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## Rebel Media Response To Digital Radio Discussion Paper Issued December 2013

Rebel Media [RM] provides commercial FM radio services 4BRZ (Breeze) and 4RBL (Rebel FM) to regional and remote areas of Queensland and New South Wales. RM is a member of Commercial Radio Australia [CRA]. We welcome the opportunity to contribute to the review.

RM broadcasts via IS19 satellite and via 40+ commercial FM repeaters to a licence area over 2,800 km long, covering diverse locations including the remote Cape York Queensland mining communities, far western New South Wales and sub metropolitan FM sites within the Gold Coast RA1 licence area and within the Brisbane RA1 metropolitan licence area.

Our largest population centres and the majority of our FM sites are in areas classified by Government as regional or metropolitan, with the balance in remote regions.

### Summary

Dependent on the successful development of the DRM+ receiver market over the next few years, we believe our market will typically be best served by a mix of;

- DAB+ in populated licence overlap areas where there is at least five commercial licensees.
- DAB+ or DRM/DRM+ in populated licence overlap areas where there is three to four commercial licensees.
- DRM/DRM+ where there is are up to two commercial licensees, or where wider coverage than DAB+ practically allows is required

Due to the large geographic size of our market and the nature of DAB+ shared multiplexes, a staggered

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### Rebel Media: Response To Digital Radio Discussion Paper

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planning approach in our market is warranted to ensure that in licence area overlap regions with limited Band III spectrum, that RM DAB+ services are planned at the same time as neighbouring overlapping services in the CRA proposed Phase 1A and 1B roll out stage.

This is to ensure there is equitable access to DAB+ Band III spectrum, to avoid the creation of digital divides, and importantly, to allow consideration of DAB+ multiplex sharing of commercial radio services serving the overlapping area.

This approach should consider the options of blending of existing licence areas where it is spectrum efficient to share DAB+ multiplexes located within a licence overlap area.

## **DAB+ in licence overlap areas where there is at least five commercial licensees**

Key commercial regional licence overlap areas in our market include;

### **Stanthorpe**

4 Toowoomba and 2 RM stations serve this area. All 6 commercial FM services currently co-site at Mt Marlay.

### **Wauchope**

3 Port Macquarie and 2 RM stations are licensed to serve this area. Existing FM site at Mt Cairncross is in the licence area of all 5 services.

### **Gold Coast Hinterland**

3 Gold Coast and 2 RM stations serve this area. All 5 commercial FM services currently co-site at Mount Tamborine.

It is imperative RM Band III DAB+ transmitters located in licence overlap areas are planned at the same time as any other commercial radio Band III DAB+ transmitters within an overlap area to ensure a level playing field and equitable access to limited Band III DAB+ spectrum.

### **Example - Gold Coast RA1 and RM Gold Coast Hinterland**

The Gold Coast commercial FM and DTV site is co-sited with existing RM commercial FM services at Mount Tamborine. The site has an unobstructed path to the population centres of both markets, and the existing Gold Coast RA1 and RM services have considerable fortuitous commercial FM coverage of each others markets.

A high power Gold Coast Band III DAB+ service at this site will serve the overlap licence area and also likely unavoidably overspill to urban centres within the key RM Gold Coast Hinterland market. A high power RM Band III Gold Coast Hinterland DAB+ service at this site will serve the overlap licence area and also likely unavoidably overspill to urban centres within the Gold Coast RA1 market.

RM and Gold Coast RA1 licensees must simultaneously commence Band III DAB+ services in the overlap region to ensure that no one service has an advantage over the other, in terms of coverage, single site operation (servicing the overlap area), service commencement, and market penetration of receivers capable of receiving the service.

Should some commercial services in the overlap region commence on Band III DAB+, and then other commercial services start years later on DRM+ or L Band DAB+, it is unlikely most listeners able to receive ABC and commercial services on a Band III DAB+ radio would immediately further invest in a different platform digital radio just to receive a few extra digital commercial radio services entering the market so

late in the game. This risks creating a substantial digital divide that favours the services starting on Band III DAB+.

Should the DRM+ platform falter from lack of cost effective receiver models, and no high power Band III DAB+ spectrum is left, then it potentially risks RM having no competitive digital broadcast future in one of RM's largest markets.

Adequate reception of the existing 4RBZ FM 100.6 Mount Tamborine service is partially interference limited due to lack of alternative high power FM channels for 4BRZ in a heavily spectrum congested region. RM can not risk a similarly poor digital outcome where planning of our services are delayed in overlap regions, or no unencumbered high power Band III DAB+ spectrum remains for RM services. That is an unacceptable potential outcome for RM if the CRA proposed phased roll out schedule is adopted as is, and our market is left last to be planned.

To ensure there is equitable access to high power Band III DAB+ spectrum, and to avoid the creation of DAB+/DRM+ digital divides, it is essential to plan RM DAB+ services located in licence overlap areas at the same time as the other commercial services within the overlap area.

Only if overlapping DAB+ services are planned at the same time, can cross market sharing of the same DAB+ multiplex be considered and spectrum efficiency maximised.

For example, if a new high power Band III DAB+ multiplex at Mount Tamborine is licensed to carry only the 3 Gold Coast RA1 commercial services, the multiplex is only 3/9th utilised. Assuming 2/9th is allocated to community, the multiplex has nearly half its capacity unused. If a second co-sited high power Band III DAB+ multiplex is allocated to the same site just to carry 2RMcommercial radio services, only 2/9th multiplex capacity is used in a spectrum limited market.

Spectrum efficiency is achieved by virtually blending licence areas of these adjacent services to more broadly reflect the existing FM coverage of the existing co-sited services, and establishing a single commercial/community high power Band III multiplex that serves both the Gold Coast (within the Gold Coast RA1 market) and the Gold Coast Hinterland (with the RM market). This reduces multiplex excess capacity and halves the spectrum bandwidth that two co sited DAB+ multiplexes would require. One single commercial/community high power Band III DAB+ multiplex could be populated as;

- 3/9th for Sea FM, Gold FM and Hot Tomato FM commercial services
- 2/9th for Breeze FM and Rebel FM commercial services
- 2/9th for Gold Coast RA1 community radio.

Leaving only 2/9th of the multiplex unallocated.

While the Tamborine site is not currently in the licence area of 2MW, this could be taken a step further to include the 3<sup>rd</sup> commercial radio service that overlaps the Gold Coast RA1 market -Murwillumbah RA1 service 2MW which overlaps the south side of the market;

- 3/9th for Sea FM, Gold FM and Hot Tomato FM commercial services
- 2/9th for Breeze FM and Rebel FM commercial services
- 1/9th for 2MW commercial service.
- 2/9th for Gold Coast RA1 community radio.

Leaving only 1/9th of the multiplex unallocated.

There is an analog radio precedent for this planning approach with the conversion of 2UUS Sydney from AM

to FM. 2UUS is licensed to the smaller Western Sydney RA1 market and successfully argued it would be at a competitive disadvantage to the overlapping Sydney RA1 services if it did not have the same opportunity to broadcast on FM in its metropolitan market overlap area. Today 2UUS broadcasts on the Sydney DAB+ multiplex, which is located well outside its licence area, and therefore has the same coverage area as Sydney RA1 DAB+ services.

The same argument and principle applies for DAB+ in the Gold Coast and Gold Coast Hinterland region, but the concept of virtual licence area blending is further strengthened in this instance by;

- Combining two co-sited DAB+ multiplexes into one shared multiplex that serves both markets promotes spectrum efficiency, more efficiently populates multiplexes, freeing scarce valuable high power Band III spectrum for neighbouring regions, the ABC/SBS Gold Coast region multiplex, or government re purposing.
- Mount Tamborine is the likely site of a Gold Coast Band III DAB+ high power multiplex and the likely site of a Gold Coast Hinterland Band III DAB+ high power multiplex. The site is already in both the RM and Gold Coast RA1 licence areas, and RM already operate FM services from the site.
- RM is the incumbent commercial licensee for the overlap area. The licence area overlap was created by the Australian Broadcasting Authority in December 2000 at the request of the Gold Coast commercial radio broadcasters seeking to extend their services into the largest duopoly population centre of the RM market.
- Any government subsidies for establishment and operation of multiplexes are substantially lowered by funding one instead of two commercial multiplexes at the same site, and improves the prospects of long term multiplex viability without government subsidy.
- Growth of Internet services and listener interaction online are already blending traditional licence area boundaries.
- DAB+ services are secondary supplemental services to the primary FM's services, whose impact and coverage will remain unchanged.
- The Convergence Review 2012 proposes abolishing of commercial radio licence areas.
- Fewer ACMA planning resources required, and faster service roll out.
- The less directional radiation pattern of a single overlap market DAB+ service will allow RM to overcome some co-channel interference issues effecting reception of the 4BRZ FM service that can not be addressed due to shortage of alternative FM channels being available.
- The less directional radiation pattern of a single overlap market DAB+ service will likely better suit a co-sited ABC/SBS DAB+ multiplex, enabling the ABC/SBS to share a common DAB+ antenna array at the site and better service the Gold Coast Hinterland region.
- Strong community of interest between the Gold Coast and Gold Coast Hinterland, with Tamborine Mountain being <20km from Southport, Gold Coast.
- Greater diversity of ownership and programming of services.

We request that RM market have staggered planning, with high power Band III DAB+ services planned at the same time as DAB+ services for overlapping neighbouring broadcasters in the CRA proposed Phase 1A

and 1B roll out stage.

### **DRM/DRM+ where there is up to two commercial licensees or where wider coverage than DAB+ practically allows is required.**

We are not yet convinced DAB+ on a shared abc/commercial/community multiplex is the best long term or most economic solution for lightly populated smaller markets with only 1 or 2 duopoly commercial radio services where a local repeater serves <7,000 people.

DRM+ has the advantage of;

- a universal open standard, with potentially lower equipment costs (i.e. open source encoders)
- Band I, II or III deployment, and part of the DRM family for AM/SW options.
- 4QAM coding option allows much wider coverage than DAB+, important in lightly populated areas where outlying multiple SFN DAB+ repeaters are not practical.
- Flexibility of economically and spectrum efficiently accommodating only one or two broadcasters, which is well suited to smaller commercial markets and sub metropolitan community use.

For example, at Weipa (population 4,184) the local ABC TV & FM town repeaters operate from the Broadcast Australia [BA] owned site in town. RM operate the only two commercial radio services co-sited with Imparja TV at the Weipa town council's water tower, where site rental and electricity are freely provided by the council.

RM does not pay to site at BA or Telstra facility for smaller FM sites in our network, whereas the ABC is typically sited at BA or Telstra sites.

If a single shared ABC/commercial DAB+ multiplex was established in Weipa, we would expect the ABC would want to co-site with their TV services at BA site, to share existing ABC VAST satellite infrastructure, and have access to backup power generation. The cost of using a BA facility, coupled with the costs of operating a Joint Venture Company [JVC], would likely render the commercial DAB+ services unviable without ongoing government subsidy. Additionally, RM would need to duplicate IS19 satellite infrastructure at the BA site.

Given the limited number of Band III channels available for DAB+, in some regions it may preclude a ABC/SBS DAB+ multiplex sited at the local BA TV/FM site, while a separate commercial DAB+ multiplex is sited on the other side of town.

A commercial DRM+ solution for Weipa could be established at the water tower, likely using Band II spectrum, which would allow for the sharing of both the existing multi tier FM antenna array and the existing IS19 satellite infrastructure. A DRM+ solution would have the lowest establishment costs, lowest operational costs, no need for a JVC, and could likely match the existing fringe FM coverage to outlying mine sites, which DAB+ could not likely practically achieve from a single site.

If the Government does follow the path of shared ABC/commercial DAB+ multiplexes in smaller centres of <7,000 people, it would likely need government to perpetually provide the commercial broadcaster cost free siting and carriage on shared DAB multiplexes.

The DRM+ standard is the best approach only if a broad range of cost effective DRM/DRM+ receivers come to market. The lack of receivers is currently a killer issue, however when DAB+ was being trailed in Australia there were also few receivers available.

The roll out of All India Radio [AIR] DRM services is now at the stage where receiver development and mass market receiver availability will become critical for DRM/DRM+ success over the next couple of years, and at that time it will become clearer if DRM+ can be considered as the best solution for these parts of our market. We suggest Government embargo all vacant Band I, II and III spectrum until that time.

This month Siano has announced the launch of the SMS2160 multi standard receiver chip that includes FM, DAB+ and DRM+ capability.

<http://www.reuters.com/article/2014/02/26/siano-idUSnBw256806a+100+BSW20140226>

If DRM/DRM+ is adopted in Australia, we believe the government should be preparing to consider early mandating of dual platform DAB+/DRM/DRM+ receiver standards, particularly important for motor vehicles uninterrupted travelling from urban centres to regional towns and also important for potential suburban community DRM+ radio services.

## VAST satellite

The VAST satellite carries government funded ABC/SBS TV Radio and Television, and a large range of commercial TV channels whose carriage on VAST is heavily government subsidised.

The obvious 'missing link' in that picture is commercial radio. It's particularly odd given the satellite spectrum costs for carrying numerous commercial radio services is a small fraction of that required for a single commercial TV channel.

The RM services and 8SAT Flow FM commercial service are carried on the cost effective IS19 platform. It serves as a distribution platform to our regional FM sites, as well as direct reception to households in our licensed market, and via separate ACMA S40 licences to households outside our main licence area.

There are no Government subsidies to provide our services via satellite to remote areas, and that's a key reason RM and 8SAT are not on the VAST platform.

We provide multiple feeds of Breeze and Rebel services on IS19, for

- North Queensland,
- Central Queensland,
- Southern Queensland
- Northern NSW

The services have the same base program template which is then tailored for each region. For example, the NSW services are presented in a different time zone and carry 2UE state news, while Queensland services carry 4BC state news.

We have frequent requests from VAST equipped households for our services. While they can freely access IS19, it requires an investment in a separate satellite dish and a more costly satellite receiver (for which there is no subsidy), so we believe very few people access our services this way.

Towns over ~500 people will remain best served by terrestrial local retransmission due to the demand for easy mobile reception of radio services. While the VAST platform is the most effective means to reach

isolated homesteads and most very small communities under ~ 100-200 people already equipped with VAST, where there are typically no existing 'self help' FM retransmission facilities.

We suggest the government consider addressing the 'missing link' in VAST and extend cost free simulcast carriage of all remote commercial radio analog and digital services (North East Australia, Central Australia, WA) on the VAST platform to allow remote households to access regionally relevant commercial radio as easily as the government subsidised commercial TV services.

### Community radio in small communities

RM is broadly a supporter of the good work done by the community sector, with the exception of a handful of rogue 'pseudo commercial' operators that use freely granted and finite public spectrum to broadcast mass appeal music formats across peak daytime time slots, that are largely indistinguishable from commercial radio. They are designed to compete head on with commercial radio for audience and local advertising (tagged advertising) revenue.

Some of these community stations used to directly own commercial stations, while some others are managed by ex RM or commercial radio staff.

Our experience in a very small towns of <1,500 where RM FM repeaters are barely viable at best, is if the ACMA licence a small local community radio station, to survive in such a small town the community station often leans towards commercial mainstream formats. It typically has no great impact on our audience share, but it is enough to fragment the market and move RM repeaters into perpetual loss, and we reluctantly close down the RM repeaters, leaving the towns without their most popular radio services.

In small towns of <5,000 where the commercial operator runs FM broadcast sites, those community stations damage advertising rate integrity and push the commercial repeaters to the edge of viability, yet do little to add to the combined diversity of commercial and community services. It deprives the market of genuine alternative community radio programming that is keeping with the spirit and government intent of being awarded a free community licence that complements rather than competes with commercial radio.

An example is 2TEN Tenterfield and 2WEB Bourke, both 'pseudo commercial' services based in small towns of ~3,000. Bourke has three licensed commercial services where the two RM services struggle for viability, and the other commercial service has not found it viable to ever commence its service. 2WEB management have openly written to the ACMA stating its intention to dominate the market and "drive the commercial operators out of town, broke".

Our concern is that if the community stations are given unconditional access to new digital spectrum, it will quickly fuel the current situation to the point where towns of this size also become unviable for RM to operate our own FM or digital repeaters.

If that were to occur, the provision of community digital radio in these towns will effectively kill off commercial radio and leave the towns worse off. It requires pre-emptive legislative safe guards be put in place prior to regional digital commencing to avoid such a disaster.

We suggest any regional AM/FM community station granted free digital spectrum should be subject to enforceable strict format conditions on all services they provide on DAB+/DRM/DRM+ spectrum, that includes prohibition on broadcasting mainstream 'mass appeal' music formats and broadcasting syndicated talk/news programming designed for the commercial stations. Additional safeguards should be put in place to prevent them palming off any remaining niche AM/FM programming onto digital.

Such conditions should not hinder the majority of genuine community radio stations that are providing a real alternative to the commercial sector, but such legislative safeguards are essential to ensure program diversity in the market, to remove advertising income driven incentive for misuse of free community spectrum, to provide investment certainty to the commercial sector, and provide a clearer distinction between commercial and community services.

### **Balance of commercial radio, community radio and commercial TV services in small towns**

Prior to DTV, most non-remote regional towns were serviced by three analog commercial TV services, typically 2 -4 commercial radio stations, and typically 1-2 community radio stations. Most remote areas were serviced by two analog commercial TV services, typically 2 commercial radio stations and typically 0-1 community radio stations.

We are concerned how that balance is changing in the digital broadcasting environment.

Most regional towns are now serviced by three commercial DTV licensees, each providing up to 5 DTV channels, for a total of ~15 digital TV services in the market. 3 of those channels are HD with surround sound, and most channels carry 'better than FM' audio bit rates of up to 256kbps (MPEG 1- Layer 2) or higher. That audio bit rate is broadly equivalent to an MPEG4-AAC service at 128kbps, which is broadly considered the minimum bit rate for near-transparent, near CD quality.

A nominal initial allocation of only 128kbps to each regional commercial radio station allows only for only one high quality near-transparent service or, more typically, two 64 kbps AAC+ channels which approach FM quality.

It appears that the commercial TV industry has achieved a much better long term outcome for digital broadcast than radio, and now provides 15 digital TV channels in a market, which may be serviced by only 4 digital commercial radio stations with sub-optimal bit rates. The number of commercial DTV services will also likely further increase significantly if there is a long term DTV migration of the prime heritage channels from MPEG2 to MPEG4. This will increasingly place regional commercial radio at a service balance disadvantage to commercial TV.

Commercial radio faces a shortage of Band III spectrum, and with DAB+/DRM+ already based on efficient MPEG4 codecs, there is little long term scope to improve coding efficiency and add additional channels.

We encourage the government to consider long term options allowing incumbent commercial broadcasters to increase the number of services and quality of digital services, with consistent outcomes across regional Australia.

To this end, we encourage government to;

- consider any options to free up further Band III spectrum for DAB+, and;
- to embargo Band I and III spectrum to potentially later add 'top up' digital capacity for incumbent commercial broadcasters to operate additional digital services via DRM+ in markets where there is no spare Band III capacity for an additional DAB+ multiplex

Additionally, for markets with only one community radio service and one or two commercial radio services, we suggest initial allocations for the community sector on shared DAB+ multiplex should be considered carefully to ensure balance of services is maintained and the commercial sector is not faced with a notable



increase in community services in small regional centres.

### **Consultation on digital repeaters**

Last year the ACMA licensed a DAB+ repeater for Brisbane services to further extend the DAB+ coverage, with no prior public consultation from the ACMA or industry. The repeater was sited at an elevated site only 8km from the RM licence area.

Currently SFN DAB+ repeaters may be deployed through a variation to the existing digital radio multiplex transmitter licence without the need for a DRCP variation or public consultation.

Currently new FM repeaters that further extend the coverage of RM services are subject to a lengthy and extensive public consultation process and require a LAP variation.

New DAB+, AM or FM repeaters, or significant coverage changes to existing DAB+, AM or FM services should all be subject to identical public consultation requirements. We ask legislation be amended to provide for that.

Kind regards

A handwritten signature in black ink, appearing to read 'Aaron Jowitt', with a stylized flourish at the end.

Aaron Jowitt  
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