Movement at the Stations: Digital Radio Update

The Federal Government is on its way to developing a policy and regulatory framework for digital radio. Carolyn Lidgerwood notes recent progress

Another step along the path towards the introduction of digital radio in Australia was made on 20 December 2004. On that date, the Minister for Communications, Information Technology and the Arts (**Minister**) announced a new consultation process for the development of a policy and regulatory framework for digital radio[1]. This article provides an overview of those developments.

Since late 2003, digital radio trials have been taking place in Sydney[2] (co-ordinated by Commercial Radio Australia) and Melbourne[3] (co-ordinated by Broadcast Australia). However, prior to the Minister's announcement it was unclear (at least from a consumer perspective) what regulatory directions were being considered by the Government in relation to digital radio.

For instance, it was not clear whether the Government would consider a similar scheme for digital radio to that for digital television conversion, which includes mandatory start dates, loans of spectrum and defined simulcast periods prior to a "surrender" of the analog spectrum.

The Minister's announcement of 20 December 2004 (**Minister's announcement**) outlined some policy developments in this area, and was accompanied by the release of two papers. The first was the report of the Digital Radio Study Group, which focussed on technical issues and implementation issues in relation to digital radio[4]. The second was an Issues Paper entitled "Introduction of Digital Radio"[5], which seeks comment on a range of digital radio policy issues.

Digital Radio Policy Principles

Included in the Issues Paper are some important "Policy Principles" that the Government has identified as guiding its consideration of digital radio issues.

In addition to some of the more obvious statements in the Policy Principles (which recognise that digital radio services can offer consumer benefits not available through analog radio, such as enhanced quality and diversity of services), there are also some significant acknowledgments.

For instance, the Policy Principles state that *"there will be a substantial period during which analog and digital radio platforms will co-exist"* and that *"digital radio may never be a complete replacement for analog radio"*. The Policy Principles also expressly recognise the interests of, and substantial investment made by, incumbent radio broadcasters and the valuable and important role they can play in the introduction of digital radio, as well as the importance of encouraging development of new digital services.

Issues for Submissions

The Issues Paper outlines a number of threshold issues that will ultimately shape the detailed regulatory framework for digital radio. These include the technological platform (or platforms) to be adopted, spectrum availability issues and the role of digital radio within the wider radio industry. As it is likely that digital terrestrial radio services would be delivered through multiplexes, the Issues Paper also addresses regulatory issues arising in this context (relating to transmission, licensing and spectrum allocation) as well as other broader regulatory issues relating to content regulation and simulcasting, and "digital audio" services.

Among the more interesting matters raised by the Issues Paper is the question of what regulatory approach should apply to the implementation of digital radio in Australia. The Issues Paper identifies three different approaches (drawing from the work of the Digital Radio Study Group). These three approaches are summarised in the Issues Paper as follows:

- Full Conversion

This approach views digital radio as a replacement technology for analog technology and would require full transition to digital radio by all incumbent broadcasters, with a view to switching off the analog service at some point in the future (linked to the take-up of digital receivers). This is similar to the approach taken in relation to digital television in Australia;

> **"there will be a substantial period during which analog and digital radio platforms will co-exist" and that "digital radio may never be a complete replacement for analog radio"**

- Market-Based

This approach would involve minimal regulation (ie relating to interference management, technology standards, spectrum allocation and some content matters eg decency), and the auctioning of spectrum (with no mandated "conversion" of existing services); and

- Managed-Introduction

This approach would be the "middle ground" between the approaches outlined above, and would be based on an assumption that digital radio would operate alongside analog services *"for a period beyond a reasonable policy development horizon"*. Priority access to digital spectrum could be provided for incumbent analog radio broadcasters (who presently operate in the broadcasting services bands), but those broadcasters would not necessarily be required to use that spectrum to rep-

licate their analog services (in contrast with the approach adopted for commercial television at the present time).

The Issues Paper notes that either the Full Conversion approach or the Managed- Introduction approach would be consistent with the Government's commitment to a five year moratorium on the issue of new digital commercial radio licences (see discussion below) and the role that incumbent operators will play in a digital environment. It also suggests that of these two approaches, the Managed- Introduction approach may be better able to address the current limits on available spectrum as it may be implemented over time. It appears from the Issues Paper that at present, the Government may prefer the Managed-Introduction approach (although this is a matter for consultation and has not yet been determined).

A selection of some other policy observations and issues arising from the Issues Paper are noted below:

- The Digital Radio Study Group has concluded that Eureka 147 (currently being used for digital radio trials) is a mature technology and that it would be a "least risk" strategy to select this technology if a decision is taken to implement terrestrial digital radio in the short term. It also noted that it is important for Australia to adopt a digital radio system that is being successfully deployed in other major markets, and that support from broadcasters is important

- International comparisons indicate that most countries that have adopted the Eureka 147 technology have a mixture of simulcast services and "unique to digital" services, and there are no international examples of a regulatory framework that either requires or prohibits full simulcasting

- The option of separating content licences from multiplex (ie carriage) licences is being considered by the Government, as well as "must carry" obligations upon multiplex licensees and access rights for non-commercial broadcasters.

Moratorium on New Digital BSB Licences

The Government has also decided that there will be a moratorium on new commercial digital radio licences (planned under the licence area planning process)

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for an initial period of five years. This is outlined in the Issues Paper and in the Minister's announcement. It is understood that this means that the ABA (or the new merged regulator, the Australian Communications and Media Authority) will not, and will not be expected to, use its powers under Part 3 of the *Broadcasting Services Act 1992* to plan new digital radio services during that period.

The Minister's announcement states that the moratorium will commence once technology and spectrum issues are resolved and a timetable for roll out of digital services has been determined. It is understood that the moratorium is intended to recognise the contribution that incumbent commercial broadcasters will make in the digital future and to provide them some stability in the early stages of the introduction of digital radio.

It is noted that this moratorium can also be viewed as being consistent with the moratorium imposed by the ABA in relation to new analog commercial radio services (in the broadcasting services bands). When the ABA completed the analog licence area planning process

in 2003, it indicated that, as a general policy, it did not propose to allocate any further analog commercial radio licences within five years of the last allocation in each licence area (under the completed licence area planning process). However, the ABA also clarified that this should not be taken to mean that after five years the ABA will begin a further round of allocations"[6]. The combination of this ABA policy, with the policy announced by the Minister in relation to new digital licences, should enable the commercial radio industry to focus on trialing digital radio in the meantime.

Next Steps

The Minister's announcement stated that "further work is required on a range of technical and other issues before the full policy framework for digital implementation can be determined, but the Government expects to be in a position to elaborate on the framework within 12 months." In that context, the Government has asked the ABA and ACA to commence a detailed investigation of spectrum issues associated with the introduction of digital radio

(in consultation with industry) and to undertake further technical work. The Issues Paper also indicates that the Government will consider the outcomes of the current and future digital radio trials.

Submissions in response to the Issues Paper close on 20 April 2005 and can be accessed from the website of the Department of Communications, Information, Technology and the Arts[5].

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consumer participant in the current digital radio trials in Sydney and thinks the sound quality of digital radio is fabulous.

(Endnotes)

[1] http://www.minister.dcita.gov.au/media/media_releases/introducing_digital_radio_to_australia

[2] In Sydney, a consortium of commercial and public radio broadcasters is conducting trials to test listener and advertiser responses to the new technology and a range of digital receivers. The trial is being coordinated by Commercial Radio Australia on behalf of commercial radio as well as the ABC and SBS, and is being broadcast on channel 9A in Band III spectrum. More details are available at http://www.commercialradio.com.au/

[3] Broadcast Australia is also conducting a digital radio trial in Melbourne on channel 9A in Band III spectrum, in conjunction with third party content providers (including the ABC and the SBS). More details are available at http://www.broadcastaustralia.com.au/

[4] The Digital Radio Study Group was comprised of Departmental and agency representatives (DoCITA, ABA, ACA). Its report is at http://www.dcita.gov.au/broad/radio/digital_radio/introduction_of_digital_radio_-_issues_paper/digital_radio_study_group

[5] http://www.dcita.gov.au/broad/radio/digital_radio/introduction_of_digital_radio_-_issues_paper

[6] http://www.aba.gov.au/abanews/news_releases/2003/60nr03.htm

Digital Rights Management in Television

Rob Nicholls focuses in on digital rights management from an Australian broadcaster's perspective

This article addresses some of the issues associated with digital rights management that face commercial and subscription television broadcasters, having regard to their particular business needs and constraints. In so doing, it looks at differences between the digital rights management issues faced by broadcasters and those concerned with the treatment of content on personal computers, including issues raised by open boxes, broadcast flags and the problem of the analog hole.

It concludes by looking at some of the practical issues raised by keeping personal video recorders and set-top boxes connected to the television rather than the internet and addressing the balance between the needs of viewers (who are important to both commercial and subscription television broadcasters) and those of the rights holders.

Digital Rights Management in Broadcasting

Digital rights management is simply a set of technologies that enables content owners to specify and control the access they want to give consumers and the conditions under which it is given. The use of the content is determined by the rights holder and in a television environment could include entitlement to:

- watch once as the content goes to air;

- time delay and watch once;

- time delay and watch many times;

- copy once to an external medium;

- copy many times to specified external media; and/or

- watch, but only on the condition that the viewer has watched some other content (such as an advertisement).

This is an indicative rather than exhaustive list.

Digital rights management includes four core elements:

- Persistent Protection - technology for protecting files via encryption and allowing access to them only after the entity desiring access has had its identity authenticated and its rights to that specific type of access verified;

- Business rights – the capability of associating business rights with content by contract;

- Access tracking – the capability of tracking access to and operations on content; and

- Rights licensing – the capability of defining specific rights to content and making them available by contract.

The term technology is used here to mean protecting files via encryption. In the television sense this should probably be technology for protecting programs via encryption. However, commercial broadcasting cannot be encrypted unless there are widely available decryption devices (which rather defeats the point of encryption). However, encryption applying to copying could be sent with a free-to-air program and this is dealt with this below in the discussion on broadcast flags.

Clearly, if there is going to be use of content then there needs to be technology to provide for business rights covering all of contracting for content, access tracking and rights licensing.

Commercial Television Broadcasting

The business of commercial television is the sale of advertising. There is an exchange of value whereby consumers watch advertisements in return for enjoyable programming. That is, programming that is designed to entertain, inform or educate in addition to advertising (which is other than this).

Although commercial broadcasters in Australia make television programming, they also buy programming. In particular, commercial broadcasters acquire drama, particularly movies, from the major studios. Popular dramas such as "Lost", "ER" and even "The Simpsons" are acquired from a small number of organisations (mainly the studios) which have their headquarters in the United States. The importance of the United States in this regard is that the expecta-