

March 28, 2017

Mr. Martin Proulx
Director General,
Engineering, Planning and Standards Branch
Innovation, Science and Economic Development Canada

Reference: Canada Gazette, Part I, January 2017, Consultation on the Technical and Policy Framework for Radio Local Area Networks Devices Operating in the 5150-5250 MHz Frequency Band (SMSE-002-17)

Dear Mr. Proulx:

In response to your invitation to Consultation on the Technical and Policy Framework for Radio Local Area Network Devices Operating in the Band 5150-5250 MHz, NAV CANADA submits the following comments to the questions listed in the paragraph 29 of the invitation:

A. the demand for and benefit, if any, of allowing HPODs in the 5150-5250 MHz frequency band?

NAV CANADA objects to the implementation of HPODs in the 5150-5250 MHz band prior to WRC-19. This issue is already on the agenda as item 1.16: "to consider issues related to wireless access systems, including radio local area networks (WAS/RLAN), in the frequency bands between 5150 MHz and 5925 MHz, and take the appropriate regulatory actions, including additional spectrum allocations to the mobile service, in accordance with Resolution COM6/22 (WRC 15)". Moving forward with a national implementation would be premature at this point as it would fail to fully take into account the results of several important technical studies that have to be completed at the ITU level. It also would precede agreement on international regulations with the risk that future international rules governing this band could conflict with any national rules adopted now. Discrepancies between international and national regulations affect the Canadian civil aviation industry significantly and would put it at a disadvantage, given its global nature.

B. the potential impacts on domestic and foreign satellite systems in the 5150-5250 MHz frequency band of authorizing HPODs use prior to WRC-19 on the basis of a maximum e.i.r.p of 4W. Requirements for an evaluation mask towards satellites and an exclusion zone of 25 km around receiving earth stations to protect all satellite systems would likely also apply. ?

International Civil Aviation Organization (ICAO) study groups are currently developing Standards and Recommended Practices (SARPs) related to the communications infrastructure required to support

commercial Unmanned Aircraft Systems (UAS). UAS will be subject to all safety and operational requirements as any other aircraft while operating in non-segregated airspace and aerodromes. ICAO plans to mandate use of Aeronautical Radionavigation allocations for that purpose, one of them being in the 5150-5250 MHz band. Under 4.10 of the ITU Radio Regulations “radionavigation and other safety services require special measures to ensure their freedom from harmful interference”. Without the appropriate studies at the ITU level there are insufficient assurances that the proliferation of the HPODs will not lead to the increase of the noise level in this band and cause harmful interference. This may, over time, affect the viability of this band as an aeronautical radionavigation band. This could lead to increased safety risks associated with operating UAVs in the Canadian airspace.

NAV CANADA is of the opinion that the best way to consider competing demands for the RF spectrum from different industries is at the ITU level, after the appropriate studies at that level have been conducted.

C. should the Department proceed to authorize HPODs use prior to WRC-19, what regulatory approach would best ensure a balance of timely deployment and the protection of other existing and futures services in the 5150-5250 MHz frequency band? Also, indicate any and all considerations that should be given to equipment standards, technical requirements, eligibility criteria and/or conditions of licence depending on the relevant approach?

Should the Department proceed to authorize HPODs use prior to WRC-19, NAV CANADA is in favour of a licensing regime that would ensure that any in-band emissions will not compromise viability of the primary aeronautical services in the 5150-5250 MHz frequency band now and in the future, and any out-of-band emissions will not compromise adjacent primary aeronautical services in the 5091-5150 MHz band.

Sincerely,



William Estrada, P. Eng.
Director, Communications, Navigation and
Surveillance Engineering