

# A DIGITAL AGENDA<sup>1</sup>

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*Jock Given*

## Abstract

This article discusses progress with the introduction of digital TV and radio in Australia and the implications for Australian public service broadcasters. It argues that digital technologies provide powerful tools for the ABC and the SBS to apply to their existing activities. However, realising this potential will be expensive. It also brings with it some threats to the independence of the organizations. The article concludes by suggesting that, even if Australia's public service broadcasters did not already exist, many of their central characteristics would be invaluable features in some organizations with a central role in the emerging media and communications landscape. These characteristics include their particular institutional structures, their size, their primary emphasis on "content," and the comprehensiveness or inclusiveness of their mandates.

## Introduction

This paper is primarily about *Australian* public service broadcasting. Thinking about its future is sometimes confused by applying to it the frames derived elsewhere, where public service broadcasters are very different. Australian public service broadcasting comprises two broadcasting institutions, the ABC and the SBS, which both offer TV and radio services and whose primary responsibilities are to offer "comprehensive" and "multicultural" services respectively. This is significantly different from even those countries with whom comparisons are most often drawn: the UK, where all free-to-air TV broadcasters have carried "public service responsibilities" (see for example Department of National Heritage 11–13) and the "niche" broadcaster Channel 4 does not provide radio services; New Zealand, where there are separate public corporations providing TV and radio services; and Canada, where there is a single, national public service broadcaster. The primary revenue source for the ABC and the SBS is budget funding, not a viewer licence fee, as with the BBC. The SBS, like TVNZ, Channel 4 and the CBC, also takes advertising on its TV service — but the ABC does not. And Australia's public service broadcasters have not, since the earliest days of ABC radio in the 1930s, dominated Australia's broadcasting landscape, as have public service broadcasters in other countries.

These points are critical in thinking about the impact of the so-called digital media revolution for public service broadcasting *in Australia*. Whatever this revolution, or transformation, is doing, it is not turning a once primarily public broadcasting landscape into a primarily commercial one — Australia's broadcasting has long been dominated by its commercial players. And it is not turning a once-dominant institution, the ABC, into a bit player — the ABC has long had to battle to define its place among other electronic media institutions which attract most of the audience most of the time. So the gloomy background of declining public media institutions and the privatisation of once-public media spaces, which informs so much discussion about public service broadcasting overseas, is not necessarily as relevant to Australia. It may be that Australia's history has prepared its public service broadcasters rather well for the media landscape they find themselves in and heading towards.

#### Digital broadcasting in Australia

There is not yet much digital broadcasting in Australia. However, there is more than is sometimes recognised. There is also a lot about Australian broadcasting that is digital.

"Digital broadcasting" means digital transmission and reception technologies. Free-to-air digital terrestrial TV services began in the major metropolitan centres on 1 January 2001. However, radio services have been delivered in a digital format by satellite to remote audiences since the mid-1980s and pay TV services delivered by satellite have been digital since their commencement in 1995 — initially the Australis/Galaxy service, now the Austar and Foxtel satellite services delivered from the Optus B3 satellite. Around 650,000 homes (45 per cent of Australia's 1.4 million pay TV subscribers) received a service transmitted in a digital format by satellite in mid-2001 (ACA 215). This is a much larger figure than the few thousand homes which have bought a digital set-top box to receive terrestrial digital TV. But not everyone who is broadcasting digitally at present is doing much that they couldn't do in analogue.

Digital technologies other than digital distribution technologies have already had a significant impact on broadcasting and will continue to do so. For example, digital recording and editing has affected the quality, cost and speed of news and documentary production in radio and TV; digital storage and playout facilities have been particularly important in cutting costs within radio operations, increasing the profitability of commercial radio stations through the 1990s and allowing public service broadcasters to, as the cliché runs, do more with less. A good example has been the establishment of the ABC's twenty-four-hour NewsRadio service. Digital technologies have made it possible to put the service together at very low cost, although analogue AM radio broadcast continues to be its primary form of distri-

bution to Australian audiences. NewsRadio, and other ABC radio networks, are also streamed over the Internet. So “broadcast” content now gets to an audience through a “non-broadcast,” but digital, means.

There has been an intense political debate over the introduction of digital terrestrial TV and a smaller, less visible debate about digital terrestrial radio — that is, over the introduction of digital *transmission* technologies into terrestrial broadcasting. The debate about TV became intense for three reasons. First, it was about technologies that would require audiences to buy new receivers or decoders to get access to the services. Second, the services would require the allocation of additional spectrum. Third, it was suggested that digital transmission would eventually replace analogue transmission, and analogue transmission would be shut down. Each of these elements had major political and industry consequences.

Digital transmission technologies offered several theoretical benefits:

- *better media* — wide screen, high definition images and CD-quality sound and more robust reception especially while mobile;
- *more media* — more services, through the greater efficiency of spectrum use achieved by digital transmission; and,
- *more useable media* — better integration of broadcast content and local storage, freeing audiences from the constraints of the broadcast schedule; better integration of broadcast content with other content transmitted using telecommunications infrastructure and stored and manipulated using a personal computer. A key element of this more useable media was the prospect of interactivity, although digital coding of one-way broadcast transmissions, of itself, doesn't enable interactivity.

In addition, the digital Internet, unlike digital or most analogue terrestrial broadcasting, makes content available to users connected anywhere in the world at the same time as local or national users. (Short-wave broadcasts from terrestrial transmitters have much wider reach than AM or FM radio and VHF or UHF TV.)

## TV

### Government decisions

The government made decisions about digital TV in 1998 and 2000. These were implemented in two pieces of legislation: the *Television Broadcasting Services (Digital Conversion) Act 1998* and the *Broadcasting Services Amendment (Digital Television and Datacasting) Act 2000*. Free-to-air commercial and public service broadcasters were provided with a new frequency to introduce a digital version of their analogue service from 1 January 2001 in metropolitan areas, and by 1 January 2004 in regional areas. They actually have to transmit two digital ver-

sions — one high definition, one standard definition — alongside their analogue version. They can provide certain enhancements, like multiple camera views and other features directly linked to the primary program. They have to provide at least twenty hours a week of HDTV programming by the beginning of 2003 — the ABC and the SBS can meet the quota with “up-converted” SDTV material — and they have to caption, for people with hearing disabilities, most prime-time programming.

The commercial broadcasters can’t provide multi-channel services (except in certain circumstances in underserved regional markets), but the ABC and the SBS, subject to certain restrictions, can. There can be no new commercial TV services licensed until the end of 2006. Analogue broadcasts are proposed to be shut down eight years after the commencement of digital broadcasts in each area — 1 January 2009 in metropolitan areas — although this time can be extended. The federal government has also agreed to provide \$260 million to fund half the cost of the digital infrastructure required by regional free-to-air TV broadcasters.

In addition, two frequencies in each of eight major markets have been set aside for something called “datacasting.” Auctions for these frequencies were cancelled earlier this year, with the Minister citing “a lack of competitive tension,” which he thought would compromise the interests of the federal budget and the communities receiving datacasting services. Allocating licences at prices substantially below their longer-term value was “unlikely to be in the public interest” and, over the proposed duration of the licences, “there may be opportunities to enhance the potential use of the spectrum — such as the ability to use a datacasting transmitter licence for other purposes from 1 January 2007 — or opportunities due to technological developments” (Alston “Datacasting licence auction cancelled”). Aspirant datacasters complained about the restrictive rules, but it’s likely the more sceptical attitude to new media services since the dotcom crash and declining advertising also played their parts. Some of this spectrum has been made available to trial the delivery of high speed Internet access services in regional areas (Alston “Wireless Internet trials for Regional Australia”).

For the ABC and the SBS, this deal treated them like the commercial networks to the extent that they were allocated additional spectrum without charge, but unlike them to the extent that they were given greater flexibility about multi-channelling and less onerous HDTV requirements.

There are a number of differences between the approach to digital terrestrial television in Australia and the approaches overseas. Australia is giving a greater role for HDTV than in other countries, but smaller roles for multi-channelling and subscription services than other countries. Like most countries, Australia is giving incumbent TV networks a central role in pioneering the use of digital terrestrial transmission, but Australia is also giving an unusually clear role for opera-

tors other than incumbent television broadcasters, through allocating substantial spectrum for datacasting. However, the opportunities for those other operators do not currently look very attractive commercially. Of course, all this might change.

### Industry action

The free-to-air TV industry commenced digital transmission in metropolitan areas on 1 January 2001 as required. Consumers who have bought a digital set-top decoder to get access to the new services will have noticed some changes, but no revolution:

- *Widescreen*: The commercial networks are producing and transmitting all or almost all their local programs in 16:9 widescreen format (Seven is lagging 9 and 10) and are transmitting what foreign programs are available in that format. AFL football on Nine and Ten will broadcast in wide-screen. The ABC is screening in 16:9 its local dramas, some other local programs including *Rage*, and what foreign programs are available. The SBS is screening its movies in widescreen but most local programming is still in 4:3 (Digital Broadcasting Australia);
- *High Definition*: There is very little HD programming being produced or transmitted. Ten is doing most, including *Rove*, *Becker*, *NYPD Blue*, the second series of *The Secret Life of Us* and some movies (Digital Broadcasting Australia). The telemovie legal series pilot *Life* is being shot in HDCam. Nine is screening *Stingers* (in Sydney, Melbourne and Brisbane) and *McLeod's Daughters* in HD — the latter is shot on 16mm film and finished on HD — and plans to shoot *Who Wants to be a Millionaire* and *This is Your Life* and perhaps a weekly rugby league match in HD also. Ten and Nine are requiring all local dramas, and documentaries for Ten, to be finished on HD (Williams; Greenwood). Reflecting their greater interest in HD, these two networks have chosen the best quality 1080i HDTV format for their broadcasts. Seven, whose HD plans are less developed, has chosen the 576p format, which uses much less of the total data capacity of their digital transmission. This leaves more for other kinds of services. SBS has also chosen 576p. An HDTV set for the Australian market was launched in August — a Sony set and DGTEC HD decoder, retailing around the country for about \$8000 (“Ten and Sony launch first HDTV sets”);
- *Enhanced services*: A number of events have been screened with multi-view capability and other enhancements: amongst them, the Australian Open Tennis on Seven, cricket and the federal election on Nine, the Melbourne Cup, Bathurst 1000 and golf on Ten. Ten’s golf coverage included an additional channel with continuously updated leaderboard information (Digital Broadcasting Australia);
- *Multi-channel services*: The ABC launched two new services which time-share part of its multi-channel capacity. ABC for Kids runs 6

am–6 pm and the youth-oriented Fly runs 6 pm–6 am. The SBS is working on an expanded version of the World Watch news program which draws on news and information programs in many languages from around the world. The ABC's channels have a considerable amount of wide-screen programming;

- *Electronic Program Guide*: There is not yet a consolidated EPG for all free-to-air networks. Some networks are providing a "What's on now/What's on next" facility, with additional descriptive information for some programs. Nine has launched a more sophisticated EPG;
- *Interactivity*: The set-top boxes available to receive free-to-air digital services do not yet have any interactive capability. Interactive TV is being led in Australia by Austar, which launched, in early October to 300,000 satellite customers, a service offering T-mail (email on the TV), shopping, an EPG, games, interactive advertising and channel enhancements on The Weather Channel and the music service Channel V (Austar 2001). Optus Television, which delivers its pay TV service by cable in Sydney, Melbourne and Brisbane, is conducting an interactive trial with about 300 users, which it plans to extend in early December.
- *Datacasting*: The Nine and Ten networks have both been granted datacasting licences which allow them to use excess transmission capacity for this purpose (ABA "New digital broadcasting licences for Nine Network," "New digital broadcasting licences for Ten Network").

Expanded free-to-air interactivity — one of the main promises of digital TV — awaits decisions about the Application Programming Interface (API) or middleware and hard-disk storage capacity to be installed in a new generation of set-top boxes and the appropriate technology for a back-channel, to carry users' commands to the service provider. It is unlikely that the required equipment will be in the marketplace before the end of 2002, two years after the introduction of digital terrestrial services. The free-to-air networks have indicated their strong preference for the Multimedia Home Platform (DVB-MHP) API adopted for services launched in Finland in August (FACTS 2001; Bernstone "FACTS", "Nine Network" 29–30). Austar and Foxtel satellite services use the Open TV API and Optus's ITV trial is using the Liberate software. So the free-to-air broadcasters haven't locked off a decision on the API or back-channel, and there are significant issues to consider about compatibility with the growing base of set-top boxes for digital satellite pay TV already in place ("IBC 2001 in focus"). Internationally, Australia is awkwardly positioned between Europe, whose DVB-T transmission standard Australia has adopted, and the US, whose emphasis on HDTV Australia has adopted in spades.

Expanded pay TV interactivity awaits decisions by Optus TV flowing from its trial, and from Telstra/Foxtel, particularly about the introduction of digital services on the cable network which services

around two-thirds of Foxtel's 775,000 customers (ACA; PBL). Decisions to "digitise" cable networks are in turn affected by the possible "declaration" of these facilities by the competition regulator, the Australian Competition and Consumer Commission (ACCC). The ACCC indicated early in 2001 that, "It is clearly in the interests of both suppliers of retail services and customers for [digital] broadband networks to be open rather than closed." Telstra argued that "in the absence of any certainty about either the scope or duration of [any such] declaration, or the pricing principles to be applied, there is little incentive to go down [the] path" of investing to "digitise" it in the first place (Shiff).

A critical distinction between many overseas markets and Australia, and between the free-to-air and pay TV markets in Australia, is that free-to-air TV in Australia is a "horizontal market" — the people who provide the services, the broadcasters, don't provide the equipment used to receive them and they don't have a direct customer relationship with their audiences. This is not the case in the vertical market of pay TV, where Foxtel, Optus and Austar all own the set-top boxes used to decode their services, and rent them to their customers as part of their monthly subscriptions. It is much more difficult to impose a particular technology in a horizontal market than it is in a vertical market. Free-to-air broadcasters can't simply go out and order a large number of a certain kind of boxes from a manufacturer, who will be happy for the big order, and guarantee that they will get into people's homes. Rather, they need to try to convince manufacturers to build equipment that makes use of it and sell it to consumers.

Another way the TV industry has gone digital is through the introduction of limited broadband, video-on-demand services. The ABC's web-site gives access to some short bits of video — some news, some video clips, some short films, some children's programs — and in Canberra, the TransACT digital cable network is offering a selection of movies-on-demand in the few suburbs where it's available.

### **Audience response**

The audience response to digital TV, to date, seems to reflect the different horizontal and vertical structures of the free-to-air and pay TV markets. In the vertical pay TV market, Austar has put boxes and a back channel capable of exploiting it into 300,000 of the 430,000 homes subscribing to its service. But in the horizontal free-to-air TV market, less than 10,000 boxes have been sold to consumers to receive digital free-to-air television. Optus TV claims strong interest, through its small ITV trial, in games and its TV matchmaking service. The latter helps users to find Mr or Ms Right through a member database called TVMates (Optus). Another digital technology whose take-up is significant is DVD — in 2000, 6 per cent of Australian homes had one, from a standing start in 1998. That means that about the same number

of households acquired a DVD player in the previous two years as subscribed to pay TV (ABS).

### **Election commitments**

The Coalition made a number of commitments relevant to digital TV (Liberal National Coalition). It promised a review of the existing datacasting rules, to commence in early 2002, "to ensure that the regime provides maximum opportunity to develop new services that do not breach the moratorium on additional free-to-air television licences." This review commenced in December (Alston "Datacasting Services Review"). It also said it would "consider legislative amendments" allowing broadcasters to achieve their 20 hours/week HDTV requirement on an annualised basis, including advertising time, and that it "will facilitate the smooth transition of community television to the digital environment," including making spectrum available free of charge. Finally, for digital cable TV, it will "consider legislating to provide upfront certainty in relation to access arrangements for those considering investing in the digital upgrade of HFC subscription television cable networks."

The Coalition also committed itself, again, to "reforming Australia's anachronistic media ownership laws": abolishing broadcasting and newspaper-specific foreign ownership laws and allowing exemptions from cross-media ownership laws where media organisations give two undertakings, first to maintain separate and distinct editorial processes and, second, to retain existing levels of local news and current affairs on TV and radio. Without reform of these laws, the Coalition thinks the current laws "will consign the Australian media sector to an outdated structure, little or no capacity for new players, an absence of further competition, and an inability to respond to a rapidly evolving and converging international media environment." Any changes to the digital TV framework may get caught up in debates about changes to media ownership laws.

### Radio

#### **Government decisions**

The government announced decisions about digital terrestrial radio at the same time it announced its first round of decisions about digital terrestrial TV, in March 1998 (Alston "Digital Radio Services"). It said it would "put in place planning processes which will allow the start up of digital radio services in Australia in 2001." It was "likely" both that digital radio would be introduced using the European Eureka 147 transmission system and that L-Band spectrum would be allocated for it, although there would be "consideration of VHF spectrum in

regional areas." Existing national, commercial and community broadcasters, though not narrowcasters, would be able to convert to digital. However, they would not get access to a frequency of their own, like their television colleagues. They would be given the opportunity to share digital transmission multiplexes, each of which would carry five CD-quality stereo audio services. Transmission capacity of 256 kbits/sec would be available for each service, from the total of around 1.5 Mb/sec available from each multiplex. There was no reference to any payment for spectrum to be allocated for digital broadcasting.

Broadcasters would be required to simulcast on digital and analogue for a period "to ensure that listeners are not disadvantaged." Beyond that, a Planning and Steering Committee had been established, chaired by the Minister's department "to develop a comprehensive planning framework." The government was still open to ideas: "Other planning and transmission standards will therefore not be discounted in the planning process." The government expected the prices of digital radio receivers "to fall to the existing prices for AM and FM radios once there is a substantial market."

The Productivity Commission, early in 2000, opposed the government's model. "Digital radio," it argued, "should be allowed to augment, rather than replace, existing radio" (Productivity Commission 18). In May 2001 a senior official in Alston's department told an ABA conference the industry needed to present to government a "*consolidated* [her emphasis] view about how it thinks digital radio should be implemented" (Holthuysen). The Australian government "does not want to impose a technology or set of standards for digital radio on the industry," Holthuysen wrote, but did want a number of principles to underpin any process for introducing digital services, namely to:

- serve the public interest;
- minimise disruption to the existing radio audience;
- promote increased diversity of service and service quality, including for services in regional areas (recommendations in this area were made by a Parliamentary inquiry completed in September 2001 (*Local Voices*));
- ensure that receivers are affordable;
- provide opportunities for new entrants;
- address issues of interoperability, compatibility and flexibility; and
- recognise that spectrum is a valuable public resource and allocation of spectrum must advance the public good, including both the delivery of new and better services and appropriate returns to the community through the Government, and that it will not just be given away to commercial interests.

### **Industry action**

Digital radio policy in Australia stalled after the government's initial decisions in March 1998 for several reasons. The radio industry was

sceptical about the immediate commercial prospects for a new kind of radio which had attracted just 35,000 receiver sales in the UK by mid-2001, six years after its introduction (Mack, in interview). The new transmission technologies developed alongside Eureka 147 — Digital Radio Mondial, WorldSpace, iBiquity — complicated the technical and policy possibilities and existing radio operators were unable to agree on who should get access to spectrum or how much they should get. Australia's radio industry generally continued to seek a "conversion" model for digital radio, like that implemented for digital television, whereby existing broadcasters would be allocated capacity on a digital multiplex to simulcast their existing service and introduce new features, without additional spectrum charges. However, the value to consumers which might be added by this conversion was less clear in a medium where existing FM transmission technology already offered fairly high quality, and the main enhancement promised, a screen, seemed curiously un-radio-like. Asking a government heavily criticised for allegedly giving away digital TV spectrum to repeat the gesture for digital radio was a brave call. Some technical trials were held and now the commercial industry is interested in broader trials with real audiences.

Amidst all the politics, some got on with the business of delivering audio in a digital format, through streaming over the Internet and "audio-on-demand." The ABC currently streams five radio stations: Triple J, NewsRadio, English and foreign language versions of Radio Australia and a composite "local" station. Radio National and ABC Classic FM are not currently streamed because the ABC doesn't hold the necessary rights to the third party content used extensively on these networks (for example, performances, books readings, opera). The Radio Australia streams have provided a way for Australians to hear, for the first time, services which are only broadcast to audiences overseas. A further five streaming audio channels are available for purposes including special events (such as the World Cup soccer) and audio-on-demand. The daily current affairs programs *AM*, *PM* and *The World Today* and many Radio National talks programs are available as audio-on-demand. This allows Internet users to listen to the program, or in some cases to individual stories within a program, at any time after broadcast. Much of this content is also available after broadcast through tape sales or through transcripts (which are accessible on the Web free or can be purchased in hard-copy). The ABC's licences with streaming and on-demand software providers Real Networks and Microsoft allow 1200 and 3400 simultaneous users respectively (Thomas in interview).

### **Audience response**

In the areas where digital radio has been introduced, especially the UK and Canada, audience response has been very slow to date. The ABC's

experience with audio streaming and audio-on-demand to date show that broadcast radio continues to be by far the dominant form of access to audio content. Live streaming of broadcast radio is probably the next most popular form, although well behind broadcast, with Triple J and Radio Australia consistently the most popular streamed networks. The use of audio-on-demand and transcripts is smaller again, with the mix varying for different programs. For example, audio stories are more popular than transcripts for *AM*, *PM* and *The World Today*, but transcripts are more popular than audio stories for the weekly *The Science Show* and *Background Briefing*. For a particular program in any given week, the most popular edition of the program accessed on demand is the most recent one. Table 1 sets out some broad comparisons, which should be treated with considerable caution because of the different concepts and time periods measured. In particular, the broadcast audience figures measure the number of discrete users, whereas the audio-on-demand and transcript figures measure the number of discrete accesses or uses (some of which may be by the same users) (Thomas in interview).

**Table 1 Broadcast audiences and Internet users for ABC current affairs radio programs**

| Audience/Users                      | AM      | PM      | The World Today |
|-------------------------------------|---------|---------|-----------------|
| <i>Broadcast</i>                    |         |         |                 |
| Weekly reach (1)                    | 976,000 | 655,000 | 650,000         |
| <i>Audio-on-demand (2)</i>          |         |         |                 |
| Weekly accesses to program web page | 45,000  | 38,000  | 32,000          |
| Of which audio-on-demand accesses   | 16,000  | 15,000  | 11,500          |
| Accesses to most popular audio file | 968     | 339     | 997             |
| <i>Transcripts (2)</i>              |         |         |                 |
| Accesses to most popular transcript | 246     | 233     | 106             |

- (1) AC Nielsen Survey 7 2001: Number of people listening to the program at least once during the week. Combined five city (Brisbane, Sydney, Melbourne, Adelaide, Perth) reach for 7 am Radio National and 8 am Local Radio editions of AM, 5 pm Radio National and 6 pm Local Radio editions of PM and Radio National and Local Radio audiences for The World Today. The total national reach is higher than these figures.

- (2) Week ending 24 June 2001

Source: ABC New Media Research

## Election commitments

The Coalition says it “will continue working with the commercial radio industry in developing an appropriate framework for the introduction of digital radio in Australia” and will facilitate further trials by making temporary spectrum available free of charge (Liberal National Coalition).

### Summary

In summary, Australia's public service broadcasters have been treated in a very similar way to commercial broadcasters in government decisions about the introduction of digital terrestrial broadcasting. Both have so far done less than the Nine and Ten networks in exploiting the features of the new transmission system in the digital versions of their main analogue TV services. The main innovation has been the ABC's two new digital-only channels, which represent its first successful foray into multi-channel TV. Like other Australian radio broadcasters, neither the ABC nor the SBS have moved beyond trials of digital radio. However, both have made substantial commitments to websites which offer interactive, digital complements and supplements to their broadcast radio and TV programs and related activities.

### The Good News and the Bad News

To see how the technical possibilities and government decisions about digital help or hinder the ABC and the SBS, it is necessary to look at their current statutory charters, which are summarised below.

The ABC's charter (ABC Act, section 6) requires it:

- to provide services within Australia which are innovative and comprehensive, including educational programs and programs which contribute to a sense of national identity;
- to provide services outside Australia which inform expatriates and encourage awareness of Australia and an international understanding of Australian attitudes on world affairs; and
- to promote the musical, dramatic and other performing arts.

A separate obligation, not formally in the Charter, requires the ABC to develop and maintain an independent news and information service (ABC Act, section 27).

The SBS's charter (SBS Act, section 6) requires it to provide multi-lingual and multicultural radio and TV services that inform, educate and entertain all Australians and, in doing so, reflect Australia's multicultural society. More specific obligations require it to increase awareness, understanding and acceptance of cultural diversity; to contribute to the retention and continuing development of language and other cultural skills; and to contribute to the overall diversity of Australian TV and radio, presenting many points of view and using innovative forms of expression.

### The good news

For public service broadcasters, the good news comes from the capacity of digital media to allow more media and more useable media and from the capacity of the Internet to reach international audiences as easily as local ones. Importantly, some of the features of digital

technology which are so helpful to public service broadcasters may actually be quite threatening to commercial broadcasters.

### **More media**

Organisations like the ABC, searching for comprehensiveness and audience reach, and the SBS, required to be multilingual and to present many points of view, get the technical capacity to provide a larger number of program or content streams, in different formats (sound, text, images or any combination), at a range of different production values, and to free audiences from the constraints of the broadcast schedule. Both organisations produce or have rights to use a lot of content, not all of which is able to be made accessible to all the people who might be interested in it: twenty-four-hour news from many sources in many languages, current affairs, specialist talks, arts, science, sport, music, comedy, education, children's programs and everything else. In the case of the ABC, there are correspondents all over the world, local stations all over the country and specialists who can summarise or provide detail. This has also been happening for a long time, so there is a substantial archive of material available for redistribution. It is as if these organisations have been waiting for an insatiable medium like the Web. The greater output of content need not be in "broadcast quality" — indeed, this is very difficult without expanded resources. Rather, the Web and the expanded capacity of digital broadcasting allow unedited, less edited or supplementary material to get to audiences: interviews, speeches, live events, pre-broadcast versions of programs and supplementary material, such as journalists' and documentary-makers' sources and information-gathering methods for particular stories.

It may seem self-evident that media organisations would like more space to do what they do. But this is not necessarily the case for wholly advertiser-supported services like commercial TV and radio stations. Producing multiple program streams to service different audience niches is a very different business to trying to get as much of the audience as possible in every time-slot — even if getting as big an audience as possible, in an increasingly fragmented media environment, has increasingly required a focus on particular parts of the available audience.

### **More useable media**

Since the job of public service broadcasters, at least for a "comprehensive" broadcaster like the ABC, is to capture everyone's attention some of the time, the ability to allow asynchronous media consumption — to have audiences watch or listen when they want to rather than when programs are "on" in the broadcast schedule — is a great advantage. Public service broadcasters try to produce and acquire material that is

worth not just broadcasting, but archiving and making accessible on-demand, so audiences and users can come back to it. But for commercial broadcasters, whose job is to maximise audience in every time-slot, asynchronous media consumption may simply cannibalise potential audience from another time slot.

For public service broadcasters, with charter obligations about education, the learning possibilities of interactivity and the integration of different kinds of content (still and moving images, text, sound — the very stuff of classroom presentations and activities) seem immediately attractive. But for commercial broadcasters, interactivity in general is a mixed blessing — an interactive advertisement might be so compelling it takes the audience away from other advertisements, or a program might be so compelling it keeps the audience away from the ads. At the very least, it requires some serious rethinking about the nature of programming and advertising.

The technical capacity to do more, with uncertain new technologies, is also helpful to organisations like the ABC and the SBS which are required to be *innovative* (see Burns and Martin in this issue). The capacity to integrate TV and radio activities in ways which are more constrained (though not greatly) for commercial broadcasters because of cross-media rules is also an advantage to Australia's public service broadcasters.

### **International reach**

For the ABC, with its special charter responsibilities to reach Australians and non-Australians overseas, the value of the Internet's potential reach is obvious. But it is not obvious for all broadcasters. Commercial FM radio broadcaster Austereo stopped streaming its FM radio services in 2001. It has a different corporate purpose to the ABC or the SBS — to make a financial profit for its shareholders. It earns its revenue by selling advertising time, and the listener surveys on which advertising rates are based take no account of the online listeners to Sydney's Triple M outside the Sydney market. It may not cost much to stream the radio stations, but it does cost something. Crucially, unlike broadcast technology, it costs more as more listeners tune in because each listener has to be serviced by a separate stream. (The stream, which sounds continuous to the listener, is constituted by a continuing series of separate audio files, each of which has to be sent to each simultaneous listener. By contrast, broadcast transmission is a single transmission of information available to any number of receivers within the coverage area.) If streaming is not generating revenue, it simply doesn't make sense to do it.

## **The bad news**

The bad news for public service broadcasters comes with some elements of the cost of digital media and the need for public service broadcasters to co-operate with other organisations in ways which may compromise their independence.

### **Cost**

The transmission infrastructure for digital broadcasting is expensive; running analogue and digital transmissions simultaneously is expensive; new formats, like interactive TV applications, are expensive; and producing content in a range of different formats — for example, broadcast radio, streamed audio, audio-on-demand, text transcripts, edited text highlights for the website, material for delivery to mobile phones — is expensive. Digital production, editing, authoring and re-formatting applications can reduce the cost of each of these steps but the combined effect is to make it very costly to deliver on the promises of digital technology. This is especially the case with the constant changes in far-from-future-proof hardware and software. Realising the potential of digital technologies requires governments to invest substantial sums in their public service broadcasters. Both the ABC and the SBS are receiving specific appropriations for digital transmission, distribution and equipment. In addition, the SBS received funding for an earlier phase of digital equipment upgrades (DCITA; Alston “ABC receives \$71.2 million”).

### **Independence**

A number of features of emerging digital technologies and the business models for deploying them require public service broadcasters to co-operate with other organisations in ways which may compromise the independence which has been so important in justifying their existence. The need for common technical standards and a simple, persuasive message for sceptical consumers about new digital distribution systems, especially digital terrestrial television, requires the public service broadcasters to co-ordinate their activities with those of commercial TV and to some extent pay TV networks. While some level of co-operation amongst broadcasters is often required when new technologies are introduced, with digital transmission systems and their associated administrative and marketing support, the range of issues on which strategic negotiation is required is particularly wide.

A single electronic program guide — the viewer’s on-screen gateway to digital TV — is another crucial area in which public service broadcasters need to co-operate with commercial broadcasters. Public service broadcasters also need to secure access for their program and

content services to distribution systems, like satellite and cable and perhaps digital radio, which they do not control, and which are operated by commercial organisations who also offer content or program services which compete with ABC and SBS services. (The public service broadcasters' terrestrial infrastructure was never actually controlled by the broadcasters, but was provided by the National Transmission Agency and its predecessors. This transmitter network was sold by the government to NTL in 1999 and then resold to Macquarie Bank in February 2002: Alston "National Transmission Network sale"; Marriner & Hughes) The ABC's early experience with pay TV, where it failed to secure carriage of its proposed channels on any of the pay platforms, provides one example of the kind of tensions which can emerge in this situation (Westfield 319–21). Another example was the aborted arrangement to provide ABC content to Telstra's portal (Senate *Inquiry into ABC On-Line*). The public service broadcasters need to have a presence in new delivery systems, but the terms on which they negotiate their place are crucial to the unique contribution they can make to it.

The increasing commercialisation of the Internet, where free-to-air media services are converging with retail activities through electronic commerce, is another source of tension for public service broadcasters. This kind of tension is not new — the ABC has confronted it particularly with children's TV programming, where a public service broadcaster needs to ensure that the merchandising opportunities of shows like *Bananas in Pyjamas* do not shape the commissioning and creative construction of them (see Dempster for a discussion of related kinds of tensions in information programming). The delivery of educational content using the online distribution systems which are increasingly used by educational institutions to deliver courses, forces public service broadcasters to rethink their role in the economy of education and their relationship to educational institutions.

All these new complexities affecting the independence of public service broadcasters from commercial influence have to be added to their enduring battle to maintain independence from the governments which fund them. The negotiations over additional funding for digital technology upgrades have provided important new fields for this battle. The Australian government agreed to provide an "additional" allocation of \$17.8 million to the ABC over four years from 2001/02 (above the base figure set as a result of a 10 per cent budget cut for the three years from 1997/98, and maintained in real terms for the three years from 2000/01). Careful not to publicly encroach on the ABC's programming independence, the government described the purpose of this "additional" contribution in the following way: "The ABC Board will need to consider how best to allocate this funding," but "It is anticipated ... that the largest component ... will be applied to regional and rural programs" (DCITA 149). As Peter Thompson notes in his article in this issue, in New Zealand the additional resources

required for TVNZ to introduce digital transmission were seen as potentially compromising its capacity to re-energise its “public service” commitments. In the UK, the BBC has required specific government approval for new services introduced with its digital capacity, funded as part of a targeted increase in the licence fee (DCMS). The government rejected its proposed BBC3 general entertainment channel aimed at 16–34 year olds, which the Department of Culture, Media and Sport said were sufficiently catered for by existing channels such as E4 and Sky One (“*BBC gets partial go ahead*”).

### **Should they do it?**

Digital technologies seem a boon for Australia’s existing public service broadcasters, if only they can find the money to exploit them and retain their independence in doing so. But if those public service broadcasters didn’t already exist, one might ask whether it would be appropriate to invent something like them to take on the job. That is, in thinking about the right institutional mix to develop a still young electronic communications medium — trying to think like the politicians shaping radio in the 1920s and early 1930s, or television in the 1940s and 50s — would it be possible to make a good case for a publicly-funded Australian Digital Media Corporation, or a Special Internet Service Corporation, funded primarily by taxpayer dollars?

There would be at least four good reasons for establishing organisations of this kind. First, public funding and public institutions do not guarantee better media output, but they greatly increase the likelihood of output different from that produced by profit-making organisations funded by advertising and subscription. At a time of considerable uncertainty about the future shape of media content, services and technology, it is wise to have a wide range of different types of institutions, drawing on different sources of funds, attempting to connect with audiences in different ways.

Second, institutions — with people, histories, cultures and established administrative infrastructure — may be more flexible and responsive to the possibilities of new technology, at least in the short term, than legislative measures or special government programs. Laws and new central government policies have an important role to play, but they may be slower to take up new challenges than service-providing institutions, because of the timing of government budget and legislative cycles. For example, both the ABC and the SBS were able to commence their online activities, though not develop them to the extent they would have liked, within their existing budgets and charters.

Third, Australia’s public service broadcasters are relatively large organisations with a degree of power and a capacity for survival. Despite the early belief that digital technology would see small organisations prosper amidst the lumbering behemoths of old media, the

media business is consolidating almost daily. The companies which appear best-placed to capitalise on new opportunities appear to be those which already have strong, distinctive places. And Australia's public service broadcasters are not so large and dominant that their role in new media raises competition issues, as has been the case in the UK and NZ.

Fourth, the ABC and the SBS are "content" organisations. They produce and acquire content and they understand a lot about the editorial and commissioning processes required to do it well. It's not a characteristic shared by most of the telecommunications, equipment and Internet access companies who aspire to provide media services in competition with public service broadcasters and others.

Finally, there seems likely to be a place, in a media landscape which is simultaneously fragmenting and consolidating, for some organisations whose job it is to service some idea of "the whole." The ABC does this as a "comprehensive" broadcaster, the SBS as an "inclusive" broadcaster with a specific focus. The digital market-place may develop cost-efficient suppliers for every media and communications niche, but its dimensions and implications are still far from clear. It seems wise to support the safeguard of one or two organisations whose job it is to ask two questions constantly — "Whose media and communications needs are not being met?" and "Whose interests are not being served?" — and which have an institutional obligation to try to do something about the answers without first needing to ask how the space can, in the jargon of the times, be "monetised."

The opportunities and challenges of digital technology will require continuing institutional adaptation, but public service broadcasters are no strangers to that.

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