

Notice No. SMSE-019-17  
Canada Gazette – Part 1  
(published November 15, 2017)

***Consultation on the Technical, Policy and Licensing Framework for  
Wireless Microphones, Notice No. SMSE-019-17***

**Comments  
of  
SHAW COMMUNICATIONS INC.**



**February 15, 2018**

## I. INTRODUCTION AND EXECUTIVE SUMMARY

1. The following constitutes the initial comments of Shaw Communications Inc. (“Shaw”) to Innovation, Science and Economic Development Canada (the “Department” or “ISED”) in connection with the proceeding initiated by *Consultation on the Technical, Policy and Licensing Framework for Wireless Microphones*, Notice No. SMSE-019-17 (the “Consultation Document”).
2. As alluded to in the Consultation Document, this proceeding has been initiated as a result of the Department’s repurposing of the 600 MHz band to allow for commercial mobile use. As Shaw stated in its comments in the Department’s *Consultation on a Technical, Policy and Licensing Framework for Spectrum in the 600 MHz Band* (SLPB-005-17), we applaud this decision to take a significant step toward alleviating the high demand for low-band spectrum for commercial mobile use. If the Department adopts a substantial set-aside for new competitors in that proceeding, as detailed in our comments, consumers will benefit greatly from the resulting increased competition in the market.
3. As the Department prepares the band for this re-purposing, it is important that other services, including wireless microphones, are appropriately re-allocated, as acknowledged in the Consultation Document. The Department must ensure that services are protected from interference and that spectrum is efficiently utilized to maximize the public’s benefit from this important, finite resource, consistent with the Government’s mandate as articulated in the *Spectrum Policy Framework for Canada* (“SPFC”).
4. As discussed in further detail below, in Shaw’s view, allowing lower power wireless microphones in the guard band and the duplex gap would be appropriate, as it furthers the objective of ensuring that wireless microphones have access to spectrum following the repurposing of the 600 MHz band, subject to interference concerns being appropriately addressed. However, Shaw encourages the Department to conduct a study to ensure that the measures adopted by the FCC to mitigate interference, namely the e.i.r.p of 20 mW and the 1 MHz frequency separation, are sufficiently stringent in Canada.

**II. RESPONSES TO THE SPECIFIC QUESTIONS RAISED IN THE CONSULTATION DOCUMENT**

**Q1** — ISED is seeking comments on its proposal to allow wireless microphones to use the 3 MHz guard band (614-617 MHz) and the 11 MHz duplex gap (652-663 MHz) subject to appropriate conditions to mitigate adjacent channel interference to mobile services.

A. Should technical rules be harmonized with those of the FCC to allow low power wireless microphones in the guard band (614-617 MHz) and duplex gap (653-663 MHz) with a maximum transmit e.i.r.p. of 20 mW?

B. Should a 1 MHz frequency separation be adopted for wireless microphones around the mobile service downlink spectrum (617-653 MHz) to protect mobile service operations?

5. Shaw does not object to the proposal to allow lower power wireless microphones in the guard band and the duplex gap, as it furthers the objective of ensuring that wireless microphones have access to spectrum following the repurposing of the 600 MHz band.
6. It is difficult for Shaw to comment on the appropriateness of the proposed maximum transmit e.i.r.p. of 20 mW and the proposed 1 MHz of frequency separation to protect mobile service operations. There is not enough information available to determine whether these proposed measures would be sufficiently stringent to ensure that mobile service operations are protected.
7. Shaw is not aware of the number and types of wireless microphones in use, but we note that some wireless microphones are low cost devices with transmission characteristics that may spill spurious emissions outside of their nominal transmit band. Spurious emissions increase linearly with the nominal power. In order to avoid interference, the frequency separation needs to be large enough to ensure that spurious emissions become negligible, or equivalent to the noise floor. Additionally, wireless microphones may also vary in the quality and accuracy of their transmit masks, making it difficult to assess whether a particular amount of separation is appropriate.
8. Without a Canadian study of these types of devices and their characteristics, it is difficult to determine with certainty how significant these spurious emissions will be in the future, and therefore it is difficult to be sure whether the proposed maximum transmit e.i.r.p. and

frequency separation are appropriate. Accordingly, Shaw encourages the Department to conduct a study, tailored specifically to the Canadian landscape and with consideration of the number of devices in Canada and the most dominant types of devices.

**Q2** – ISED is seeking comments on its proposal to introduce the use of wireless microphones, on a secondary basis, into the frequency bands 941.5-952 MHz, 953-960 MHz, 6930-6955 MHz and 7100-7125 MHz with appropriate conditions to prevent interference to fixed services.

9. Shaw does not have any objections to this proposal at this time.

**Q3** – ISED is seeking comments on its proposal to allow wireless microphones to access the broadcasting bands (54-72 MHz, 76-88 MHz, 174-216 MHz, 470-608 MHz), the duplex gap (652-663 MHz) and the guard band (614-617 MHz) on a licence-exempt basis, and the voluntary licensing of eligible users' wireless microphones.

A. ISED is seeking comments on the eligibility criteria to determine who should be permitted to voluntarily license their systems (see paragraph 62).

B. Should ISED consider a licence-exempt approach for wireless microphones within the broadcasting or 600 MHz bands (614-617 MHz and 652-663 MHz)?

10. Shaw has no comments on the eligibility criteria set out in the Consultation Document.

**Q3 – Q4.** ISED is seeking comments on its proposal to license the operations of wireless microphones on a secondary basis in the frequency bands 941.5-952 MHz and 953-960 MHz, 6930-6955 MHz and 7100-7125 MHz, based on its eligibility criteria.

A. ISED is also seeking comments on the eligibility criteria (see paragraph 64).

11. Shaw does not have any objections to this proposal at this time.

\*\*\* End of document \*\*\*