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Planning for WLAN use in the 6 GHz band

Radio Spectrum Management Policy and Planning

Ministry of Business, Innovation and Employment

[Radio.Spectrum@mbie.govt.nz](mailto:Radio.Spectrum@mbie.govt.nz)

Dear Sir/Madam,

Sony is pleased to have the opportunity to submit the following comments on the WLAN use in the 6 GHz band discussion document.

Q1. Do you agree with RSM's proposal on making the 5925 - 6425 MHz available for WLAN use?

Sony agree with RSM's proposal on making the 5925 - 6425 MHz available for WAS/RLAN (Wireless Access System including Radio LAN)

Q2. What are your views on the potential future use of 6425 - 7125 MHz for new applications (e.g. Wi-Fi or IMT)?

No comment

Q3. Do you agree that RSM should include 5925 - 6425 MHz in the GURL-SRD for WLAN low power indoor and very low power use?

Sony agree with RSM's proposal on including the 5925 - 6425 MHz in the GURL-SRD for Low Power Indoor (LPI) and Very Low Power (VLP).

Q4. Do you agree that RSM should mandate ETSI EN 303 687 as the radio standard for WLAN use in the 6 GHz band? Is there any other regulatory compliance standard we should consider?

Sony agree with RSM's proposal on mandating ETSI EN 303 687 as the radio standard for Low Power Indoor (LPI) and Very Low Power (VLP) devices.

However, for high power devices, we suggest that the RSM make regulatory compliance rules equal to the FCC rules for "Standard Power Access Point" and "Fixed Client Device".

Q5. What are your views on using a licensing approach to support 30 dBm EIRP WLAN devices?

Q6. What are your views on supporting 36 dBm EIRP standard power devices using Automatic Frequency Coordination (AFC) system? Do you have any proposals to provide AFC systems to New Zealand?

Sony strongly recommends that the RSM adopt Automated Frequency Coordination (AFC) system

approach for support of 36 dBm EIRP standard power devices including fixed client devices rather than the Radio Licensing approach with the following views.

- In the licensing approach, applicants are required to engage an Approved Radio Certifier/Engineer to certify a license and ensure it will not cause interference to existing licensed services by themselves. By adopting the AFC System approach, users of devices seeking to access the band do not have to engage an Approved Radio Certifier/Engineer to certify a license. In addition, an AFC System will be responsible for ensuring that devices will not cause interference to existing licensed services.
- Registration of device location and horizontal antenna pattern is required in the licensing approach, but this process is typically performed in a non-automated way. By adopting the AFC System approach, this process can be completed by the signaling over the device-to-AFC system interface in an automated way.
- Although the licensing approach is much more burdensome for users of devices (i.e. applicants) than the AFC system approach, only 30 dBm EIRP is permitted on a license while an AFC system approach permits 36 dBm EIRP at maximum.
- Under the AFC System approach, devices seeking to access the band can obtain a list of which frequencies/channels are available at their location from an AFC system and start their use of the spectrum in an automated way.
- Under the AFC System approach, users of devices will receive greater flexibility to add/change their network deployment than the licensing approach.
- RSM can leverage industry standards for AFC system based spectrum access scheme being developed by Wi-Fi Alliance<sup>1</sup> and Wireless Innovation Forum<sup>2</sup>.

In order to leverage industries existing efforts for other countries such as US and Canada to the extent possible, the RSM should adopt rules equal to those adopted (or to be adopted) by the FCC (and ISED Canada).

On the other hand, due to the nature of New Zealand, there is no need for interference border coordination that is required in other location, for example, the US-Canada Border. This means that it would be easier for the RSM to develop and adopt more advanced regulatory regime concerning AFC system based spectrum access on top of the rule equal to those adopted (or to be adopted) by the FCC (and ISED Canada). Sony requests the RSM to develop its regulatory regime for AFC system based spectrum access such that innovative and more efficient secondary use of the band can be achieved by fully exploiting various features of advanced wireless technologies such as Wi-Fi and 3GPP 5G New Radio (NR) for unlicensed operation (so-called "NR-U"). Such features include, but are not limited to the

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<sup>1</sup> <https://www.wi-fi.org/news-events/newsroom/wi-fi-alliance-advances-automated-frequency-coordination-system-development>

<sup>2</sup> <https://6ghz.wirelessinnovation.org/>

following:

- Integrated Access and Backhaul (IAB)
- Beamforming with Active Antenna System (AAS)
- Coordinated Multi-Point (CoMP)
- Synchronized sharing

Sony supports the RSM's thought that it would look to industry to develop and manage the AFC System. In order to facilitate market competition and innovation, Sony requests the RSM to permit multiple AFC System Operators for the market in New Zealand.

Yours sincerely

David Harris

Technical Support Manager

on behalf of Sony Australia & New Zealand