

## Last Minute Changes to the 2.5 GHz Technical Framework

A late submission on the content of TLG Discussion Paper 1 was received from a TLG member. The submission proposed changes to the out-of-band emission mask set out in the TLG Discussion Paper 1 although the paper had been finalised. The ACMA then sort comment on the proposal by other members of the TLG. The proposal was:

- To extend the +4 dBm/MHz shoulder of the out-of-band emissions for transmitters in the upper band 2620-2690 MHz to include the whole of the band 2615-2700 MHz rather than the 5 MHz either side of the licence frequency boundaries. Outside the band 2615-2700MHz the limit of -45 dBm/MHz would still apply.

The reasons for the change were to increase international harmonisation of requirements which would impact on equipment supply and to reduce the need for negotiation between licensees intending to use FDD systems.

In-band the potential impact of the proposed changes would be on possible future use of TDD systems in the upper band in radio dense areas. The impact of the broader out-of-band emissions would affect the necessary separation distances between TDD and FDD base stations in that band. The potential impact out-of-band would be to the level of emissions in the band 2695-2700 MHz this would potentially lead to more coordination by licensees to ensure protection of the Radio-Astronomy sites at Parkes and Narrabri in NSW.

Given the lack of industry interest in the use of TDD systems in the 2620-2690 MHz band during the TLG and the existing coordination requirements for base stations with the Radio-Astronomy sites already in the framework(in TLG Discussion paper 3), the ACMA has decided to adopt the proposed changes to the technical framework.

Specifically the change effects how the non-spurious out-of band emission limits for the upper band are specified. Instead of being referenced to the individual licence edge they will now be referenced to the licence edge and to the frequency range 2615-2700 MHz as set out below. The levels remain unchanged.

For a radio emission that is:

- (a) not a spurious emission; and
  - (b) caused by transmitter, operating under a 2.5 GHz spectrum licence within the frequency band 2620 MHz to 2690 MHz;
  - (c) outside the frequency band of the licence;
  - (d) offset from the upper and lower limits of the frequency band of the licence;
- the emission limits in the frequency band containing frequencies that have offsets:
- (e) within the range 0 MHz to 1 MHz — a radiated maximum true mean power of +3 dBm EIRP per 30 kHz; and
  - (f) greater than 1 MHz but within the band 2615 to 2700 MHz — a radiated maximum true mean power of +4 dBm EIRP per 1 MHz; and
  - (g) beyond the band 2615 to 2700 MHz but within the band 2500 to 2800 MHz — a radiated maximum true mean power of -45 dBm EIRP per 1 MHz.

A diagram showing the emission mask for an example licence for the band 2630-2640 MHz is shown on the next page.

