

Submission on Technical Arrangements for the 3.5GHz band

29 July 2019



SUBMISSION

- 1 Thank you for the opportunity to comment on the Radio Spectrum Management's *Consultation on Technical Arrangements for the 3.5GHz Band*.
- 2 Given the nature of the consultation, we have responded to your specific consultation questions in **Appendix A**.

APPENDIX A: RESPONSES TO SPECIFIC CONSULTATION QUESTIONS

<p>Q1</p>	<p>Do you agree with the proposed rules of co-existence and the process of change?</p> <p>We agree with the proposed rules of co-existence and the process of change.</p>
<p>Q2</p>	<p>Do you have any additional comments about the process?</p> <p>No comments.</p>
<p>Q3</p>	<p>Do you agree with the proposed frame structure?</p> <p>We agree with the proposal that all operators in 3.5 GHz band should use only 3GPP compliant 5G technology with the following initial configurations:</p> <ul style="list-style-type: none"> • 30 kHz subcarrier spacing; • 4:1 frame structure – DDDSU (D = Downlink, S = Special frame and U = Uplink)
<p>Q4</p>	<p>Do you agree with the proposed arrangement for the special slot?</p> <p>We agree with the proposed 10D2GP2U proposal for the special slot.</p>
<p>Q5</p>	<p>Do you agree with the process for defining the start of the TDD frame for the first time?</p> <p>We agree with the proposed first-in-time rule: The operator that is the first to deploy in the 3.5 GHz band can start its transmissions at any time they see appropriate. Other entrants to the band should align their frame with existing users.</p>
<p>Q6</p>	<p>Do you agree with the proposed solution for a synchronisation source and timing alignment?</p> <p>We agree that the method of synchronisation should not be mandated. The operators should be free to select their own method as long as they can ensure that their frame does not deviate in time from other operators.</p>
<p>Q7</p>	<p>Do you agree with the calculation methodology for the unwanted emission mask, particularly the choice of the nominal antenna gain?</p> <p>We agree that the unwanted emissions mask for the equipment operating in the 3.5 GHz band should be calculated using the 3GPP standard, namely 3GPP 38.104 V15.5.0 (2019-03). We would advise that we follow international best practice when it comes to measurement methodology since we will struggle to develop something specifically for NZ.</p>

<p>Q8</p>	<p>Do you agree with the choice of EIRP over the TRP?</p> <p>TRP does technically appear to be more practical to proceed with in the case of 5G limit assessment than traditional use of EIRP for power limits in current Radio and Spectrum Licensing. However, the calculation of unwanted emission mask for 5G is relatively new to everyone. New Zealand needs to be mindful of internationally recognised “standard practices” to ensure we can leverage learnings and knowledge around the world.</p>
<p>Q9</p>	<p>Do you have any other comments regarding the out-of-band emission mask?</p> <p>No.</p>
<p>Q10</p>	<p>Do you agree with the technical compatibility analysis between the amateur operation in 3300-3410 MHz and 5G (or compatible technology) in the 3.5 GHz band?</p> <p>If the amount of amateur operation in adjacent bands is limited (as per MBIE’s statement), then we agree with the proposed compatibility analysis.</p>
<p>Q11</p>	<p>Do you agree with the technical compatibility analysis between SRD operation in 2900-3400 MHz and 5G (or compatible technology) in the 3.5 GHz band?</p> <p>No comment.</p>
<p>Q12</p>	<p>Do you agree with the arrangement for satellite services in the frequency range 3800-3840 MHz?</p> <p>No comment.</p>
<p>Q13</p>	<p>Do you agree that operators should be permitted to choose to not follow these technical principles as long as no harmful interference is caused to their adjacent operators?</p> <p>We agree that alternatives may be used as long as no harmful interference is caused. However, a swift process needs to be in place if/when interference is detected and the interference source is addressed promptly.</p>
<p>Q14</p>	<p>Do you agree that the same technical principles should be imposed throughout the 3.5 GHz band?</p> <p>We believe the same technical principles should applied throughout 3.5GHz band.</p>