Review of Australian Broadcasting Services in the Asia Pacific – Terms of Reference

Submission

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Start Digital Radio Mondiale Transmissions Now

High Frequency Digital Radio Mondiale has been transmitted by Radio New Zealand International for the last 13 years. The sound quality is so good they use their Southern Pacific wide signal to feed FM re-transmitters. The many listeners who are outside of the small coverage area FM re-transmitters can receive the signals directly using a DRM radio.

When receiving a DRM signal directly, the receiver can show an electronic program guide, a many page text service, still images, emergency warning system and the automatic switching of the receiver to the frequency in use (In HF radio the frequency is switched at sunrise and sunset to optimise coverage).

Existing Facilities

Broadcast Australia, Radio Australia/ABC’s transmitter contractor installed Continental Electronics Model 418G-DRM transmitters Shepparton and Tennant Creek 17 years ago. https://contelec.com/418g-drm100/ shows it is still a current model so it’s not old technology. These transmitters are the same power as the Radio New Zealand International transmitter.

All of these transmitters can be switched from AM to DRM and back again at will.

Using DRM mode, the electricity consumption will drop by more than 60 %, reducing running costs.

What is required to start transmissions

- Broadcast Australia’s 475 Verney Rd, Congupna Vic transmitter site has to be recommissioned.
- The above transmitter at Shepparton will need to be tested in DRM mode and the antenna system optimised.
- Add AMSS (AM signalling System) which will allow the DRM radio to automatically switch from AM and back to DRM.
- Hire from a telecom company’s digital line from the ABC’s Melbourne studios. (The satellite RA signal cannot be used because it does not contain the additional data services such as text, images, electronic program guide and emergency warning system. In addition, the sound compression systems are different and badly interact when combined.)
- At the Melbourne studios install a content server which will combine the sound signals, data sources (text, images etc) from the RA website. https://www.rfmondial.com/fileadmin/downloads/Specification_RFmondial_DRM_ContentServer.pdf. Also install xHE-AAC sound compressors so that RA can transmit an English and a foreign language program simultaneously from the single transmitter. (The stereo sound programs should be supplied to these compressors to improve the sound quality for the listeners)
- Setup the Emergency Warning System computer in the Melbourne Studios with connections to the Department of Foreign Affairs for political warnings, Bureau of Meteorology for weather warnings and to Geoscience Australia for Tsunamis and earthquakes. The warnings can be audible, visual (text and maps) and restricted to the affected area.
- The transmitter mode should alternate between DRM and AM (often called short wave) every 2 hours. This is feasible because existing programming contains lots of repetition.
This makes it worthwhile to buy a DRM radio which can automatically switch between DRM and AM giving continuous program. An announcement prior to each change to DRM should encourage listeners to buy a DRM radio for clear reception with text and images.

- Increase the programs relevant to the target audiences both in English and the native language to make listening to Radio Australia attractive and in the same or better sound quality of local broadcasts.
- Purchase for all embassies and consulates in the coverage areas professionally installed DRM radios for the public area

Lastly, the superior sound quality of DRM even in the High Frequency bands is being transmitted by Radio New Zealand International, All India Radio, China Radio International is currently testing it a high power using one of Radio Australia’s vacated frequencies! Radio Republic Indonesia is committed to DRM. Receivers are available and the prices will drop as more listeners buy DRM radios are sold to those who want a radio which sounds local no matter where you are in the coverage area which includes being mobile in vehicles and boats. This cannot be achieved using satellite, FM rebroadcast or mobile broadband.
Submission 2: Demonstration of DRM

The demonstration is of a Radio New Zealand broadcast received in Spain around 20,000 km from the transmitter. It is well out of the coverage area so reception is not constant.

Listen for the following:

- The content is aimed at the audience which is in Papua New Guinea
- The excellent DRM sound quality
- The very poor quality of the AM broadcast which is the usual “Short Wave” experience.

Please listen to the link below:

https://youtu.be/kkD01FuXOsg

Thanks to [redacted] for the link

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