



2017 03 29

To: Mr. Martin Proulx
Director General
Innovation, Science and Economic Development Canada
Engineering, Planning and Standards Branch
235 Queen Street
Ottawa, Ontario
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Via e-mail: ic.spectrumengineering-genieduspectre.ic@canada.ca

Subject: **SMSE-002-17: Consultation on the Technical and Policy Framework for Radio Local Area Networks Devices Operating in the 5150-5250 MHz Frequency Band – Comments**

Dear Mr. Proulx,

1. We are pleased to provide comments to the Department's above noted consultation.
2. We would like to thank the Department for the opportunity to provide our comments on this important consultation as it directly impacts Canadian consumers.
3. It should be noted, that we actively participated in the development of the comments submitted to the Department by the Radio Advisory Board of Canada (RABC) and we align ourselves with supporters of Radio Local Area Networks (RLAN) rule changes prior to WRC-5150-5250 MHz.
4. We endorse the comments provided by the parties supporting the views regarding the increasing existing demand for access to and overall benefits of allowing High Power Outdoor Devices (HPOD) in the 5150 – 5250 MHz frequency bands. The demand for these devices exists today and as a result, we fully support the introduction and use of these HPODs prior to WRC-19.
5. While we support the views expressed by the RABC regarding the introduction of HPOD in the 5150 – 5250 MHz frequency band, we would also like to provide the following additional comments on the three key questions raised by the Department in the consultation:

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

- We would like to emphasize, that mobile operators and other service providers are in fact presently using outdoor devices in order to provide Canadian subscribers with access to low cost connectivity for backhaul and high speed internet services;
- The projected growth for RLAN services in Canada is expected to continue to increase and the existing spectrum used for the delivery of these services is becoming more congested in the urban areas of the country;
- Modifying the technical rules in the 5 GHz (5150-5250 MHz) band would serve to alleviate some present congestion. Harmonizing the Canadian rules for RLAN devices in the band with those adopted by the Federal Communications Commission (FCC) now would increase the amount of usable spectrum in the band and serve to alleviate these immediate congestion challenges. The increased amount of available spectrum would also assist carriers in the reliable delivery of ever increasing broadband speeds to Canadian consumers;
- In our view, modifying the technical rules in the 5150-5250 MHz portion of the band would address the above mentioned service demands; and
- We totally support device harmonization with the U.S. It is expected that harmonization will eventually occur in any case, and any delay will only create transitional discrepancies and severely hamper the ability of carriers to provide Canadian consumers with world class broadband access.

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.*

- With respect to the views expressed by those entities that profess that sharing is not possible in the band, we agree with the views expressed by the RABC that studies carried out with cooperation of the satellite industry outside the WRC process in the U.S. clearly demonstrated that under specific conditions (such as using an antenna mask) that sharing between RLAN and other services was indeed possible in those bands and as such, sharing would be possible in Canada as well;
- It is interesting to note, that while those parties who are not in favour of the proposed changes to HPOD argue that they will be prone to a rise in the noise floor from the millions of devices, during the RABC discussions, they continuously argued that they did not believe that there would be a significant demand for HPOD in Canada. While we certainly do not share the view regarding the lack of demand for these devices, if in fact the demand did not materialize, it would therefore not contribute significantly if at all to the noise floor;
- Further, given that the U.S. has allowed outdoor high powered devices to be deployed for quite some time, we are unaware of any interference related

complaints filed with the U.S. regulator. It is expected that the overall deployment of HPOD in Canada would be considerably lower than those in the U.S. and as such any interference potential (if any) would also be considerably reduced; and

- With respect to the Department's proposal to have exclusion zones in an effort to protect existing and future satellite earth stations, we do not anticipate any issues with the identification of the proposed 25 km exclusion zones.

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.

- As has been the case in other instances where certain devices are available in the U.S. market, given Canada's close proximity to the U.S., it is inconceivable that the HPOD devices that are presently being used and deployed in the U.S. will not make their way into Canada;
- Presently we are unaware of any mechanism that is at the government's disposal that would preclude consumers and small business owners from importing and using this equipment in Canada;
- With respect to one of the biggest arguments against aligning the rules with the U.S. and allowing the use of HPOD in the 5 GHz band prior to WRC-19 has been that due to Canada's lower population we do not have the same spectrum congestion as the U.S. If we were to average the population across Canada's geography this would indeed seem to be the case. However, it must be noted that spectrum congestion is a localized phenomena and as such locations such as downtown Toronto is in fact as spectrally congested as New York City;
- We strongly urge the Department to align its technical and policy rules as closely as possible with the U.S. regulatory approach for use of the 5150 – 5250 MHz band. Particularly since the FCC has already considered and taken into consideration the balance required for timely deployment of HPODs together with the need to protect other services that are using the band and the apparent lack of reported interference issues in the U.S.;
- With respect to the rules governing indoor RLAN devices, we fully support increasing the permissible power level of these devices to the same levels adopted by the FCC; and
- Harmonization and alignment of both the indoor and outdoor RLAN equipment power limits with the U.S. rules would serve to increase the amount of much needed spectrum in the 5 GHz band. Availability of this spectrum would relieve congestion being presently experienced in the band and allow carriers to deliver increased broadband speeds in the gigabit range to Canadian consumers.

Summary

- We therefore believe that given the present congestion and lack of appropriate RLAN spectrum to meet the present and future demands by carriers for backhaul and high speed internet services that the Department should align the technical and policy rules with those in the U.S. and allow use of HPOD in the 5 GHZ RLAN band;
- We also support and strongly encourage the Department to align the power limits for both the indoor and outdoor RLANs with the U.S. rules in order to increase the availability of much needed usable spectrum in the 5 GHz band; and
- We further recommend that the Department proceed with authorizing the use of these devices in Canada prior to the World Radio Conference (WRC) – 19.

6. Should you have any questions or require further clarification, please do not hesitate to contact me.

Yours truly,

[Original signed by B. Chapman]

Barry Chapman
Vice President - Regulatory Affairs