



WISPAU

Wireless Internet
Service Provider
Association of Australia



Wireless Internet Service Providers Association of Australia Response

Response to ACMA Automatic Frequency Coordination-assisted spectrum sharing in the 6Ghz band – Discussion Paper

January 2026

Adrian Robertson

President

president@wispau.au

John England

Vice President

vicepresident@wispau.au

Ulick Napier

Secretary

secretary@wispau.au

Allen Cuppitt

Treasurer

treasurer@wispau.au



WISPAU

Wireless Internet
Service Provider
Association of Australia



WISPAU

Wireless Internet
Service Provider
Association of Australia



ABOUT WISPAU

WISPAU (Wireless Internet Service Providers Association of Australia) Members offer broadband services into remote, regional and underserved markets in Australia. We offer local services that deliver many economic benefits including affordable broadband, skilled local employment, training, technology provision and support for the communities we operate in.

For over 10 years WISPAU has supported Wireless Internet Service Providers in Australia, combining the experience and talent of those dedicated business owners who are striving to deliver improved coverage and service in areas whilst also providing economic benefits and support to the local community.

Together, these businesses through collaboration of this organisation are not necessarily competing against the national carrier but complimenting the vision for better connectivity outcomes for all Australians. In many instances we are working towards the same goal as the national carrier, complementing and increasing the coverage provided with connectivity options available for Australians.

THE IMPORTANCE OF WISP'S FOR REGIONAL AUSTRALIA

Fixed wireless internet service providers (WISPs) play a crucial role in enhancing connectivity in local Australia, particularly in regional and rural areas.

WISP providers offer reliable high-speed internet access by transmitting data via radio signals from a base station to a fixed antenna on the customer's premises. This technology is especially significant in Australia due to the vast and often challenging landscape, which can make traditional wired infrastructure expensive and difficult to deploy.

WISP providers are inherently local business that operate in the local regional or remote community to which they service. For this reason, local WISP's are keenly concerned on providing the best experience to their customers and delivering broadband services that are comparable to metro areas. The ability to deliver broadband across 6Ghz will vastly improve services in regional and remote areas and allow WISPs to deliver increased speeds and improved telecommunications.



WISPAU

Wireless Internet
Service Provider
Association of Australia



CURRENT TRIAL OF AFC BY WISPAU

WISPAU is currently running a scientific trial of AFC with support from Cambium Networks and Qualcomm with reports from this trial submitted to the ACMA.

Currently the trial has successfully shown that AFC PTMP radio equipment can operate alongside incumbent licenced 6Ghz PTP links without creating interference issues with those licenced links.

The current trial includes three Cambium Networks PMP450v PTMP Radio Access Points operating in Benaraby, Qld (24° 00' 47.41" S, 151° 19' 16.30" E).

The radio access points are operating on both 5Ghz and 6Ghz bands simultaneously using 40Mhz channels.

Reports from this scientific licence trial have been sent to ACMA for review and discussion.

There has been no incidents of interference reported during the scientific trial at this stage.

The trial is scheduled to continue in 2026. WISPAU is considering further additional trial sites under the current scientific trial utilising similar Cambium Networks equipment and AFC models.

QUESTIONS FOR COMMENT – RESPONSES FROM WISPAU

1. Do you support the adoption of an AFC framework in Australia to enable outdoor standard-power operation in the 6 GHz band? What are the key benefits and concerns? In particular, who would the main beneficiaries be, and what would be the implications for consumers in the telecommunications market?

WISPAU fully supports the adoption of 6Ghz AFC framework to enable standard power operation in the 6Ghz band. The key benefit is allowing WISPs to deliver increased capacity services to customers, improving telecommunication services delivered by WISPs to Australian consumers.



WISPAU

Wireless Internet
Service Provider
Association of Australia



Equipment providers such as Cambium Networks, Tarana, Mimosa and others are already providing AFC enabled radio equipment that allows the WISP to provide cost effective broadband services that are comparable to fibre connected areas.

This is incredibly important in delivering comparable services to customers in regional and remote areas where fibre may not be commercially viable and mmWave products may not offer the reach and distance in area and where subscriber density may be reduced.

It also matches the existing framework of countries such as the US and Canada, aligning radio manufacturers product compatibility

2. How might AFC change the way WISPs and other communications service providers operate, particularly in terms of supporting greater spectrum efficiency or service innovation?

Manufactures already have available and are manufacturing AFC enabled radio equipment that can operate across 5Ghz and 6Ghz increasing the bandwidth capacity and improving connectivity. This equipment can dramatically change the ability for a WISP to provide higher broadband service speeds to customers in all areas of Australia and allow WISPs to compete with the overseas privately owned LEO's.

It also allows the effective use of the 6Ghz spectrum in areas where licenced PTP links are not in place (and are not impacted) opening up the opportunity to provide improved services to Australians with the benefit of locally owned ISP's being commercial competitive with a broadband offering that will provide economic and social improvement opportunities to those areas serviced.

Restricting standard outdoor power PTMP radio equipment to 5Ghz band, limits WISPs ability to improve capacity and speeds to customers utilising new radio equipment and ultimately will make WISPs uncompetitive and potentially uneconomically viable in Australia.

Some manufacturers already allow for existing subscriber equipment deployed by the WISP to connect to the access points that have both 5 and 6Ghz frequencies enabled on the radio, and allows WISPs to either provide faster services and progressively upgrade customer equipment as the customer requests or also deliver improved services to more customers in an area by separating customers on to either 5ghz channel frequencies or larger 6Ghz frequencies, delivering improvements again as the



customer requires, and not impacting greatly on the WISPs profitability or requiring excessive capital investment.

3. Are there any alternatives to AFC that could support dynamic and efficient frequency assignments in the 6 GHz band?

WISPAU is not aware of suitable alternatives to AFC or equipment that is being manufactured and is readily available for use within the 6Ghz band.

AFC radio equipment and AFC providers from multiple suppliers is already manufactured, proven and available.

4. Would established models in other jurisdictions such as the US and Canada, or aspects of these models, be appropriate for the Australian radiocommunications environment?

We see no issues with established models such as those in Canada being used in Australia. The model is already successfully used as per the current scientific trial underway with WISPAU with the AFC functionality proposed by Qualcomm based on the existing models in the USA and Canada.

Harmonising with these standards and regulations ensures that manufacturers of radio equipment and AFC providers have multiple market opportunities, increasing competition and development, reduces uncertainty and ensures affordable pricing for Australian devices.

It also accelerates implementation and can allow for industry-led AFC delivery with ACMA defining regulatory rules.

5. How much spectrum should be made available under AFC, and what bandwidths should be allocated to support individual AFC service offerings? Should part or all of the 6 GHz spectrum available for RLAN use be made available for AFC-enabled access by standard power devices, or is there a case for arrangements supporting a range of power levels above VLP/LPI and below/including standard power?

WISPAU supports the range of 5925Mhz to 6585Mhz range for AFC usage. This is the range that has been currently under trial with no issues encountered during the trial in an area that has multiple licenced links in the area. We would also **strongly suggest and support** that **AFC can be used in the range 6585 to 7100Mhz outside of the defined**



WISPAU

Wireless Internet
Service Provider
Association of Australia



population areas by WISPs. This option was suggested as a potential outcome in the ACMA Future use of the upper 6Ghz band Outcomes paper in December 2024.

This can be implemented easily by defining the populated areas and providing these areas to AFC service providers to ensure equipment outside of the defined population areas (as outlined in the December Outcomes paper) are available to WISPs allowing for efficient usage of the entire available spectrum (5925Mhz to 7100Mhz) whilst also restricting AFC equipment from operating in the defined WA WBB range (6585Mhz to 7100Mhz) when deployed within the defined populated areas.

Configurations of 160Mhz or 320Mhz could be made available under AFC, however it is likely that 320Mhz would not support spectrum efficiency and be restricted in effective distance due to power levels. It is more likely that 40, 80 and possibly 160Mhz would be used in standard power outdoor PTMP situations and then aggregating the channels (such as is done by Cambium 450v and Tarana) to provide either 2x40/80Mhz , 3x40/80Mhz or 4x40Mhz managed by AFC.

6. What degrees of geographic and spectrum segmentation should be considered when planning for individual AFC system deployments? For example, would planning for localised, self-contained areas or multiple sub-bands foster competition in the market for the provision of AFC services, or would that come at too much of a cost to spectrum efficiency (through the need for guard bands/spaces)?

WISPAU supports a national framework that covers the national landscape rather than geographic and spectrum segmentation, which, if implemented would introduce complexity, inefficient guard band fragmentation and spectral inefficiencies.

ACMA should consider the accrediting multiple AFC providers (that meet the requirements) rather than segmenting spectrum and over-complicating the purpose of the AFC system, which is to provide spectrum efficiency and flexibility of use in the 6Ghz band while protecting incumbents from interference.

7. What are the respective roles and responsibilities for industry and government in realising an AFC regime? Should AFC be operated by industry under government-set rules or should government play a more direct role in providing AFC services?

WISPAU sees that the role of government (specifically the ACMA) as the source of information for AFC service providers and accredit AFC operators. There is little benefit in the ACMA itself establishing an AFC system as most radio manufacturers align with existing industry service provider offerings currently already in operation.



WISPAU

Wireless Internet
Service Provider
Association of Australia



In the USA and Canada, the government regulators have approved providers such as Qualcomm, Federated Wireless, Broadcom, Sony Group Corporation, Wireless Broadband Alliance, Comsearch and others.

As has been seen by the trial with WISPAU, Cambium Networks and Qualcomm, the AFC service provider can utilise the data from ACMA to effectively deliver an AFC solution, quickly and efficiently with no imposed cost to the ACMA to deliver the AFC solution.

Therefore, we see the role of the ACMA to set out the regulatory framework and key technical standards as well as approval of the AFC provider in Australia, rather than the ACMA operating its own AFC.

The role of the ACMA should be to register and record the required 6Ghz PTP licenced links as it currently performs and allow approved AFC providers to effectively access this data and update in the required timeframes.

It is up to the AFC system provider to maintain reliability, security and meeting the technical and regulatory requirements set out by the ACMA to deliver an AFC service. With multiple AFC operators already accredited as aforementioned, this also drives competition, development and improvements in AFC systems.

As has been shown in the recent scientific trial by Qualcomm, a development of a functional AFC system that could potentially meet Australian requirements was developed quickly and has been implemented effectively and was industry led.

8. What role should databases such as the ACMA's RRL or other coordination mechanisms, such as those administered by the ACMA but used by accredited assigners, play in the process?

As has been seen by the trial underway, the ACMA's RRL should be seen as 'the source of truth' for any AFC provider.

Provided this database contains the registered licenced links and other areas defined to restrict 6Ghz usage (such as the afore mentioned 'populated areas' or areas where ACMA would like to restrict usage of 6Ghz) and is kept up to date, this is all the information the AFC provider will need to effectively deliver AFC system.

9. What is the need for, and potential structure of, a tiered access model for incorporating standard power RLAN devices in the 6 GHz band?



WISPAU

Wireless Internet
Service Provider
Association of Australia



WISPAU would support a tiered access model such as follows –

Tier 1 – Incumbent licenced uses (highest priority) that are registered in the RRL and protected

Tier 2 – Standard Power RLANs (AFC Managed) where devices must connect to an AFC system before transmission. AFC controls the frequency and power of the tier 2 device available based on the device's location proximity to Tier 1 devices.

Tier 3 – Lower power / Very low power (general access devices) which are restricted and used indoors / outdoors at set lower power levels that are unlikely to affect Tier 1 or Tier 2 devices significantly.

The above suggested tiered model would allow maximum usage of the spectrum and the greatest improved impact from home users to WISPs whilst still providing protection for those licenced users in the spectrum

10. With respect to licensing, should individual AFC-coordinated devices be registered on the RRL or covered by broader system-wide licensing arrangements, or are there other authorisation models that we should consider?

WISPAU does not see the need for registering individual AFC-coordinated devices on the RRL.

Like the usage of standard power devices in 5Ghz that are not registered, WISPAU believes devices that are utilising AFC do not need to be individually licenced. This adds complexity and cost to a system that is not required and adds little benefit. The AFC service provider will already have devices registered, and as part of the service by the AFC provider, keep logs and details of the registered AFC device's locations, frequency and power.

For example, consider that customer radio equipment that will be using AFC would need to be registered – could lead to many thousands of devices registered and some of these may be moved, deactivated, reactivated depending on areas and customer requirements.

The primary purpose of AFC is to protect the licenced links (or restrict usage in areas defined by the ACMA), and it is only this data that is required to be recorded in the RRL, as the AFC will protect those links / areas that are licenced whilst giving WISP's opportunity to utilise unused spectrum in areas where it is available.



The AFC system provider should then make any data required from registered AFC devices available to the ACMA upon request, should the ACMA decide to do so.

11. What processes and safeguards would need to be established to accredit, audit and ensure ongoing compliance of industry-led AFC operators? What type of rules should be imposed on prospective AFC operators and how should those rules be codified?

WISPAU suggests that the ACMA follow AFC specification standards like that in Canada DBS-06 - (<https://ised-isde.canada.ca/site/spectrum-management-telecommunications/en/devices-and-equipment/radio-equipment-standards/database-specifications-dbs/dbs-06-automated-frequency-coordination-afc-system-specifications-6-ghz-5925-6875-mhz-frequency-band>) - which could be utilised here in Australia.

12. What technical or administrative features (e.g., real-time geolocation, exclusion zones, device registration, database accuracy and latency) will be critical to the successful implementation of AFC?

Apart from the existing 6Ghz licenced links existing in the RRL, exclusion zones will also need to be implemented for areas such as –

- Populated areas where restriction of usage from 6585Mhz to 7100Mhz would occur
- Areas where there may be a scientific licence in place within the 6Ghz band
- Other areas ACMA may wish to restrict usage of 6Ghz devices.

As has been discussed with Qualcomm previously, the addition of such areas is not difficult to implement and once implemented the AFC will ensure that radio devices are limited to only the spectrum frequency and power available for use at that radios GPS co-ordinates.

Reliable, accurate information on the above locations will be important, as will the ability for AFC system providers to access the data every 24hrs. (It is unlikely that updates in the RRL for current or future licenced services will require 'real-time' updates as 24hrs would provide sufficient time period to protect any such licenced services once entered into the RRL).

Currently geolocation of devices only requires a confidence level of 95% or greater reported to the AFC system, which WISPAU believes would be suitable requirements for use in Australia.

WISPAU would recommend similar standards to Canada DBS-06 as stated previously.



WISPAU

Wireless Internet
Service Provider
Association of Australia



13. How should data integrity, ownership, and update mechanisms be managed in AFC systems? Are ACMA's existing systems (such as the RRL) sufficient, or would changes or new systems be required to support real-time coordination?

As has been shown in the current AFC trial, ACMA's existing RRL has proven to be sufficient and if the ACMA RRL data is available and up to date, then the AFC will work effectively.

The question is around how often the data is updated by the AFC service provider, which, under the current trial, is 24hrs.

This timeframe seems to be sufficient and under the trial it has not been an issue. It is unlikely that 6Ghz PTP links will be regularly updated frequently, and a newly licenced link would need time to be registered before being put into service, allowing any AFC system to automatically protect the licenced link should a new link be registered within that 24hr timeframe.

14. What is the expected market for the provision of AFC services in Australia?

It is expected that Australian WISPs will quickly deploy AFC enabled standard outdoor power devices. Radio manufacturers have equipment readily available to upgrade WISP networks to higher bandwidth capacity and increased subscriber capacity.

Other markets such as Mining Operations, Sporting Stadiums and Public Wifi areas are also likely to benefit from AFC services.

Device Manufactures and AFC providers will also likely be keen to develop and promote AFC uptake of services in Australia.

15. What standards or other mandatory specifications should be prescribed to ensure AFC-enabled devices comply with operational rules (for example, GPS accuracy, firmware requirements, revalidation intervals)? What are the implications for manufacturers and operators?

WISPAU offers the following that should be considered when undertaking standards for AFC in Australia -

- GPS accuracy horizontally and vertically with 95% confidence level
- Regular interval and validation checking by the devices with AFC provider at least every 24hrs



WISPAU

Wireless Internet
Service Provider
Association of Australia



- Restriction of power levels if GPS fails on subscriber units the client devices must operate 6 dB lower than the power level of the AP to which it's associated. Generally this is because the CPE has already associated with the access point and subscriber units generally do not move often and a lower power level than the AP will ensure no interference.
- 24-hour grace period if GPS or connectivity to AFC service fails on the Access Point before the radio reduces power until reconnection is established.
- AFC system providers to update every 24hrs from the ACMA RRL database
- AFC system providers grace periods if unable to access the RRL information (this may require a period of up to 5 – 7 days to cover times where RRL may not be available over periods like long weekends, etc) AFC system provider obliged to contact the ACMA if unable to successfully access / update from the RRL database.
- AFC system provider has registration process for points of contact responsible person to resolve interference issues if they arise according to specific registered devices

WISPAU would again suggest that the Canadian DBS-06 standard be used as a reference.

The above is in line with AFC operational rules already in place in countries such as Canada and US that have operating AFC systems.

ADDITIONAL

WISPAU is open to discussions from any organisation or agency that is keen to assist in the delivery of better, reliable and faster broadband services to all Australians utilising AFC in the 6Ghz band.

We are keen to progress the trial of AFC in Australia under the current scientific trial in collaboration with industry partners and will continue to provide details on the performance of the AFC to assist ACMA in future directions on the potential of an AFC model in Australia.

WISPAU would like to thank the ACMA for the opportunity to conduct and run a scientific trial of AFC (the first of its kind in Australia) and to allow discussions and submissions on how Australia could implement an AFC model.