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**August 10<sup>th</sup> 2017**

**Attention: The Manager, Spectrum Planning Section**

Spectrum Planning and Engineering Branch  
Communications Infrastructure Division  
Australian Communications and Media Authority  
PO Box 78  
Belconnen ACT 2616

Dear Sir,

**Submission Topic: Submission to ACMA on "Future use of the 3.6 GHz bands options paper"**

Jettech Networks (Jettech) are a Hobart-based business employing 10 staff. A major component of our business is in providing network access to a number of customers here in Tasmania which as you may be aware is recognized as being at the lower end of the socio-economic scale.

Jettech are heavily reliant on apparatus licensed 3.6 GHz spectrum to reach our customers in the most effective manner.

Over the last 10 years Jettech has built a solid business providing business grade connections to customers that could not access broadband at all or customers that have requirement for a high availability fixed services. 3.6 GHz point to multipoint allows us to offer carrier grade services to customers at an affordable price point.

Jettech's network investment in staff, core routing infrastructure, microwave backhaul and facilities was undertaken to provide 3.6 GHz point to multipoint access to approximately 80% of our customers. Jettech do not see this service being a viable without equitable spectrum access for smaller players in the market.

Since the commencement of the 3.6 GHz consultation process and the subsequent embargo, Jettech has been forced to halt expansion plans. This ultimately impacts on the livelihood of our staff and our ability to provide high quality services to customers in Tasmania.

Apparatus licensed point to point is not scalable or cost effective for mid-bandwidth customers due to the high cost and requirement to install dedicated equipment at a tower site for each customer. Speeds typically achievable using 3.6 GHz technology are 10/10 Mbps, 25/5 Mbps, 50/20 Mbps and in some cases on older 30 MHz allocations we can achieve close to 100 Mbps. Reliable services can't be delivered over ISM class licensed equipment. The Australian Communications and Media Authority (ACMA) proposal of replacing 125 MHz of 3.6 GHz spectrum with a very small 40 MHz allocation of 5.6 GHz spectrum for incumbent 3.6 GHz point to multipoint users is a grossly inadequate measure. There are also other concerns regarding the viability of the proposed 5.6 GHz allocation.

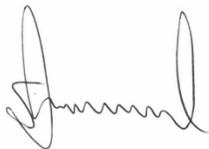
Our opinion is ACMA's highest value use determination for 3.6 GHz does not take into account the socio-economic benefits that small fixed wireless service providers add to the community in rural and regional Australia.

In conclusion ACMA's options 3b and above as discussed in the ACMA 3.6 GHz discussion paper June 2017 would have a devastating effect on a large number of established 3.6 GHz fixed wireless point to multipoint service providers. Option 3a is sensible approach as it generates a high return for the spectrum in high demand areas and does not displace a large number of incumbent users.

Jettech's business model, like many other fixed wireless service providers requires access to equitable spectrum to continue to operate and provide good outcomes for regional Australia.

We have addressed the issues for comment below.

Kind Regards

A handwritten signature in black ink, appearing to read 'Sam Jeanneret', with a stylized, cursive script.

Sam Jeanneret,  
Managing Director

## Issues for comment

1. Should the 3.6 GHz band be progressed from the *preliminary replanning* stage to the *re-farming* stage in the ACMA's process for considering additional spectrum for MBB services? Why/Why not?

### *Response*

*From Jettech's perspective re-farming the Area 1 Embargoed areas would be acceptable.*

*In any case ACMA should assist any remaining incumbents to re-locate their services. Incumbents would require access to equitable spectrum for what they would lose from the 3.6 GHz spectrum.*

2. Do the areas identified in this analysis cover the likely areas of high demand for access to the 3.6 GHz band? Would smaller or larger areas be more appropriate? Why?

### *Response*

*Jettech would only support re-farming in major metropolitan centres (Area 1) if no spectrum sharing arrangements were in place.*

3. If any part of the 3.6 GHz band is re-allocated for the issue of spectrum licences is seven years a suitable re-allocation period? If not, what period of time would be appropriate?

### *Response*

*7 Years would be supported if ACMA could provide spectrum of equivalent productivity and obtainability between 2 and 6 GHz. ACMA should assist incumbents with transition to this band. During this period new allocations should be available adjacent to current apparatus licences for incumbents to allow for greater return on investment.*

*Otherwise 7 years is a transition out period for our business as a wireless network service provider. 10 years would be more suitable in this case.*

4. Should different re-allocation periods be considered for different areas? For example, should a longer period be considered for services outside Area 1?

### *Response*

*Yes, re-allocation periods should be operated to a time frame that enables incumbents to transition to equivalent productive spectrum, or for ACMA to develop new innovative dynamic spectrum licence management methods that will benefit not only incumbent 3.6 GHz users but spectrum users in many bands.*

5. Are these guidelines appropriate? Why?

*Response*

*We foresee technical challenges of geographical adjacency issues and dead zones in the guidelines. ACMA should consider better more equitable options to accommodate 3.6 GHz point to multipoint incumbents.*

6. Are there any other issues that affect the usability of an area-wide licences that should be taken into account when defining the licence area?

*Response*

*No comment as our concern is losing spectrum in which we operate our business under as an incumbent.*

7. If point-to-point licences are affected by replanning activities in the 3.6 GHz band, are the options identified for point-to-point licences suitable? Are there any alternative options that should be considered?

*Response*

*I think the options for incumbents in point to point are much fairer than options for point to multipoint incumbents as there are many spectrum options for point to point users.*

8. Is the 5.6 GHz band a viable option for wireless broadband systems?

*Response*

- a. *No, the proposed offer in the 5.6 GHz band is not a viable option for incumbents.*
  - b. *There are 5+ incumbents in our region utilising 125 MHz of 3.6 GHz point to multipoint spectrum and it has proven challenging to co-ordinate 3.6 GHz apparatus licences. Now ACMA are proposing a much smaller 40 MHz allocation of 5.6 GHz spectrum.*
  - c. *ACMA needs to clarify whether the proposed power is TX power or EIRP. If EIRP, the proposed power limits for the 5.6 GHz point to multipoint band at 4 watts are so low it would be ineffective due to the reduced coverage areas.*
  - d. *The 5.6 GHz point to multipoint band is already abused by operators of ISM equipment running much higher EIRP than the proposed limit. A simple spectrum scan in our areas of 3.6 GHz operations will reveal the state of the band between 4.9 – 6 GHz.*
  - e. *The presence of BOM radar systems in the 5.6 GHz is also a concern. Tasmania has BOM radars in close proximity to several deployed 3.6 GHz licences. Due to the proximity, incumbents in Tasmania would be concerned regarding interference and possible exclusion zones.*
9. Under what circumstances apparatus- and class-licensed arrangements should be considered for the 5.6 GHz band?

*Response*

*No comment as the proposed offer for 5.6 GHz for point to multipoint use is of little value to us as a service provider.*

10. If apparatus licensing arrangements are developed for wireless broadband systems in the 5.6 GHz band, are the notional arrangements proposed in Appendix 3 suitable?

*Response*

*No the notional arrangements in Appendix 3 are not suitable for point to multipoint solution in built-up areas.*

*ACMA have already acknowledged that this is not a large enough allocation to accommodate incumbents. Additional alternative options need to be put on the table.*

11. If point-to-multipoint licences are affected by replanning activities in the 3.6 GHz band, are the alternative options identified suitable? Are there any alternative options that should be considered?

*Response*

*The alternative options of incumbent users of the 3.6 GHz spectrum are inadequate. There is not enough spectrum space available in the 5.6 GHz band to be viable in the majority of areas Jettech Networks has already deployed. Coupled with interference issues from radar, nearby 5.x GHz equipment and unlicensed users of the 5.x GHz spectrum our business could not continue to deploy point to multipoint solutions.*

*There is some impetus behind dynamic spectrum licencing management and this should be carefully evaluated by ACMA. Equitable spectrum needs to be maintained for incumbents until an acceptable solution has been made available.*

*The 1800 MHz band mentioned in discussion for the 3.6 GHz Band Options Paper for point to multipoint is inadequate.*

*The 2 GHz band mentioned in discussion for the 3.6 GHz Band Options Paper for point to multipoint is inadequate.*

*Carrier grade services cannot be operated in the 2.4 and 5 GHz class licenced bands effectively.*

*Negotiation of spectrum licensing with existing spectrum licence holders is out of the reach of small wireless service providers.*

12. The ACMA seeks comment on the suitability of the current west coast earth station protection zone located near Mingenew, WA, for long-term satellite service use. Are the current regulatory arrangements effective?

*Response*

*Jettech has no comment on this question.*

13. In the event FSS earth stations are affected by replanning activities in the 3.6 GHz band, the ACMA seeks comment on:

- a. Any issues surrounding the development and establishment of an east coast earth station protection zone; particularly on what factors would be necessary to make it an attractive option for earth station operations.
- b. Whether there are any views on potential candidate locations to consider.
- c. Whether there should there be more than one earth station protection zone on the east and west coasts of Australia.
- d. If the identification of a central Australia earth station zone should be considered.

*Response*

*No Comment*

14. Are the approaches for amateurs, radiolocation services, class licensed devices and TVRO systems suitable?

*Response*

*No Comment*

15. Are there any other options for incumbent services, not identified in this paper, which should be considered?

*Response*

*ACMA should provide much better support to relocate incumbents if they want to realise the perceived high value use of the 3.6 GHz band.*

*Jettech support WISPAU's initiative to explore dynamic spectrum licensing management options.*

16. Should any of the sharing arrangements discussed in this section be considered for implementation in the 3.6 GHz band? Why or why not?

*Response*

*The proposed sharing arrangements are not viable or favourable to incumbent 3.6 GHz point to multipoint users as highlighted because it will not be possible to deliver carrier grade services under this arrangement.*

17. Are there any other sharing arrangements that should be considered?

*Response*

*Jettech support WISPAU's initiative to explore dynamic spectrum licensing management options.*

18. Are there any other replanning options that should be considered?

*Response*

*Jettech are primarily concerned with having access to equitable and productive spectrum as we operate under the 3.6 GHz apparatus licence model.*

19. Which replanning option should be implemented in the band? Why?

*Response*

*Jettech supports up to option 3a as the amount of incumbents will be greatly reduced.*

*ACMA should consider assisting all remaining incumbents if they would like to realise the value of 3.6 GHz spectrum in densely populated metropolitan areas.*

20. In the event an area-wide licensing option is implemented, in which of the defined areas (that is, Area 1, 2, 3 and Australia-wide as defined in Appendix 6) should these arrangements be implemented? Are the current area definitions appropriate? If not, what area should be defined?

*Response*

*Jettech have no comment on area definitions other than the fact that the areas were set up with good reason in the first place.*

21. If Option 4a is implemented, what frequencies and areas should be re-allocated for the issue of spectrum licences? How much spectrum should remain subject to site-based apparatus licensing arrangements? Should different amounts be considered in different areas?

*Response*

*On face value option 4a does not support 3.6 GHz point to multipoint incumbents adequately. The risk of area redefinitions would provide no certainty to incumbent vendors in area 2 and area 3.*

22. If Option 4b is implemented, what frequencies and areas (that is, incumbent apparatus licence services) should remain subject to site-based apparatus licensing arrangements?

*Response*

*Option 4b seems like another strategy to force incumbents out of the band. The interference levels from outside spectrum users would render the option not viable for carrier level services.*

23. Comment is sought on the ACMA's preferred option (Option 3c) for the 3.6 GHz band.

*Response*

*Option 3c is not an acceptable outcome as it will displace a large number of incumbents.*