Before the

Innovation, Science and Economic Development Canada (ISED)

Ottawa, Ontario

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Consultation on the Technical, Policy and Licensing Framework for Wireless Microphones
Notice Reference Number: SMSE-019-17

REPLY COMMENTS OF SENNHEISER CANADA

Sennheiser Canada respectfully replies to first-round comments in this proceeding.

1. The **Department of National Defense**, **Transport Canada**, and **NAV Canada** spell out their oppositions to allowing wireless microphones access to the 960-1164 MHz band. Other countries, however, are studying the same concerns; and some have arrived at ways to use wireless microphones safely while ensuring the integrity of incumbent applications. We urge ISED to consider the protection mechanisms that experts in other parts of the world have determined to be satisfactory. Given the ongoing loss of UHF spectrum, we disagree with **Shure**'s view (¶ 8) of no immediate need to make the 960-1164 MHz band available to wireless microphones.

2. We concur with every other aspect of **Shure**'s comments. We particularly support Shure's observation (¶ 6B) that lack of harmonization with other countries, particularly the United States, would create a need for "Canada only" products that would unnecessarily limit the options and flexibility of Canadian operators, ultimately to the detriment of Canadian-made content and its consumers.

3. Sennheiser agrees with **Dynamic Spectrum Alliance** (page 2) that there is no need for licence-exempt wireless microphones using the 657-663 MHz duplex gap segment to contact a white-space database prior to operation. We further agree with DSA on limiting

licensing eligibility to professional users (page 3). We part company, however, on the question whether ISED should follow the U.S. FCC in limiting licences to entities that use 50 or more microphones. DSA says the FCC "got it right," while in fact the FCC itself has begun a possible U-turn, agreeing the numerical limit may be "unnecessarily restrictive" (FCC 17-95 at ¶ 84) and opening a proceeding on whether also to license professional users who do not meet the 50-microphone requirement (GN Docket No. 14-166). DSA's argument against allowing wireless microphones at 7 GHz (pages 3-4) rests solely on the speculative possibility of RLAN operations in the band; but the burden on RLANs of protecting wireless microphone users would add little to the far more difficult burden of protecting other incumbent users.

4. **Rogers** gives a vague warning (¶ 9) that a 20 mW power limit for wireless microphones in the 600 MHz guard band or duplex gap may be too high, yet expresses confidence in the FCC's "thorough analysis" supporting that limit, and offers no evidence to question it. Contrary to Rogers' suggestion (¶ 9), the FCC did consider 5G operation in adopting the limit. Rogers further misreads the FCC (¶ 13) in stating the FCC did not consider the need for separation between wireless microphones and the mobile uplink band; the FCC did consider the question and decided the separation is unnecessary. Indeed, wireless microphones have been operating at power levels up to 250mW immediately adjacent to the 698 MHz uplink block for years without incident. Finally, the two-year wait that Rogers requests between the Canadian 600 MHz spectrum auction in Canada or the end of the U.S. transition, on the one hand, and the adoption of rules for wireless microphones, on the other (¶ 14), is not only unnecessary—Rogers gives no reason for it—but will strand wireless microphone users without adequate spectrum and equipment during the period of the transition and well beyond, as manufacturers need at least three years to develop and launch a product after all the technical requirements are specified.

5. **Shaw Communications** gives no basis for stating that the 20 mW power limit in the guard band and the duplex gap needs further study (¶ 4). The FCC has looked at the question carefully; if anything, the limit is more stringent than necessary. Shaw's (¶ 7) concern about out-of-band emissions from wireless microphones is likewise misplaced, as adoption of the ETSI mask (which Sennheiser supports) will completely resolve the issues, and do so far more effectively than the frequency separation Shaw favors.

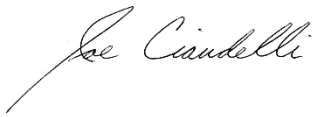
6. **Lectrosonics** proposes that the power limit for wireless microphone in certain bands be specified as 250 mW conducted power, not 250 mW EIRP. Sennheiser agrees that conducted power should be an option, but asks ISED to leave the choice of measurement technique to manufacturers and their test labs.

7. **SaskTel** gives no reason for requesting that the rules on professional users eligible for licences categorically exclude houses of worship (¶ 10). To the contrary, some houses of worship maintain operations that are more sophisticated than some other eligible entities, such as local TV stations. We do agree on the need for flexibility. We also agree with SaskTel on designating 614-616 MHz and 653-663 MHz bands exclusively for the use of wireless microphones (¶ 11), while limiting white space devices to frequencies below 608 MHz.

CONCLUSION

Canadian wireless microphone operators and consumers of content will benefit from rules that provide adequate spectrum to cushion the continuing loss of access to UHF TV bands.

Respectfully Submitted,



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