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The Manager
Wireless Broadband,
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PO Box 78,
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Reference – Replanning of the 1880 – 1920 MHz band.

The Australian Radio Communications Industry Association (ARCIA) is pleased to have the opportunity to contribute to the discussion process involving the replanning of this spectrum band, as we represent the industry sector that has been supplying and maintaining critical communications networks for over seventy years, we believe that we can offer constructive and valid comments. In many discussion paper responses over the past decade, we have always tried to present solutions that are not specific towards any particular market sector, and we have always sought that any recommendations and policy directives from the ACMA remain transparent.

Before we address the specific information sought by the ACMA in this instance, we believe that there are some fundamental concepts that should be kept in mind by the ACMA during the replanning process -

a) As a result of the many and varied spectrum reviews there seems to be a situation developing where the overall 'Highest public benefit value' seems to consider each segment as a stand-alone entity without any consideration of the public benefit that may be gained from other segments because of usage of a specific band. If we look at the 1.9 GHz band as a stand-alone entity, then it would be easy to assume that the public benefit derived from the point-to-point and point-to-multipoint services would be far outweighed by allocation the band to wireless broadband or similar applications. In fact, it might well be that the benefit from other spectrum segments is highly dependent on these link services for operation and without the link services the value of other spectrum segments would be reduced.
b) Along similar lines, the tendency for recent spectrum reviews to be moving existing link services away from historical frequency allocation areas is leading towards a situation where there will be little or no suitable spectrum available for these essential services and everything simply auctioned off for WBB services under spectrum license conditions. This would end up being a negative outcome and the actual applications of spectrum should be considered as part of the replanning process to ensure that 'the baby is not thrown out with the bathwater', with this in mind we support the position of retaining these services within the existing band, as more usage for 'Enterprise WBB' opens up there may well be an increased demand for point-to-point links as part of this new market development.

c) History has also shown that the ACMA spectrum planners have often made mistakes when allocation spectrum segments to particular technologies, and that changes in technology and usage patterns have ended up creating 'orphan' spectrum segments. We would suggest that in this case any continuing use of the terminology of allocating the 1880 – 1900 MHz spectrum block as being for DECT or DECT-2 technology could be a mistake. Whilst we understand the usage of the band is that way at present, the modern world where Australian telephone services are now being either –
    - IP-derived circuits through the NBN Co network, or
    - Tending not to be a requirement of the modern population demographics who are moving towards WBB devices as their primary communications format, with fixed line phone being a diminishing market.

   We would respectfully suggest that the area of spectrum involved should now be classified under the Cordless Communications Devices Class Licence, this would then encapsulate the DECT devices as well as the cordless microphone and headset markets, as well as leaving options open for other uses which may develop in the future under this format.

d) The interest shown by the Australasian Railway Association towards having the section of this band dedicated for railway use requires some further consideration. Our thoughts in this regard are that previous dedicated concepts specifically oriented towards railway operations, such as the 3GPPP technology developed for trains, have not been economically viable in the longer term. Modern manufacturing techniques mean that equipment for most applications has to be designed around commercially available products, basically unless it is a consumer oriented product it will not be viable commercially. If we look at this particular spectrum segment it is hard to see how railway operators would want to limit their technology options to spectrum most suited to 4G applications plus limited 5G utilisation, further technology developments will simply not be designed to be operated on such a limited bandwidth. The railway applications will need to be based on fifth generation (5G) technology with high bandwidth to encapsulate operational communications, signalling and consumer accessibility as part of the system – even the full 40 MHz of spectrum would fail to meet this requirement in the future. We would respectfully suggest that this section of spectrum should be allocated for WBB under apparatus licensing formats which would then enable other users to utilise the spectrum for WBB in areas other than railway corridors. If we look at the area covered by rail corridors outside of the metropolitan areas, it is a very small portion of Australia and as such to have this spectrum available on a secondary basis for WBB will provide better spectrum utilisation.

We now feel that we can offer constructive comment on the various scenarios outlined in the discussion paper –

Option 1: No change to current arrangements in the 1880–1920 MHz band

The main elements of Option 1 are:

1. Maintaining SR WBB uses under the CCD class licence across 1880–1900 MHz
2. Maintaining LA WBB and PTP access arrangements across 1900–1920 MHz in regional and remote areas.

We recognise the benefits offered by this option and offer limited support.

Option 2: SR WBB in 1880–1920 MHz

The main elements of Option 2 are:

- Maintaining and expanding SR WBB access under class licensing arrangements across the entire 1.9 GHz band enabling access to new uses including future DECT and MulteFire in the whole band.
- Maintaining LA WBB and PTP access arrangements across 1900–1920 MHz in regional and remote areas.

Although this may offer some benefits for the SR WBB market, we do not support this option.

Option 3: SR WBB in 1880–1900 MHz and RMR in 1900–1910 MHz

The main elements of Option 3 are:

- Maintaining SR WBB uses under class licensing arrangements across 1880–1900 MHz
- Enabling access to new uses include future DECT, MulteFire under class licensing arrangements across 1880–1900 MHz
- Maintaining LA WBB and PTP access arrangements across 1900–1920 MHz in regional and remote areas.
- Introducing RMR services in the 1900–1910 MHz segment of the band for new uses and applications such as rail applications.

Again, we do see some benefits with this option, however, we do not support the proposal as outlined.

Option 4: SR WBB in 1880–1920 MHz and RMR in 1900–1910 MHz

The main elements of Option 4 are:

- Maintaining and expanding SR WBB uses under class licensing arrangements across the entire 1880–1920 MHz frequency range.
- Maintaining LA WBB and PTP access arrangements across the 1900–1920 MHz segment in regional and remote areas.
- Introducing RMR services in the 1900–1910 MHz segment of the band for new uses and applications such as rail applications.

It is our opinion that this option offers the best outcomes for the replanning process, however, we would suggest that with the segment supposedly set aside for the RMR utilisation needs further consideration. We would suggest that the segment should be approved for Local Area Wireless Broadband (LA-WBB) under apparatus licensing conditions as secondary utilisation for areas outside of the relevant railway corridors. This will then permit a higher utilisation of suitable WBB spectrum in regional and remote areas of Australia.

Response to the questions raised in issues for comment –

1. **The ACMA invites comments on the proposed desirable planning outcomes.**
   ARCIA recognises that there are competing demands for spectrum, however, the proposed options address the requirements and provide a degree of transparency with regard to the outcomes.

2. **The ACMA seeks stakeholders' views on any other applications we have not identified that could be accommodated under SR WBB**.
   This is always a tough question as there will be potentially other applications that may use this spectrum in the future, with the SR WBB segment operating under class licensing will leave it open to future applications. We suggest that the spectrum segment proposed for RMR be made available for LA-WBB services under apparatus licence outside the railway corridors in regional and remote areas.

3. **The ACMA invites comments on the replanning options, especially the preliminary preferred option presented in this paper, and any alternative options.**
   ARCIA supports the proposal outlined in Option 4 with the additional recommendation outlined above for LA-WBB use on a secondary basis.

4. **Is personal handy phone system (PHS) technology still required to be included in the cordless communication devices class licence?**
   We are not able to add meaningful comment on this point other than to support the use of class licensing in the 1880-1900 MHz segment which would cover the PHS anyway.

5. **The 1900–1920 MHz frequency band plan will sunset on 1 April 2023. Is the band plan still required, or can the band plan be allowed to sunset?**
   We have nothing to add on this issue.

6. **The ACMA invites comments on coexistence considerations, and analysis on coexistence issues for the proposed options in this band.**
   We have nothing to add on this issue.

In closing, we would point out that we do have concerns regarding the present allocations and identification of technologies for the 1.9 GHz band, we would not be in favour of the removal of spectrum for link services without serious discussion on suitable alternatives, and the discussion should include both equipment availability and cost of replacement. Part of the equation must recognise that moving link allocations to higher frequencies will often lead to dramatically different link paths and consequently more equipment and site development costs as part of the process.

Our recommendations regarding identification of the technology for one specific use such as DECT (or its derivatives) is opening long term issues that could reflect poorly on the present review process. We do believe that with the change to SR WBB terminology and using Class licensing for that segment removes much of the risk. We do also believe that adapting the proposed RMR segment to permit LA-WBB outside of rail corridors is a method of increasing the public benefit of this spectrum segment.

We welcome the opportunity to be involved in the discussion process and we always try to recognise the competing needs of other spectrum users whilst retaining the requirement for transparency in all spectrum matters and decisions. We welcome any queries regarding the contents of this response.

Yours sincerely,
Australian Radio Communications industry Assn (ARCIA) Inc.

Ian Miller – Executive Officer