a number of documents relating to the planned authorization of WSD in Canada. In document CPC-2-1-28 *(Voluntary Licensing of Licence-Exempt Low-Power Radio Apparatus in the TV Bands*) it says: *"TV-band LPA certified under RSS-210 may operate in Canada without a licence"* but adds, *"…if protection from potential interference caused by WSDs is desired, users of licence exempt LPA should voluntarily obtain radio licences."* No mention was made in either of the above documents that this privilege might be restricted to professional users only.

8. It now appears that the Department has decided to renege on the commitments made in 2012 and 2015, without any explanation as to why it is suddenly no longer desirable to provide a last-ditch protective alternative for unlicensed WM users experiencing unacceptable interference from other unlicensed users of the UHF-TV band. It would certainly seem that there continues to be a need for available remediation measures for unlicensed WM, other than perhaps frequent and costly channel changes. If the Department proceeds with its proposed policy, unlicensed "non-professional" WM users will be left with no reasonable recourse to permanently protect their own operations once WSD operations are launched in Canada. If rules are set that do not satisfactorily support existing users, then it only encourages widespread unauthorized use, such as covert operation in the 608-614 MHz Radio Astronomy band.

9. Considering all of the above, the Department should at least modify its proposed policies so as to permit the licensing of any previously-unlicensed WM devices operating in the TV bands below 617 MHz. This would not appear to present a problem with respect to the total number of licences that may be sought for this purpose across Canada, since the annual costs and paper-work associated with obtaining WM licences will clearly make this option an absolute last resort for most non-professional users, especially the general public. However, it would provide an effective remediation path for quasi-public users, such as houses of worship, meeting halls and conference rooms. If it is considered absolutely necessary to specify certain bands for professional-only WM use, then perhaps this could be achieved by so designating the Mobile duplex gap (652-663 MHz), as well as the higher bands proposed in SMSE-019-17.

10. All of which is respectfully submitted, this 15th day of February 2018.



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