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DEPUTY LEADER OF THE GOVERNMENT IN THE SENATE
MINISTER FOR COMMUNICATIONS
MINISTER FOR THE ARTS

Mr Rod Sims
Chairman
Australian Competition and Consumer Commission
GPO Box 3131
CANBERRA ACT 2601

Request for advice – allocation limits for an auction of spectrum in the 3.6 GHz band

Dear Mr ^{Rod} Sims

I write to request the Australian Competition and Consumer Commission's (ACCC) advice on whether I should direct the Australian Communications and Media Authority (ACMA) regarding appropriate allocation limits for an auction of 125 MHz of available spectrum in the 3575-3700 MHz range (the 3.6 GHz band) in metropolitan and regional areas of Australia, and if so, what the ACCC considers those limits should be.

The 3.6 GHz spectrum will be available for up to a 12 year term, depending on the location. I have agreed that the auction will allocate spectrum across a range of metropolitan and regional areas. Spectrum in the 3.6 GHz band is subject to a two year re-allocation period in metropolitan areas, except for Perth which will have a five year re-allocation period, and a seven year re-allocation period in regional areas. A map describing the re-allocation areas and time periods is at **Attachment A**.

Under section 60 of the *Radiocommunications Act 1992* (Cth), I have the power to direct the ACMA to develop procedures to impose allocation limits on the sale of spectrum. Spectrum allocations in the 3.6 GHz band will have consequences for competition in the mobile market. In deciding whether to impose allocation limits on this auction, I wish to seek the advice of the ACCC.

There is strong commercial interest in this band driven by the increasing need for data and international developments in fixed and wireless broadband technologies, including the identification of the broader 3300-3800 MHz frequency range as a pioneer band for 5G services. In Australia the 3.6 GHz band is currently used for fixed satellite service (FSS) earth stations, point-to-point links and site based wireless broadband services that are authorised under apparatus licences.

The ACMA has indicated a preliminary preference to auction the 125 MHz of available spectrum in 25 x 5 MHz lots. Although only a preference at this stage, auctioning the spectrum in 25 x 5 MHz lots would have implications for allocation limits.

Small lots allow the band to be split in a large number of ways and may be attractive for smaller bidders. However, offering the spectrum in 25 x 5 MHz lots increases the risk that bidders may win an amount of spectrum that is insufficient or uneconomical. To mitigate this risk a minimum bid requirement (MBR) has been proposed. The MBR would allow auction participants to nominate a minimum amount of spectrum they wish to purchase at auction, up to a limit to be set by the ACMA.

If the ACMA uses a MBR cap for the 3.6 GHz auction, the cap will need to work in concert with any allocation limits that I direct the ACMA on. A MBR would also be impacted by 5G standards, which are still in development. 5G technology makes it possible to utilise large contiguous spectrum bandwidths, which means that portions of spectrum considered sufficient for 4G/LTE technology could be considered insufficient for 5G. At the time of writing the amount of contiguous bandwidth required for 5G is not clear. I encourage the ACCC to engage with the ACMA on this issue to allow each to share its thinking on matters of mutual interest. More information on the auction design is at [Attachment B](#).

At the 2017 Radcomms conference, you announced the ACCC's desire to consider spectrum holdings holistically rather than considering holdings in particular bands only. Specifically, you stated that holdings in the 3.4 GHz band were relevant to this auction. I encourage the ACCC to consult with my Department and the ACMA early to share information and thinking, including views related to the sustainability of carriers in the mobile market and likely impacts of decisions related to this auction on previous and future investment decisions. I look forward to considering the ACCC's advice and ask that it include detailed reasoning for its recommendations.

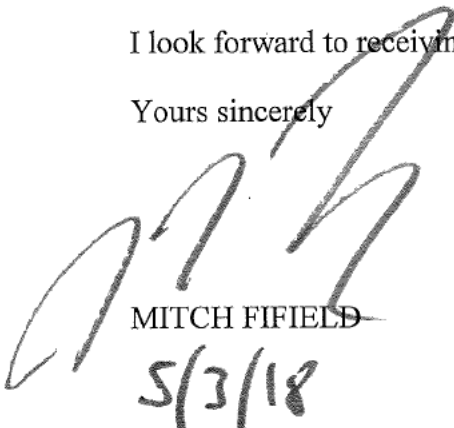
The Government has committed to auction the 3.6 GHz spectrum in 2018, and the ACMA is working to commence the auction in October 2018. To facilitate this, I would appreciate the ACCC's advice by 30 April 2018.

The contact officer for spectrum issues within my Department is Cathy Rainsford, Assistant Secretary, Spectrum and Security Branch. Ms Rainsford can be contacted by email at

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I look forward to receiving your advice in due course.

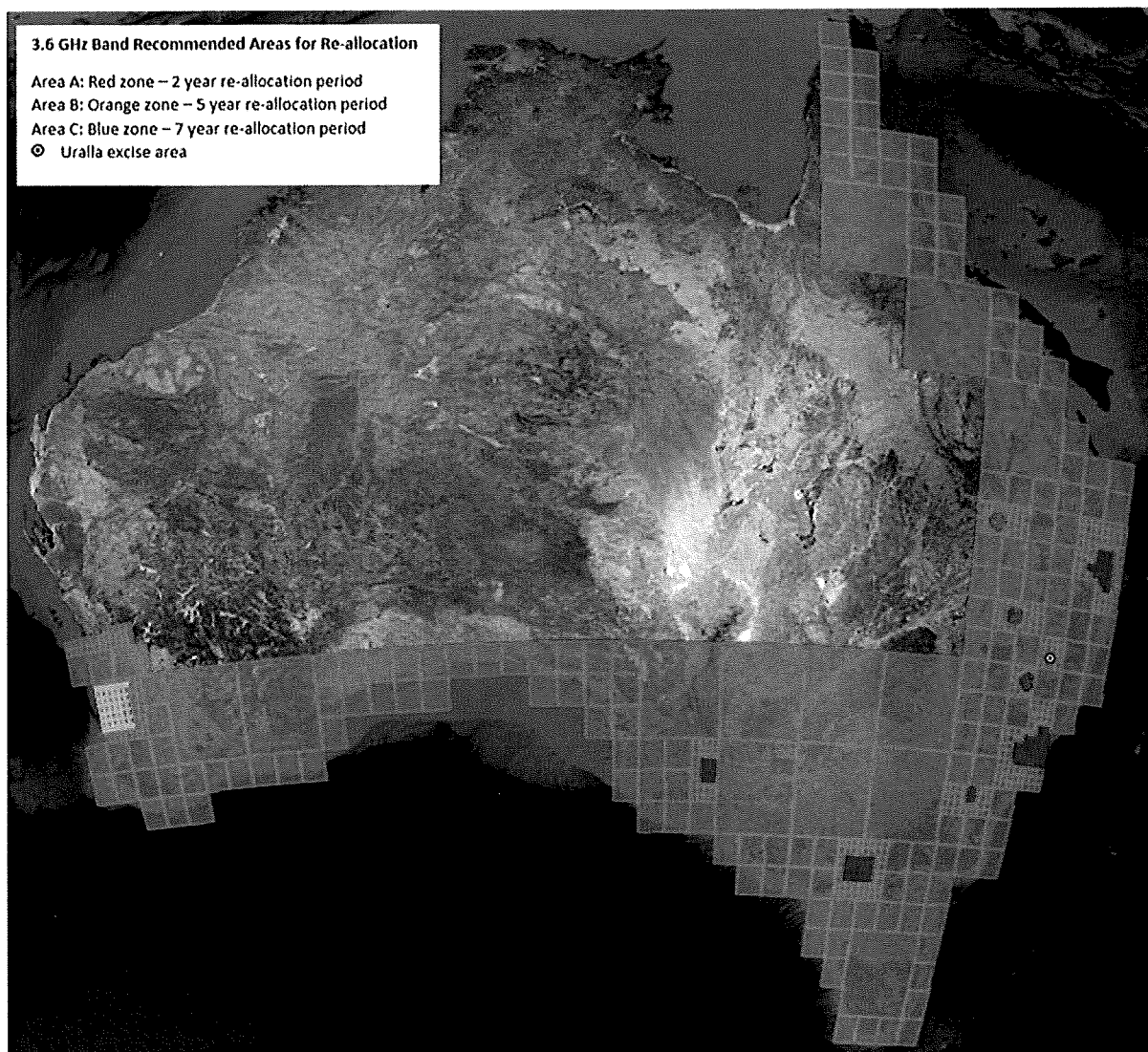
Yours sincerely



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5/3/18

Figure 1: Map of metropolitan and regional Australia as described by the HCIS identifiers



Auction design

Allocation methodology

The proposed auction format is an enhanced simultaneous multi-round ascending auction (ESMRA). The ESMRA format would use a two-stage approach using a clock auction structure. The first stage allows bidders to bid for the number of frequency-generic lots that they want in each geographic area. The second stage is an assignment round and allows bidders the opportunity to bid for the specific frequencies that they want to use for the lots they won in the first round. In the assignment round bidders are likely to look for opportunities to acquire contiguous spectrum bands, or consolidate holdings they may already hold.

Lot configuration

The ACMA's preference is to offer the 125 MHz of available spectrum in the 3.6 GHz band in 25 x 5 MHz lots. Offering the spectrum in smaller lots would allow for the band to be split in a large number of ways and may also encourage smaller bidders to bid for small lots.

Using 25 x 5 MHz lots would, however, increase the risk that bidders could win amounts of spectrum that they consider to be insufficient and uneconomical. To mitigate this, in the event that 25 x 5 lots are used for the auction, a MBR would be used.

Minimum bid requirement

A MBR allows bidders to reduce demand from the minimum requirement to zero if the price exceeds the bidder's specified price point. If bidders are allowed to reduce their spectrum demand to zero in the event that they don't win an amount that is above their MBR, there is a risk that there could be unsold spectrum. The ACMA would run a follow-up auction of any unsold spectrum after the initial round and prior to the assignment round.

The ACMA would not be able to set a MBR until the allocation limits for the auction are known, as allocation limits could render a MBR ineffectual. If, for example, the ACMA sets a MBR of 50 MHz and the ACCC recommends allocation limits of 40 MHz the MBR would not be functional.

For more information on the auction design please contact Giles Tanner at the ACMA at

