

Attention: The Manager
Wireless Broadband Section

Dear Manager,

Thank you for the opportunity to comment regarding Review of the 1.5 GHz band - consultation 16/2022.

While I understand that consultation period has closed, if you are still open to receiving submissions, please accept this as our formal submission.

Background

Noise FM Pty Ltd is an Australian Radio Broadcasting Company, we offer a number of narrowcast radio services using the LPON and NAS licensing options.

As a broadcaster, I am very keen to see at least some slice of 1.5 ghz spectrum used for digital and analog audio radio broadcasting.

1) Are there any international arrangements or technology trends that the ACMA should be aware of?

A number of countries are trialing Digital Audio Broadcasting in the 1.5 ghz bands. Given the spectrum constraints within the current VHF Band III DAB allocation, it would make sense to have at least some allocation for DAB within the 1.5 ghz bands.

A recent development has been the wide spread development, use and adoption of Software Defined Radio (SDR). SDR has the potential to open up the 1.5 ghz band to analog and digital radio broadcasting options. Furthermore with low cost SDR receivers capable of receiving a variety of modulation techniques and decoding a range of digital broadcasting standards (DAB, DRM, DVB, etc), its now possible to receive digital radio on a very wide range of frequencies including 1.5 ghz.

2) What is the demand for access to the 1.5 GHz band by WBB, MSS and broadcasting services? Are there any other new services that should be considered?

DAB for Narrowcasters / Community Radio

Narrowcasters and regional / sub cap city community radio stations have effectively been locked out of DAB within VHF band III (mostly because of a lack of VHF Band III spectrum), therefore I would argue that 1.5 ghz offers a pathway for Narrowcasters and Community Radio Services to go digital.

Wideband FM Analog Audio Broadcasting

Narrowband Area Services (NAS) have been popular with narrowcasters and non English broadcasters for a number of years, however in recent years the narrowband audio quality of NAS at just 4.5 kHz frequency response has not kept up with the demands of modern consumers/listeners wanting high quality wideband audio, therefore I would argue that 1.5 ghz band should be used for wideband FM (200 khz channels) analog audio, allowing for High quality Mono or Stereo and audio frequency response upto 15 kHz, such licences could be offered under a similar licence structure as NAS licences (except with higher transmission power and bandwidth in the range of 200 to 300 KHz).

Fixed Point to Point (Studio to Transmitter links STL)

Studio to Transmitter Links (STL) have been allocated for a number of years within the 845 to 849 mhz band, however in recent times this band has come under pressure from a number of users, therefore to alleviate this congestion, I would argue that having a 1.5 ghz option for STLs would be ideal. Propagation of 1.5 ghz is similar to that of 900 mhz and suppliers/manufacturers of STL equipment currently offer 1.5 ghz as an option so equipment can be sourced.

Such licences could be offered as a point to point or point to multipoint option. LPON networks for instance, often need to feed audio to multiple Transmitter sites, therefore having a point to multipoint option would allow for this.

3) What are the ongoing requirements for incumbent services in the 1.5 GHz band?

Are there any viable alternative options?

Nil comment.

4) What planning scenarios should be considered in the 1.5 GHz band?

I would argue 7 to 10 mhz of spectrum should be allocated for Digital Audio Broadcasting (DAB) to accomodate narrowcasters and Community broadcasters.

Wideband FM Analog Audio Broadcasting, Fixed STL Point to Point and Fixed Point to Multipoint could share remaining spectrum.

5) Comment is sought on the coexistence scenarios identified, including the ACMA's preliminary thinking on these scenarios. Are there any other coexistence scenarios the ACMA should consider?

Digital Audio Broadcast should have a dedicated channels allocated, with the remaining spectrum shared between incumbents, fixed point to point and fixed point to multipoint services, with new services such as Wideband FM Analog Audio Broadcasting and Fixed STL Point to Point licences could share remaining spectrum via a planning model RALI.

Thanks you for the opportunity to comment. Please feel free to contact me if I can offer any further information.

Kind Regards

Nathan Rose
Managing Director

Noise FM Pty Ltd