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**Re: Digital Radio Discussion Paper December 2013**

Dear Jason,

Thank you for this opportunity to make a submission regarding digital radio. I am a license holder of various other types of broadcast licensees.

Domestic Shortwave, MF NAS (1611 khz to 1701 khz ). Lpon's

Please find below my answers to the various questions.

**Questions:**

- 1. Is the licensing and planning framework for digital radio operating effectively? Should any changes be made to the regulatory framework?**

No. I'm not a fan of anything to do with DAB+ at all.

- 2. Should the provisions concerning the commencement of digital radio services be modified or removed, allowing broadcasters to commence services whenever they wish (subject to spectrum planning considerations)?**

No! Some form of breathing space is needed for incumbent broadcasters regards of the system used.

- Is the access regime established in Part 3.3 of the Radiocommunications Act operating effectively? Is the system of access undertakings working as it should?**

No

- 3. Should any of the provisions relating to the access regime be amended or replaced?**

Yes amend everything! Get rid of the current setup. The commercial sector should realise it's not the government and stop trying to force the government into taking up their defacto standard.

- 4. Are the reasons for a moratorium on new licence area planned commercial digital radio licences still valid?**

No

**Should the moratorium, which is due to expire on 30 June 2015, be extended or discontinued?**

Scrap it

**5. Should there be any changes to the initial restricted datacasting framework?**

Yes.

**6. Given that the ACMA has not issued any restricted datacasting licences, is there any future for such services?**

Yes. I fear the real answer to this question is buried under the failure to have picked a standard and decided on the road we are taking. Getting answers out of ACMA for common everyday issues isn't easy at the best of times.

**7. How can restricted datacasting be made more attractive to new entrants to the market?**

Restricted datacasting can follow the same guidelines as Narrowcast programming.

**8. Should there be additional spectrum allocated for restricted datacasting services?**

Yes

**9. What is your assessment of the trends in digital terrestrial radio technology? Does the overseas experience with these technologies have anything to teach us about their merits and appropriateness in the Australian environment?**

I have been watching the roll out of Digital radio broadcasting for the some time now and have drawn some broad based opinions. I'm not an engineer but I'm knowledgeable enough to build my own stations.

DAB+ is not my favourite replacement for FM Analogue. The current trend to do more with less bandwidth (that seems to be the trend currently) on DAB has depleted the "it's better quality" argument. This needs to be stopped with minimum bandwidths set for services should DAB+ stay.

I also don't agree with whole multiplex model run by a collection of your opposition idea. No matter which way you look at it involving a third party is dangerous.

DAB+ doesn't support a smaller localised service within the multiplex. You would need to transmit another multiplex just for that one service at a lower power level and more suitable site.

There is talk of needing repeaters with the current DAB+ system. This surely must be setting off an alarm bell or two! With extra sites needed to deliver the same service how is this good economics?

DAB+ is no good for distances in regional areas and the notion of a completely different standard for regional areas is a just not smart!

DRM & DRM+ are my favourites for an Australian standard nation wide. DRM+ could be deployed on spectrum just below the FM dial on VHF TV Ch2 and 3. I'm of the understanding DRM+ takes up less room than it's equivalent FM analogue does. Using frequencies in this area

would (in a lot of cases) mean DRM+ services could go on air without too much redesigning of current infrastructure.

DRM could be deployed on the first of the Tropical SW bands near 2.4mhz. This too could be deployed into existing infrastructure without too much effort.

I'm aware there is a bandwidth issue with DRM on MF frequencies. This has to do with the bandwidth of the aerial system on lower frequencies. There has been a suggestion in technical circles that DRM could be deployed on 26 mhz. This resolves the bandwidth issue but propagation at 26mhz means you could have your station rendered totally useless at any time day or night during the times "skip" is coming from over seas services! Anyone who has use 27Mhz CB knows that even across town communications are wiped out by big ove seas stations when this is at it's peak. It happens a lot. At least on MF we know it's only at night that we have the problems.

Australia is a much larger area than most of the European countries mentioned in the discussion examples. What works for them will not always work for us here due to the distances we need to cover.

One thing we should totally avoid is anything to do with HD radio and any IBOC systems like the USA has sadly decided to allow. HD RADIO is a good example of the grass in NOT always greener on the other side!

I don't believe the lack of receivers' argument is worth giving any credit to. Because once a standard is set receiver makers will follow. Some crossover time is needed.

**10. What are your views about the impacts of Smartphone and other streamed audio services on the future of 'traditional' radio listening?**

The smart phone has the potential to be the new portable radio. But until data speeds and quotas improve the smartphoe will be more like an ipod. Stuttering and buffering are large put offs for streaming services.

**11. What data do you have to support these views?**

*I operate streaming radio stations and have feedback from many people over the years.*

**12. Given its importance in the radio listening environment, what digital radio technologies are likely to be adopted by car manufacturers in the short to medium term?**

Car manufactures are currently installing smart consoles in cars that can surf the web, play radio AM, FM, and listen to music with apps.

**13. What impact, if any, will the intent of several car manufacturers to install internet-connected entertainment systems have on the future of digital radio?**

This will have heaps and possibly even effect the sales of the models concerned. Radio listening in the car is a long tradition offering more choice without taking away the traditional AM FM is a must.

**14. If you import or sell receivers, are you aware of any new developments which may have applicability in the Australian market? If so over what timeframe?**

No comment

**Given its ability to cover large geographic areas, do you think satellite radio may have a future in Australia?**

Yes, but the population here might not be big enough to support it

**15. Have you conducted or commissioned any research into digital radio audience figures or the demographics of digital radio listeners since digital radio services commenced in 2009? If so, what are the current and projected audiences for digital radio?**

No.

**16. Have you conducted or commissioned any research into the growth in streaming radio services across online platforms and connected devices including mobile phones, tablets or desktop computers? If so, what are the current online radio audience figures and the demographics of listeners? Do you have any research on the projected growth of these digital radio technologies?**

Similar listeners to Australia

<http://www.statista.com/chart/1504/radio-listening-in-the-united-states/>

**18. Are there alternative allocations of spectrum the Government could be considering for terrestrially Based digital radio?**

Analogue TV Channel 1 (59.5 MHz) DRM+

Analogue TV Channel 2 (66.5 MHz) could be used for DRM+

Existing Analogue roof top antenna in situ were used for TV channel 2

Analogue TV channel 5A (140.5) could be used as DRM+ Digital radio in the cities as there is less floor noise with 140MHz compared with 60 MHz

There is 21 MHz of bandwidth with these three channels. A DRM+ channel is 96 KHz wide that's 210 DRM+ Radio channels with 8 KHz band guard. These channels can be planned similar to existing FM Broadcast band.

**19. What has been your experience of the establishment and operation of a digital radio multiplex?**

No comment

**20. Are there alternative arrangements for sharing multiplexes which would be more efficient, particularly in regional areas, where there are generally fewer services than in metropolitan areas?**

DRM and DRM+ Australia wide and be done with it!

**21. Is the current regulatory and technical framework for digital radio best suited to providing digital radio in regional and remote Australia? What mix of features (for example, range of services, signal/population coverage) is desirable?**

Nope scrap it all together!

**22. In order to maintain audio quality, should there be a mandatory minimum amount of bandwidth used per station?**

Yes if you keep DAB+. No If you go with DRM and DRM+