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The Manager, Spectrum Planning Section  
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PO Box 78  
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Dear Mr Marinelli *Marinelli*

The ACCC welcomes the opportunity to comment on the ACMA's 'Wireless broadband in the 26 GHz band – Options paper'.

We support the ACMA's accelerated process for allocating mmWave spectrum in light of industry demand to make more spectrum available to support the rollout of 5G networks in the near future.

The ACCC has a strong interest in spectrum allocation given its potential to impact competition in downstream wireless markets, particularly those markets we currently regulate. As such, our comments focus on the broad issues outlined in the paper, rather than on specific questions raised by the ACMA.

Overall, we are interested to ensure that optimal use of scarce spectrum resources will deliver the benefits of 5G services to consumers and businesses through competitive downstream markets.

The ACCC has taken the following principles into account in developing its views:

- Radiofrequency spectrum is both the enabler of and a barrier to providing wireless communications services.
- Competition is the key driver of network investment and efficient outcomes for consumers and businesses that rely on commercial wireless communications.
- Commercial wireless communications services are rapidly becoming essential for consumers and businesses across the entire economy, with a range of socio-economic benefits, and have the potential to significantly enhance productivity.
- Competitive implications and drivers in downstream spectrum-using markets should be taken into account at the spectrum planning and allocation stage to ensure that consumers and businesses relying on commercial wireless communications are well-served and that efficient outcomes are being achieved.
- The current spectrum licensing and allocation model is predicated on the principle that exclusive spectrum rights provide investment certainty for network operators. However, while future uses of spectrum cannot always be accurately predicted, the potential use cases for 5G may mean that more dynamic access to the essential spectrum resource, either through forms of sharing or trading, could lead to more efficient outcomes.

## **5G potentially disrupts current model of service provision**

The potential use cases for 5G, facilitated by its versatility, capabilities and efficiencies for operators, presents a challenge for policymakers and regulators to create flexible, yet fit-for-purpose, policy and regulatory frameworks.

To date mmWave spectrum has not been used to deliver wireless broadband services, yet it is anticipated to be fundamental for new 5G applications that will require both high bandwidth and ultra-low latency, and will likely provide for a more diverse array of use cases beyond traditional wireless broadband.

The Options paper acknowledges that, “While 5G technologies are beginning to take shape, potential businesses models are not yet so clear. In particular, how closely deployments will align with the now-traditional mobile network operator (MNO)-centric service provision model is yet to crystallise—indeed, the unique physical characteristics of the band and technology improvements may pave the way for a mix of deployment models previously not seen.”

Importantly, and unlike previous mobile generations, new participants may enter the market for spectrum, beyond traditional mobile or fixed wireless network operators. The potential that 5G-enabled connectivity offers beyond traditional telecommunications services means that we will likely see spectrum become a critical input into more downstream markets in the future.

## **Competitive implications of 5G to the economy**

As a result, the allocation of mmWave spectrum (and future 5G spectrum allocations) may have more significant competitive implications for the broader economy compared to previous spectrum allocations.

Given that international standards are not yet fully developed for 5G and that a variety of potential use cases are possible, it is important to ensure that current and future regulatory frameworks are flexible to encourage future innovation and competition.

In light of this, we strongly encourage the ACMA to explore ways in which it can more explicitly take into account the potential competitive impacts on known and emerging downstream markets in planning for the allocation of the mmWave bands. We also consider that spectrum should be made available in a way that is technology and service neutral, to encompass the broadest range of potential future use cases and that whatever approaches taken are flexible enough to meet the diverse demands of different providers.

## **Current licensing models may require rethinking**

In terms of the proposed licensing options, we consider the primary objective is to ensure that all those who require spectrum are able to access it in a way that facilitates its most efficient use as well as competition in downstream markets. The increasing scarcity and demand for spectrum means the traditional approach to allocation and licensing may need to transform as we move into a 5G world. This may include developing new ways to re-use or re-allocate spectrum to ensure new entrants can access spectrum in the future.

Unlike previous generations of mobile networks, 5G is accompanied by technical developments that facilitate new opportunities for network utilisation and enable a single network to provide a variety of heterogeneous services. 5G networks also require more and different spectrum compared to previous mobile generations to support its diverse technical characteristics (low latency, high bandwidth capacity, etc.).

There is likely to be significant demand for mmWave spectrum, now and in the future, as more 5G services and applications are developed. This may be a stimulus for more dynamic

utilisation of spectrum than in the past to ensure all potential users are able to access sufficient spectrum.

Consequently, new flexible models of spectrum management and licensing may need to be explored to more efficiently make available enough spectrum to support the many diverse use cases of 5G.

This could mean a shift away from exclusive spectrum licences, where one operator is the primary licensee, towards new frameworks that facilitate greater spectrum sharing. Alternatively, exclusive licences could be issued with conditions to promote sharing arrangements.

While spectrum sharing is not a new concept, technical developments are reducing the potential for interference and disruption between services, which may see it become a more attractive and viable solution to operators.

In the event that spectrum is increasingly shared amongst operators, and spectrum holdings become more fluid, it will likely bring about new challenges and issues for policy-makers and regulators. For example, where allocation limits are imposed at an auction, it may become increasingly difficult to ascertain who has what spectrum in order to determine appropriate limits.

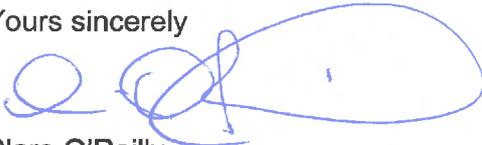
Spectrum sharing may also require greater regulatory oversight if those seeking spectrum are unable to commercially negotiate reasonable terms and conditions of access.

## **Conclusion**

As discussed above, the use of spectrum in an efficient and competitive way is fundamental to future growth and development of a range of services. Spectrum planning decisions will therefore have a significant influence on competition in downstream markets, and potentially affect market structure if operators are unable to access sufficient spectrum to support their needs.

We look forward to the ACMA's work in this very important area and would be happy to discuss any of the issues raised in this submission.

Yours sincerely



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