



Submission by Free TV Australia

Expiring Spectrum Licences Stage 2:

- Information-gathering and views on uses of frequency bands

June 2024

Submission from Free TV Australia

- Free TV Australia welcomes the opportunity to provide comments in response to issues raised in other public submissions made to the Australian Communications and Media Authority (ACMA) on its March 2024 consultation paper, 'Expiring spectrum licences Stage 2 consultation'.
- Free TV Australia is the peak industry body for Australia's commercial free-to-air (FTA) television broadcasters. It proudly represents all of Australia's commercial free-to-air television broadcasters in metropolitan, regional and remote licence areas.



- Free TV's interest in the expiring spectrum licence process relates to future arrangements for the 2.5 GHz 'mid-band gap' spectrum licences, which are used by television networks for Television Outside Broadcasting. Three other public submissions deal expressly with this issue: those from Telstra, the Department of Defence and Boeing Australia. The submission from Ericsson also bears on boundary arrangements for the 2.5 GHz 'mid-band gap'.

Telstra's and Ericsson's public submissions

- Telstra's public submission is alone amongst the fixed and mobile network operators in addressing the future of the 2.5 GHz 'mid-band gap'.
- While it supports in theory the potential use of the band for TDD wireless broadband services, Telstra's submission also acknowledges the adverse implications of FDD use of the surrounding 2.5 GHz spectrum for the value to telecommunications of the mid-band gap. In apparent recognition of the ongoing case for TOB in the 2.5 GHz 'mid-band gap', Telstra proposes further exploration of an alternative course, which would be to shift the costs of protections at the band edges, from mobile network operators licensed in the adjacent 2.5 GHz band to the TOB operators in the 2.5 GHz 'mid-band gap'. It states:

If a solution could be found for ENG services to reduce the spectrum occupancy and only operate in the middle of the 2.5 GHz mid band gap, thereby leaving the edges as a guard band, this would save mobile network operators the expense of additional filtering on new base station deployments in the 2.5 GHz band.

- The four TOB operators currently each use their own, 10 MHz slice of the 2.5 GHz 'mid-band gap', with only the two, 5 MHz guard bands at the outer edges of the allocation left unused. According to Telstra's suggestion would mean widening the two guard-bands. This would require modification to the Janteq equipment currently used by all networks. Widening the guard-bands would also necessitate additional coordination between operators and reduce the utility and flexibility of the band for each network. Changes might also be needed to ancillary equipment, such as filters.

- As the Janteq equipment will be very old by September 2029, it may make more sense to revisit the issue of band-edge protections once the choice of a long-term replacement technology for the existing TOB gear is known. In its previous submissions, Free TV has urged the ACMA to take a holistic view of the future of the TOB bands. The choice and potentially also the timing of a replacement technology for the Janteq (and other) TOB equipment will benefit from better information than is available today about which of the current TOB bands will offer the greatest long-term certainty of tenure for TOB operators.
- These comments are also potentially relevant to the submission from Ericsson.
- On a related issue, Telstra's submission also repeats mobile industry calls for additional spectrum to be re-farmed for IMT, and points to the 600 MHz (617-698 MHz) and 'upper 6 GHz' bands (6425-7125 MHz) as potential foundation bands for 5G Advanced and 6G. On this topic, Free TV proposes to make a separate submission to the ACMA's consultation paper on planning for the upper 6 GHz band.

Department of Defence's public submission

- Defence currently operates land, sea and air mobile systems in the 2.2 GHz (2 200 to 2 290 MHz) frequency band under the mobile service, coordinating with TOB users where appropriate. Commercial TV broadcasters, the ABC and Fox Sports hold Australia-wide apparatus licences for TOB covering these bands.
- Defence believes the 2.5 GHz 'mid-band gap' can fulfil increasing Defence requirements into the future, in addition to continued use of the 2200-2290 MHz frequency band, without the need to displace TOB from the band, citing the history of 'proven coexistence' with TOB in 2.2 GHz.
- The proposed access to the 2.5 GHz mid band gap would be mostly across training areas but there might be occasions when a greater operational area, including Australia-wide, would be required.
- Free TV is committed to constructive engagement in support of spectrum sharing arrangements that are consistent with its members' operational requirements in bands for which they hold licences.
- Issues that would need to be considered further include:
 - the different technical characteristics of TOB usage of the 2.5 GHz 'mid-band gap', as opposed to the 2.2 GHz band its members currently share with Defence, and
 - the likelihood of interference to TOB from any potentially Australia-wide Defence activities in the band, unless coordination arrangements satisfactory to both parties could be agreed.
- TV networks' use of the 2.5 GHz 'mid-band gap' was outlined in our own submission to the Stage 2 process. Free TV is already in contact with DoD and it has signalled its members' openness to more detailed exploration of the potential for sharing the 2.5 GHz 'mid-band gap'.

Boeing Australia's public submission

- The focus of Boeing's submission is the Australian and global uncrewed aircraft systems (UAS) industry, 'which is undergoing exponential growth and... requires forward thinking and timely spectrum regulation to underpin and support this growth'.
- Boeing seeks access for UAS to dedicated spectrum needed to safely support technologically advanced UAS communications platforms that enable more complex flights including beyond visual line of sight (BVLoS).
- The Boeing submission expresses no view on TOB in the 2.5 GHz 'mid-band gap' but does flag an interest in the band should the ESL process decide on alternatives in the frequency band of which UAS would be a consideration.
- It is unclear from the Boeing submission whether the company believes satisfactory sharing arrangements could be developed with TOB operators, or whether it is simply expressing interest in the band if TOB services move from it after September 2029.
- Free TV is committed to constructive engagement in support of spectrum sharing arrangements that are consistent with its members' operational requirements in bands for which they hold licences.