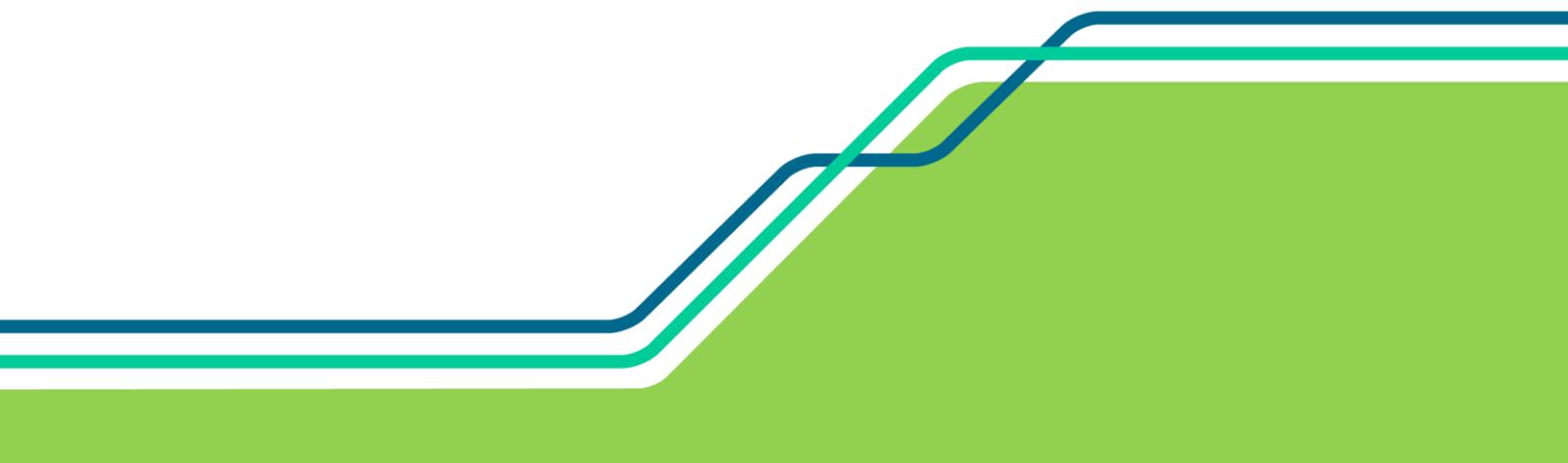

AUSTRALASIAN RAILWAY ASSOCIATION SUBMISSION

To

Australian Communications and Media
Authority

on

Regional and remote apparatus licences in the
1800 MHz band – Issues paper 1



ARA RESPONSES TO QUESTIONS POSED IN REGIONAL AND REMOTE APPARATUS LICENCES IN THE 1800 MHz BAND – 1800 MHz-a shared strategy Issues paper 1 (December 2012)

General Comment

The Australian Rail Industry notes that the term PTS (Public Telecommunications Services) is used throughout the paper. However, it is the Australian Rail Industry's understanding that any allocation for the Australian Rail Industry in the 1800 MHz band in regional and remote areas will normally be available for "Private" use and will not be restricted to "Public" use.

The Australian Rail Industry supports the use of mobile voice and data service apparatus licensing in regional and remote areas and for the purpose of the response to this issues paper will interpret PTS to mean mobile voice and data services as determined in the Radiocommunications (Class of Services) Determination 2012, issued by the authority of the Minister for Broadband, Communications and the Digital Economy.

Specific Response

The ARA on behalf of the Australian Rail Industry offers the following responses to the specific questions.

Q1: Is this an accurate description of likely demand for the 1800 MHz band?

Yes, the Australian Rail Industry believes that the ACMA has accurately captured the demand for 1800 MHz in regional and remote areas.

Q2: Are there other demand drivers for the 1800 MHz that the ACMA has not discussed here?

The Australian Rail Industry is not aware of any additional demand drivers from other sectors for 1800 MHz spectrum in regional and remote areas.

The Australian Rail Industry notes that future demands will emerge from within the Australian Rail Industry such as the introduction of High Speed Rail links, services to new population centres, expanding metropolitan areas and new resource industry ventures.

Q3: Is the PTS apparatus licence type the most appropriate way to licence all the diverse mobile services that are expected to be deployed in the 1800 MHz band in the medium – term?

Yes, the Australian Rail Industry supports the use of the PTS apparatus licence type as the most appropriate way to license 1800 MHz spectrum in the short to medium term. It will offer the greatest level of flexibility to all stakeholders. This flexibility includes the ability to minimise licence costs for a given licensee and to maximise the efficient use of spectrum through secondary user access within industry specific national allocations. That is, if an industry is not using allocated spectrum in a particular geographic area that spectrum can be licensed to a secondary user until required by the primary user. This will ensure the future availability of 1800 MHz spectrum for industry specific national allocations and the efficient use of spectrum in the short to medium term.

Q4: What are the likely impacts on both fixed and mobile services of the proposed introduction of PTS services in 1800 MHz spectrum in regional remote areas?

The Australian Rail Industry supports the ACMA's view that the new arrangements will impact current fixed link Licensees in regional and remote areas. However, the impact can be minimised through the issuing of apparatus licences, which will facilitate the continued use of fixed links, where there are no interference issues for industries that have been given priority use through national allocations.

While the potential for interference between the allocations during the transitional arrangements is real, careful coordination and management should ensure the greatest protection possible for all Licensees.

Q5: The ACMA seeks input from stakeholders on future options for fixed – link services in the 1800 MHz band. What would be the most beneficial approach for government, community and industry?

The Australian Rail Industry considers that the most beneficial approach for Government, Community and Industry is **Option 2**.

Allowing existing fixed links to continue operating but change their status to secondary.

The Australian Rail Industry believes that PTS should be the primary use and that there are other cost effective non RF options available to fixed links, such as fibre, that would free up spectrum for mobile applications.

Flexible sharing arrangements based on apparatus licensing combined with a revised “use” prioritisation will facilitate greater spectrum efficiency within the Band. For example, within national allocations for particular industries, both fixed and mobile service could be allowed. This would result in current fixed link services being able to remain for as long as possible, if there are no interference issues identified by primary users, while still maintaining protection for primary use. This could result in extended transition time for the current Licensees to undergo any change that may be necessary.

If fixed link services are maintained as a primary service, deployment of PTS would be hampered in many locations and may result in conflicts and compromise causing inefficiencies and reduced service quality

Q6: What are the likely impacts on current and prospective licensees of the three options for fixed – link services in the 1800 MHz band?

Option 1 - To keep fixed-link services as a primary use would limit spectrum efficiency through restricting the roll out of PTS services based on spectrally efficient technologies such as LTE.

For the Australian Rail Industry, current GSM-R technology offers greater spectrum allocation flexibility and is less affected by interference. However, LTE is considered the prospective future technology for the Australian Rail Industry.

Option 2 - Allowing existing fixed links to continue operating but change their status to secondary use is the Australian Rail Industry’s preferred option.

As indicated, flexible sharing arrangements based on apparatus licensing combined with a revised “use” prioritisation will facilitate greater spectrum efficiency within the Band. For example, within national allocations for particular industries, both fixed and mobile service could be allowed. This would result in current fixed link services being able to remain for as long as possible, if there are no interference issues identified by primary users, while still maintaining protection for primary use. This could allow extended transition time for the current Licensees to undergo any change that may be necessary.

As a secondary use, fixed-links would be required to stop operating if they interfered with PTS services. With the increased use of PTS services in this band the probability of interference from existing fixed- links would increase. As per the Radiocommunications Act 1992, secondary services are not permitted to cause interference to a primary service or claim protection from interference from a primary service. As such, fixed-link services would have no protection from this increased probability of interference.

Option 3 - Clearing the band of fixed-link services would have the highest impact on the current Licensees.

It would limit the roll-out of PTS services in the short to medium term due to the requirement for the ACMA to allow 2 years notice for band clearance activities.

Removing fixed-link services from the 1800 MHz spectrum band in regional and remote areas could increase pressure on other bands for this service which may not result in the most efficient use of this scarce resource.

Q7: How should the ACMA strike the balance between existing fixed links and new PTS deployments?

The Australian Rail Industry considers that allowing existing fixed links to continue operating but change their status to secondary use as per Option 2 above, combined with the continued use of apparatus licences, is the best approach to strike a balance between the increased use of 1800 MHz for PTS services and the continued operation of fixed-links in this band.

Q8: The ACMA seeks views on the proposed measures to facilitate access to the 1800MHz band for mobile services in the short – to medium term.

The Australian Rail Industry considers the measures proposed by the ACMA offers quick access to the band for PTS services, while allowing the ACMA to fully consider the best planning options to ensure the most appropriate licensing arrangements for the efficient use of the 1800 MHz spectrum band in regional and remote areas.

The Australian Rail Industry believes that the most appropriate licensing arrangements will include both apparatus and spectrum licensing in the short to medium term.

Q9: The ACMA seeks the views of prospective licensees on its proposal to introduce assignment priorities for PTS licences in the short – medium term.

The Australian Rail Industry strongly supports prioritised assignments in the 1800 MHz band and in particular a specific allocation for Rail.

Q10: The ACMA seeks views on the preferred option for assignment priorities to facilitate access to the 1800MHz band in the short – to medium term.

The Australian Rail Industry strongly supports a specific allocation of adequate spectrum for the Australian Rail Industry.

A national allocation of 1800 MHz spectrum that links metropolitan, regional and remote areas will allow a national interoperable rail system that will meet the requirements of rail regulators, allow for the introduction of advanced technology and will support future growth in passenger and freight rail services.

It is imperative that spectrum is available to underpin a national, interoperable rail safety and control communication service to support current and future rail requirements. This is crucial to meeting rail safety regulators requirements and maintaining and growing Australia's productivity to support international competitiveness and a vibrant domestic economy.

Q11: Which assignment priority model for remote Australia would best meet the needs of prospective licensees?

The Australian Rail Industry strongly supports the arrangements proposed in **Option 1 for remote areas**.

The Australian Rail Industry believes that the low population density in remote areas would be more than adequately addressed by the level of spectrum, a total bandwidth of 2 x 45MHz, prioritised for mobile voice and data services.

The increased bandwidth for Infrastructure and Australian Rail Industry Services would provide greater potential for infrastructure and rail transport systems allowing improved service performance and reliability at lower costs.

For example, the proposed inland freight corridor and associated infrastructure services would require access to substantial spectrum in remote regions.

Remote Option 2 does not provide a national allocation for the Australian Rail industry and will inhibit the roll out of national interoperable systems.

Q12: Which assignment priority model for remote Australia would maximise the public benefit derived from use of the spectrum?

The Australian Rail Industry considers that **Option 1 for remote areas** maximises the public benefit derived from the use of the spectrum.

The Australian Rail Industry believes that the low population density in remote areas would be more than adequately addressed by the level of spectrum, a total bandwidth of 2 x 45MHz, prioritised for mobile voice and data services.

The use of more automated monitoring and control systems for infrastructure and the Australian Rail Industry would increase the performance and reliability of infrastructure and Australian Rail Industry services in remote areas. The reduced cost and automation of the systems that deliver necessary basic service and transport will aid in countering the tyranny of distance and increase the liveability of remote areas, increase industry efficiency, productivity and enhance Australia's international competitiveness.

Q13: Which assignment priority model for regional Australia would best meet the needs of prospective licensees?

The Australian Rail Industry strongly supports the arrangements proposed in either **Option 1, 2 or 3 for regional areas**.

Options 1, 2 or 3 provide appropriate assignment priority for the Australian Rail Industry for regional areas, particularly when combined with the use of apparatus licensing. This would result in the most efficient use of spectrum in that if a first priority user is not deploying services in a particular geographic area then secondary users can be provided access to that spectrum frequency.

Option 4 does not provide a national allocation for the Australian Rail industry and will inhibit the roll out of national interoperable systems.

Q14: Which assignment priority model for regional Australia would maximise the public benefit derived from use of the spectrum?

The Australian Rail Industry believes that **Option 1, 2 or 3** will provide significant public benefit though the application of an appropriate assignment priority for rail in regional areas, particularly when combined with the use of apparatus licensing. This would result in the most efficient use of spectrum in that if a first priority user is not deploying services in a particular geographic area then secondary users can be provided access to that spectrum frequency.

The provision of this proposed allocation will safeguard spectrum to serve future demands that are expected to emerge. For the Australian Rail Industry these demands will include the introduction of High Speed Rail links, services to new population centres, expanding metropolitan areas and new resource industry ventures.

Q15: The ACMA seeks input from stakeholders on the proposed tax.

The Australian Rail Industry supports the ACMA taking a conservative approach to the pricing of spectrum given that the unit spectrum access charge already takes into account CPI increases over the 15 year period of spectrum licences and that the population serviced is a direct factor in determining the licence tax.

Q16: Stakeholders are invited to expand on their views on these and other issues. They are invited to provide more detail on the basis for incorporating corresponding adjustments in apparatus licence taxes that nevertheless remain consistent with the minister's unit value.

The Australian Rail industry supports opportunity cost pricing for apparatus licences.

It is reasonable to use the assumption that the starting price for the spectrum should be as per the Minister's Direction, noting that this price reflects the premium for existing licensees and the demand for the spectrum in metropolitan areas.

Therefore, while the Minister's Direction price can be used as the base price it should be discounted to reflect the lack of premium for existing licensees and lack of demand for the spectrum in regional and remote areas.

Q17: The ACMA seeks input from stakeholders on the methodology used to revise the PTS licence tax.

The Australian Rail Industry considers that while the methodology is sound, there should be further consideration given to having different discount rates for licence tax taking into account of demand for the spectrum in regional and remote areas. The current methodology results in one rate for both regional and remote areas but there can be vast variation in demand for the spectrum within defined Local Government Areas (LGAs) in particular when considering the opportunity for frequency reuse at different locations within any given regional LGAs.

Q18: The ACMA seeks views on approaches to identifying an appropriate geographic boundary and for quantifying population when calculating apparatus licence taxes.

The Australian Rail Industry considers the use of the LGA can potentially be inequitable. Population per Ward may better reflect demand and be more appropriate in calculating the apparatus licence tax.

Q19: PTS taxes in the 2.1 GHz band are also currently based on estimates of population for the relevant LGA sourced from the 2006 Census and applying the 2006 LGA boundaries. The ACMA seeks the views of interested parties on maintaining consistency of population metrics across the different spectrum bands.

The Australian Rail Industry notes that regional and remote LGAs can be significantly larger in area than the area covered by the communication system. This is particularly so for the Australian Rail Industry, where radio frequency propagation is optimised along the track corridor.

Licence fees calculated on an LGA and the associated protection obligations implied give rise to possible issues in relation to multiple licensees in a given LGA and could restrict the ability of gaining the maximum efficiency out of the available spectrum in a given LGA.

The Australian Rail Industry believes that a population count relative to the area covered by an approximation of the likely propagation area of a licence may be a more appropriate approach. The increased GIS grid resolution, now used by the ACMA, may assist in adopting this approach.

In regard to the 2.1 GHz band, the Australian Rail Industry believes that maintaining consistency would be preferred and that the ACMA should consider revising the approach to population estimation to align with that proposed.

Q20: The ACMA seeks comment on the proposed amendments to the Tax Determination.

The Australian Rail Industry suggests that the ACMA reconsider the proposed amendments to the Tax Determination subsequent to the comments provided in this response.