Digital Dilemma

Dana Stewart, in this paper which received an honourable mention in the 2005 CAMLA Essay Prize, analyses the uptake of Digital Television in Australia.

Introduction

The legislative framework developed to manage the switch to digital television in Australia has not yet enabled the realisation of this technological advancement's potential and importance. A number of aspects of the framework have been criticised, and the slow uptake of digital television by consumers to date reinforcesthese arguments. It is questionable as to whether the policy and legislative decisions taken with a view to implementing this significant development have ensured Australia is 'on track to a new era in broadcasting'.

The benefits of digital technology

The above statement, made by the Productivity Commission in its Broadcasting Inquiry Report in 2000, is a bold claim as to the significance of the switch to digital terrestrial television broadcasting (**DTTB**). However, there would be few who would disagree.

> "*Digital television is superior to analog transmission. The improved technical quality of the digital television signal allows for the broadcast of clearer, sharper pictures without the interference and ghosting to which analog transmission is prone.*"[1]

Because digital signals are compressed, the same amount of spectrum bandwidth can be used to deliver multiple standard definition (**SDTV**) programs simultaneously, or a high definition television (**HDTV**) program.[2] Wide screen, cinema-quality programs with surround sound, and diversity of product (such as an increased number of programs streams, interactive services and enhanced programming) are all features which can potentially be enjoyed by consumers when they purchase a new digital television or set top box.[3] The technology allows the broadcasting industry to produce programs more efficiently, and potentially derive new revenue streams resulting from additional services being provided with residual spectrum capacity, and a convergence of television and other communications services could be possible because of the ability to access and transmit digital data.[4] Also, the more efficient use of the radiofrequency spectrum could allow the government to increase revenue raised from its allocation.[5]

Initiating the adoption of digital television in Australia

The Government announced on 24 March 1998 that the new digital technology should be used primarily to enhance the standard of existing commercial and national broadcasting services.[6] The legislative basis for the scheme was provided in the *Television Broadcasting Services (Digital Conversion) Act 1998* (Cth) (**Act**). This Act contained amendments to the *Broadcasting Services Act 1992* (Cth) (**BSA**) (which sets out the ownership and programming conditions for broadcasting licences) and the *Radiocommunications Act 1992* (Cth) (which regulates spectrum usage and licensing of transmitting apparatus). A new Schedule 4 was inserted into the BSA to establish a basic framework for the introduction of DTTB,

> "*including the allocation of spectrum, dates for commencement of digital broadcasting, periods for simulcasting and so forth*".[7]

Subsequent amendments to this Schedule were made by the *Broadcasting Services Amendment (Digital Television and Datacasting) Act 2000* (Cth) following a number of reviews concerning certain aspects of the scheme.

In the Explanatory Memorandum to the *Television Broadcasting Services (Digital Conversion) Bill* 1998, the Government acknowledged:

> "*The introduction of DTTB poses regulatory challenges for Government given the dynamic nature of DTTB developments internationally and the need to allocate broadcasting service bands spectrum for its introduction in Australia. It is important for the Government to put in place a framework that provides clear ground rules to all participants and ensures that the community benefits from the opportunities presented by the development and application of this technology.*"[8]

Key issues considered in this initiative included: how DTTB should be used, how much control should be left with the market and what must be regulated by government.[9]

The stated objectives for the introduction of DTTB were:

- to improve the technical quality of the Australian television system in line with international technology advances;
- to allow for a smooth transition from analog to digital television broadcasting and transmission with minimal disruption to consumers;
- to maximise the use of existing transmission infrastructure;
- to introduce DTTB services within a timetable to ensure that Australia does not fall significantly behind the rest of the world;
- to increase viewer choice and diversity of product;
- to seek competitive neutrality between the commercial and national television broadcasting sector, the pay TV sector and other communications sectors;
- to provide an appropriate return to the Commonwealth for the use of television spectrum;
- to achieve spectrum efficiency gains to enable new services to be introduced;
- to encourage the use of television spectrum to provide a range of new information/data services;
- to take into account the rapidly changing commercial and technological environment;
- to protect the interests of consumers in regional areas; and
- to retain free-to-air analog television services for a period of time to ensure that the interests of consumers are protected.[10]

The legislative framework for digital broadcasting

The new Schedule 4 inserted in the BSA contains a simplified outline of the legislative framework for DTTB. It states:

- *"The ACMA [Australian Communications and Media Authority] is to formulate schemes for the conversion, over time, of the transmission of television broadcasting services from analog mode to digital mode.*
- *There is to be a simulcast period throughout which broadcasters are to transmit their television programs in both analog mode and SDTV digital mode.*
- *At the end of the simulcast period, analog transmissions are to cease.*
- *Broadcasters must meet the standards relating to quotas for the transmission of program in HDTV digital mode.*
- *Broadcasters must meet the standards relating to captioning of digital of television programs for the deaf and hearing impaired.*
- *Broadcasters will be allowed to use spare transmission capacity on digital transmission channels to provide datacasting services.*
- *Owners and operators of broadcasting transmission towers must give digital broadcasters and datacasters access to the towers for the purposes of installing or maintaining digital transmitters.*
- *There are to be reviews before specified dates of certain elements of the digital television regulatory regime."*[11]

The simulcast period was legislated to commence on 1 January 2001 and last for 8 years, or such longer period as prescribed.[12] It was designed to minimise disruption to viewers and allow time for the price of digital television sets to come down.[13] In addition to the analog and SDTV simulcast, the commercial and national broadcasters must meet the HDTV quota of 1040 hours per calendar year.[14] The commercial broadcasters must meet this quota with material that is originally produced in high definition digital video format,[15] but since the national broadcasters source much programming from Europe (where there is little HDTV production) they are permitted to meet the quota by 'upconverting' their SDTV quality programming. With some exceptions, the HDTV version of the television broadcasting service must not differ from the SDTV or analog version.[16]

To enable this 'triplecast', these broadcasters were allocated 7 MHz of additional spectrum and issued transmitter licences authorising the transmissions in digital mode. These were issued for free as a concession to the high costs that would have to be met in relation to the digital conversion.[17] When the simulcast period ceases and analog transmission is switched off, each broadcaster must transmit in digital mode using the channels allocated by ACMA under the scheme or a digital channel plan, and return the additional loaned spectrum and transmitter licences.[18] New transmitter licences will be issued for continued digital broadcasting.[19] The conversion schemes to be formulated by ACMA for executing this initiative must require the broadcasters to prepare implementation plans, and forfeiture of the digital transmitter licences would be required under the conversion schemes if the broadcaster failed to commence digital transmission on time, ceased digital transmission during the simulcast period, or failed to comply with certain standards.[20]

Exceptions to the simulcast rule

The 'simulcast rule' which requires broadcasting in both analog and digital mode during the simulcast period can be excused in certain circumstances. Advertising, sponsorship matter and television programs designated by ACMA and electronic program guides can be ignored in determining whether there has been this simultaneous broadcast.[21]

Multi-channelling may also be a limited exception to the simulcast rule.

> *"Multi-channelling is the transmission of more than one discrete stream of programming over a single television channel or carrier."*[22]

This is made possible by the compression techniques employed in digital broadcasting.[23] ACMA can ignore a particular television program transmitted using multi-channelling transmission capacity where, for example, a designated event (eg, a live sporting event) extends beyond its scheduled finishing time into a regularly scheduled news program in circumstances beyond the control of the broadcaster or any person who supplied the program to the broadcaster. The sole purpose of permitting the use of multi-channelling transmission capacity in this context is to allow viewers of the digital version of the commercial television broadcasting service to choose between viewing the regularly scheduled news program and viewing so much of the designated event as overlaps with the other television programs.[24]

The national broadcasters are permitted to provide non-commercial multi-channel services which are linked to the obligations of their charters.[25] The service has to be distinct from any other broadcasting service provided by the broadcaster and cannot be a subscription broadcasting or subscription narrowcasting service.[26] The types of television programs that can be delivered by the service are strictly limited. The ABC provided two multi-channel services pursuant to this arrangement but ceased in June 2003 due to budgetary constraints.[27]

Permitted digital program-enhancement content can also be ignored in determining commercial and national broadcasters' compliance with the simulcast rule. This is content in the form of text, data, speech, music, sounds, visual images or any combination of these, designed to enhance the main simulcast program, which is closely and directly linked to the subject matter of the primary program.[28]

These concessions at least allow broadcasters to make use of some of the innovations afforded by digital technology.[29]

Datacasting services

Datacasting services or designated teletext services can be provided by the commercial and national broadcasters using any spare transmission capacity on their digital transmission channels.[30] The Act does not specify particular types of datacasting services, but stipulates some genre conditions with reference to 'category A' and 'category B' television programs.

> *"They may include weather reports, stock prices, news and entertainment guides which would be updated throughout the day, and Internet type services."*[31]

To ensure that commercial and national broadcasters do not enjoy an unfair competitive advantage as a result of their loan of spectrum, they will be charged for their provision of datacasting services.[32] Other datacasters must obtain a datacasting licence issued under Schedule 6 of the BSA and a corresponding datacasting transmitter licence under the *Radiocommunications Act 1992* (Cth).[33]

Evaluating the legislative framework

The critical question is whether the legislative framework achieves its objectives. There is widespread opinion that the legislation has failed to help realise the potential of DTTB.[34] The significant criticisms of the scheme have been summarised as falling into two main categories:

> *"First, there were concerns about its effect on competition. It was argued that the model unfairly favoured incumbent free-to-air TV broadcasters, by allocating them additional spectrum without extra charge, and prohibiting further commercial TV competition for several years. Sec-*

ond, there were concerns about whether the model would be attractive to consumers."[35]

The consumer resistance experienced has been blamed on the 'irrelevant'[36] product that results from the legislative framework. Perhaps a greater emphasis on enabling the spectrum efficiencies to enhance content and consumer choice would have generated a more attractive product than has tying up spectrum with the mandate of HDTV and restricting the use of features such as multi-channelling and program enhancements. The Productivity Commission, in a report largely ignored by the Government, expressed:

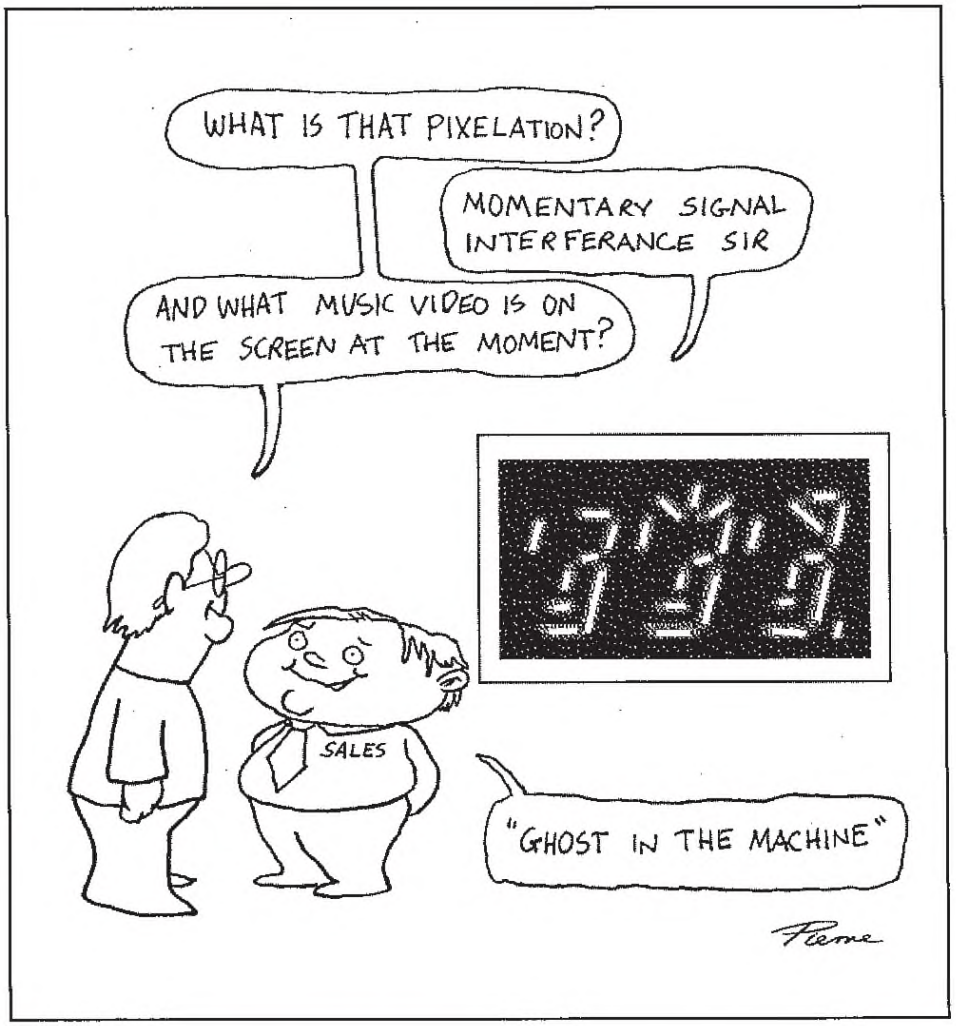
> *"While the Government's objective of ensuring a 'smooth transition' to digital broadcasting is important, excessive regulation of the format or content of new digital services jeopardizes the achievement of any sort of transition, deprives consumers of major benefits of digital television, and will also constrain the development of new services by Australian companies in this dynamic and fast growing industry. A liberal approach to regulating the new medium will be essential to a successful conversion process."*[37]

In May 2005, Digital Broadcasting Australia estimated that approximately 12 per cent of households in areas where all digital services are available owned digital receivers and take-up across all television households was around 10 per cent.[38]

> *"The retail sales tracker GfK Australia says that while sales of digital set boxes are growing, the 320,000 sold in the year to August equated to only 20 per cent of the 1.55 million television sets sold."*[39]

Other research has highlighted that digital television is poorly understood. "Forty-six per cent of the non-adopters did not know whether they could receive it and 40 per cent did not know that analog transmission would be completely replaced."[40]

Because of the slow take-up, it is likely that the analog switch off date will occur later than initially predicted. While this was indicated in an Issues Paper released in September 2005 by the Department of Communications, Information Technology and the Arts (DCITA), it was also stated that setting a firm switchover date may, of itself, be an effective way of increasing digital take-up.[41] The Australian legislation currently sets a switch-off target date that can be modified.[42] A firm date would provide greater certainty and justification for all players to further their preparation for a digital-only television transmission. For the sake of comparison, the US has legislated a criteria-based switchover of January 2006 if 85% of homes are able to receive all local station broadcasts in digital,[43] (although the US Senate has recently drafted a bill mandating digital-only signals by 7 April 2009).[44] In the UK, Ofcom has issued digital replacement licences to the free to air commercial broadcasters which commit them to an analog switch-off by the end of 2012.[45]



Senator Coonan has admitted that Australia needs a Digital Action Plan to drive digital take-up and a plan for the transition to the point where Australia will be ready to end the expensive simulcast period.

> *"In addition to direct measures to stimulate and encourage take up of digital services, there may also be technical or other barriers that need to be addressed, that act as a disincentive for consumers to make the change, or which diminish their experience of digital television".*[46]

Ideas for Improvement

Different suggestions (based on overseas experience) to drive digital take-up were presented in DCITA's September Issues Paper. These included:

- implementing incentives for broadcasters to expedite conversion (such as a licence tax on analog spectrum);
- allowing for a range of new digital services to attract viewers who do not value the picture quality of HDTV as enough incentive to convert;
- mandating digital tuners be integrated into all newly manufactured TV sets;
- requiring more detailed labeling on television reception equipment to indicate that after a certain date the television will not be able to receive broadcast programming unless connected to converter equipment;
- providing more consumer information and support;
- subsidising the price of digital receivers;
- providing for the conversion of multiple sets in a household;
- addressing reception difficulty issues for residents of multiple-unit dwellings;

- establishing a testing and conformance centre for digital television technology; and
- considering whether measures for particular groups such as people with disabilities, older or socially isolated people are necessary.[47]

Others have expressed that there may be cheaper access to digital television for consumers if the commitment to HDTV was relaxed.[48] Those who wanted the benefits of HDTV could still buy the appropriate equipment.

> *"The Seven Network spilt from its commercial TV colleagues, Nine and Ten, to support the [SDTV/HDTV simulcast] idea... , worried that the emphasis on HDTV would require it to invest a lot of money upgrading equipment without much incentive for audiences to make the investment needed to notice the improvement. The Nine and Ten Networks disliked the SDTV/HDTV simulcast idea for that reason, and also because they argued it compromised the quality of the HDTV pictures they would be able to transmit."*[49]

The Productivity Commission concurred that to facilitate consumers' adoption of digital television, a new regulatory framework should permit but no longer mandate HDTV. It also expressed that multi-channelling and the provision of interactive services by commercial and national broadcasters should be permitted.[50]

Dr Switkowski, former Telstra chief,

> *"advocated direct intervention by Canberra, including some form of subsidy of set-top boxes, to ensure the deadline was met. This could cost the budget about $400 million, he estimated. But to recoup this outlay, the Government could auction off broadcasting spectrum, raising 'multiples' of this amount."*[51] He said the *"free-to-air networks should also be free to 'multicast' new channels, allowing them to supplement traditional advertising revenues with 'pay as you go' channels"*.[52]

Conclusion

The concerns expressed as to the shortcomings of the legislative plan for implementing DTTB are valid. The scheme has so far not been able to fulfill its objectives. However, the stated objectives indicate that the Government did recognise the significance of DTTB and intended to implement this technology in pursuit of its benefits. Having tracked the progress of implementation to date, however, it is clear that the legislation has not zealously encouraged the market players to prepare for the switch off of analog transmission. DCITA's recent 'Driving Digital' Issues Paper has fortunately acknowledged that there may be shortcomings in the scheme due to the slow take-up, and is thoughtful of ways to improve the situation. This conviction to eventuate DTTB and willingness to rectify the weaknesses in the initial framework afford confidence in the expectation that the benefits of digital technology in Australia will ultimately be realised.

Dana Stewart is a Graduate Law student at the University of New South Wales

[1] Des Butler and Sharon Rodrick, *Australian Media Law* (2nd ed, 2004) 542.

[2] Ibid.

[3] Explanatory Memorandum, Television Broadcasting Services (Digital Conversion) Bill 1998, Datacasting Charge (Imposition) Bill 1998; Butler and Rodrick, above n 1.

[4] Butler and Rodrick, above n 1.

[5] Explanatory Memorandum, Television Broadcasting Services (Digital Conversion) Bill 1998, Datacasting Charge (Imposition) Bill 1998.

[6] Butler and Rodrick, above n 1.

[7] Lesley Hitchens, 'Digital Television Broadcasting – an Australian Approach', 12(4) (2001) *Ent. L.R.* 112-119.

[8] Explanatory Memorandum, Television Broadcasting Services (Digital Conversion) Bill 1998, Datacasting Charge (Imposition) Bill 1998.

[9] Ibid.

[10] Ibid.

[11] *Broadcasting Services Act 1992* (Cth) Schedule 4, cl 1.

[12] *Broadcasting Services Act 1992* (Cth) Schedule 4, cl 6(3).

[13] Butler and Rodrick, above n 1, 543.

[14] *Broadcasting Services Act 1992* (Cth) Schedule 4, cl 37E(2B).

[15] *Broadcasting Services Act 1992* (Cth) Schedule 4 cl 37L.

[16] *Broadcasting Services Act 1992* (Cth) Schedule 4 cll 37E(1)(c), 37F(1)(c); Butler and Rodrick, above n 1, 545.

[17] Butler and Rodrick, above n 1, 543; *Broadcasting Services Act 1992* (Cth) Schedule 4, cll 8, 23; *Radiocommunications Act 1992* (Cth) s 102A.

[18] Ibid.

[19] Ibid.

[20] Ibid.

[21] *Broadcasting Services Act 1992* (Cth) Schedule 4 cll 6(8)-(13), 19(8)-(13).

[22] Productivity Commission, *Broadcasting Inquiry Report*, Report No. 11 (2000).

[23] Ibid.

[24] *Broadcasting Services Act 1992* (Cth) Schedule 4 cll 6(8), 19(8); Butler and Rodrick, above n 1, 546.

[25] *Broadcasting Services Act 1992* (Cth) Schedule 4, cl 5A.

[26] *Broadcasting Services Act 1992* (Cth) Schedule 4, cl 5A.

[27] Butler and Rodrick, above n 1, 546.

[28] *Broadcasting Services Act 1992* (Cth) Schedule 4, cll 6(14), 19(14).

[29] Butler and Rodrick, above n 1, 546.

[30] *Australian Broadcasting Corporation Act 1983* (Cth) s 6A; *Special Broadcasting Service Act 1991* (Cth) s 6A; *Broadcasting Services Act 1992* (Cth) Schedule 4 cll 6(3)(k), 19(3)(k); Butler and Rodrick, above n 1, 547.

[31] *Datacasting Charge (Imposition) Act 1998* (Cth); *Broadcasting Services Act 1992* (Cth) Schedule 4, Part 6; Butler and Rodrick, above n 1, 547.

[32] Ibid.

[33] *Broadcasting Services Act 1992* (Cth) Schedule 6 cll 7-12; *Radiocommunications Act 1992* (Cth) s 102B; Butler and Rodrick, above n 1, 548.

[34] Hitchens, above n 7.

[35] Jock Given, 'More Choices: The 2000 Decisions', *Turning off the television: Broadcasting's Uncertain Future* (2003) 159-186.

[36] Professor Duane Varan, Murdoch Univerisyt Interactive Television Research Institute, quoted in Jeni Porter, 'Viewers content to leave digital out there', *Sydney Morning Herald* (Sydney), 8 October 2005.

[37] Productivity Commission, *Broadcasting Inquiry Report*, Report No. 11 (2000).

[38] Department of Communications, Information Technology and the Arts, *Driving Digital: A Review of the Duration of the Analogue/Digital Television Simulcast Period*, Issues Paper (September 2005).

[39] Jeni Porter, 'Viewers content to leave digital out there', *Sydney Morning Herald* (Sydney), 8 October 2005.

[40] Ibid.

[41] Department of Communications, Information Technology and the Arts, above n 38.

[42] Ibid; *Broadcasting Services Act 1992* (Cth) Schedule 4 cl 6(3)(c).

[43] Department of Communications, Information Technology and the Arts, above n 38.

[44] Telecom Asia Daily, 'US drafts digital TV bill', <http://telecomasia.net/telecomasia/article/articleDetail.jsp?id=187370> at 18 October 2005.

[45] Ibid.

[46] Ibid.

[47] Ibid.

[48] Given, above n 35.

[49] Ibid.

[50] Productivity Commission, *Broadcasting Inquiry Report*, Report No. 11 (2000).

[51] Porter, above n 39.

[52] Ibid.