
The Parliament of the Commonwealth of Australia

Digital Television: Who's Buying It?

Inquiry into the uptake of Digital Television in Australia

House of Representatives

Standing Committee on Communications, Information, Technology and the Arts

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Canberra

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Foreword

In my first job, as a probation and parole officer, I visited many homes and was struck by the diversity of tastes at all social levels and also the consistency of the lounge set-up around the television and the VCR. Most often this was in the central living area of the home and where interviews were conducted. I quickly formed the personal view that television was a lot like carbohydrates – extremely bad in large quantities.

In my current job, I visit many constituent homes and television is still the central focus of major living areas. Now, the screens are getting larger and flatter and things like DVDs, gaming consoles, PVRs and PCs are being added.

My mother used to suspend television as a punishment; today I ban ‘all screens’. To my surprise I agree with the Committee that these days television is an essential service. Lack of access to a colour television is a marker of poverty and some state governments require landlords to connect television for tenants. If the analogue broadcast signal were to cease tomorrow there would be outrage – but the analogue signal is going to cease as the Australian Government takes advantage of digital technologies to better manage Australia’s broadcast spectrum.

The title of this report asks Digital Television – Who’s Buying It? Until now, the answer has been that few Australians have bought into this new technology and a low market base has limited the features and programming that are offered on digital – which has in turn reduced its appeal for many viewers.

In 2006, it is apparent that if Australia is to keep pace with international production trends and to provide viewers with the range and quality of television experienced around the rest of the world, then now is the time to ‘get serious’ about ‘getting digital’.


This report has examined the options for ensuring the smooth transition to digital television in Australia, taking into account the cost of continued simulcast and in particular the impost this places on regional broadcasters. It has considered the financial burden the conversion to digital may place on the community from the purchase of set-top boxes, and how to minimise the cost over an appropriate

timeframe. It has also sought to consider the needs and responsibilities of manufacturers and retailers in providing lead times and adequate product information.

Digital also brings with it the opportunity for multichannelling and high definition broadcasting. These options have been tightly regulated until now. In line with the move to digital, the report makes a number of recommendations to lift these restrictions. Ultimately, these programming and broadcasting choices will be determined by market demand.

During the course of this inquiry the Committee spoke with a number of peak bodies and to national and commercial broadcasters. I thank those who prepared submissions for the inquiry and who spoke to us during public hearings and inspections. I extend my thanks to the members of the Committee for their commitment and interest in this inquiry. I also thank the Committee secretariat for their hard work and dedication to ever changing timetables and deadlines.

The Hon Jackie Kelly MP
Chair



Membership of the Committee

Chair The Hon Jackie Kelly MP

Deputy Chair Ms Julie Owens MP

Members The Hon Bronwyn Bishop MP

Mr Alan Griffin MP

Mr Michael Johnson MP

Mr Andrew Laming MP

Mr John Murphy MP (from 2 December
2004 - 10 May 2005)

Mr Peter Garrett MP

Mr Chris Hayes MP (from 10 May 2005 -
present)

Mr Michael Keenan MP

Mr Ken Ticehurst MP

Committee Secretariat

Committee Secretary Dr Anna Dacre

Inquiry Secretary Mr Anthony Overs

Administrative Officer Ms Emma Martin



Terms of reference

Terms of Reference for an inquiry into the uptake of digital television in Australia.
The Committee is to inquire into and report on:

- The rollout process for digital television, including progress to date and future plans.
- Options for further encouraging consumer interest in the uptake of digital television.
- Technological issues relevant to the uptake of digital television.
- Future options.



List of abbreviations

ABA	Australian Broadcasting Authority
ABC	Australian Broadcasting Corporation
ACA	Australian Consumers' Association
ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
ACT	Australian Capital Territory
AFC	Australian Film Commission
ASTRA	Australian Subscription Television and Radio Association
BAND	Beautiful Analogue Not Digital
BBC	British Broadcasting Corporation
BSA	<i>Broadcasting Services Act 1992</i>
CBAA	Community Broadcasting Association of Australia
DBA	Digital Broadcasting Australia
DCITA	Department of Communications, Information Technology and the Arts
DCPs	Digital Channel Plans
DEH	Department of the Environment and Heritage
DTT	Digital terrestrial television

DTTB	Digital terrestrial television broadcasting
DTV	Digital television
ESR	Eureka Strategic Research
FCC	Federal Communications Commission (United States)
FOXTEL	Foxtel Management Pty Ltd
HD	High definition
HDTV	High definition television
IEA	International Energy Agency
iTV	Interactive Television
ITRI	Interactive Television Research Institute
LCC	Lithgow City Council
LCN	Logical Channel Numbering
LG	LG Electronics Australia Pty Ltd
MCE	Australian Ministerial Council on Energy
MEPS	Minimum Energy Performance Standards
MHz	Megahertz
NAEEEC	National Appliance and Equipment Energy Efficiency Committee
NSW	New South Wales
NT	Northern Territory
OECD	Organisation for Economic Co-operation and Development
Ofcom	The Office of Communications (United Kingdom)
Optus	Singtel Optus Pty Ltd
Panasonic	Panasonic AVC Networks

PDR	Personal digital recorder
PVR	Personal video recorder
Retravisio	Retravisio Pty Ltd
Samsung	Samsung Electronics Australia Pty Ltd
SBS	Special Broadcasting Service Corporation
SCB	Southern Cross Broadcasting (Australia) Ltd
SD	Standard definition
SDTV	Standard definition digital television
Sony	Sony Australia Ltd
SYR	Shire of Yarra Ranges
TCC	Testing and conformance centre
The Code	Digital Television Marketing Code
The Digital Act	<i>Television Broadcasting Services (Digital Conversion) Act 1998</i>
TPA	<i>Trade Practices Act 1974</i>
UK	United Kingdom
US	United States
UTSPS	University of Technology, Sydney Programmers' Society
WA	Western Australian
WADIR	Western Australian Department of Industry and Resources
WIN	WIN Corporation



List of recommendations

3 Driving digital and switching off analogue

Recommendation 1

The Committee recommends that the Australian Government switch-off analogue television nationwide on 1 January 2010.

Recommendation 2

The Committee recommends that the Australian Government commission an independent study into Australia's current spectrum allocation and future requirements, reporting by 1 January 2008, and taking into account:

- options for the utilisation of returned spectrum following analogue switch-off;
- re-allocation of television network spectrum to group together broadcasters and provide a more consolidated width of returned spectrum for future allocation;
- additional television networks, including community broadcasting stations offering a range of programming aimed at indigenous and minority ethnic and community groups; and
- the spectrum needs of future technologies, in particular wireless and other emerging technologies.

4 Content and quality

Recommendation 3

The Committee recommends that the Australian Government remove the programming restrictions on multichannelling for national free-to-air networks as soon as possible and no later than 1 January 2007.

Recommendation 4

The Committee recommends that the Australian Government remove all restrictions on multichannelling for commercial free-to-air networks on 1 January 2008.

Recommendation 5

The Committee recommends that the Australian Government maintain the prohibition on free-to-air networks offering subscription multichannelling.

Recommendation 6

The Committee recommends that the Australian Government maintain the current minimum High Definition broadcasting quota for free-to-air networks until 1 January 2011.

Recommendation 7

The Committee recommends that, prior to 1 January 2011, the Australian Government undertake a review to determine whether current High Definition quotas for free-to-air networks should be removed, increased or decreased.

Recommendation 8

The Committee recommends that the Australian Government reconsider current restrictions on datacasting with a view to lifting restrictions on 1 January 2008.

5 Selling digital**Recommendation 9**

The Committee recommends that the Australian Government ensure that the One Watt initiative and the MEPS standard are fully operational by analogue switch-off at 1 January 2010.

Recommendation 10

The Committee recommends that the Australian Government

- work with industry stakeholders to establish a testing and conformance centre for digital television equipment; and
- provide A\$1 million as seed funding in the first year for the establishment of a testing and conformance centre.

Recommendation 11

The Committee recommends that the Australian Government coordinate the establishment of a mandatory labelling scheme that will accurately identify television and digital reception products. The scheme should be based on the industry's Digital Television Marketing Code.

Recommendation 12

The Committee recommends that the Australian Government terminate the analogue Television Black Spot program as a priority, and implement a Digital Television Black Spots Program.

Introduction

- 1.1 Television broadcasting in Australia is currently undergoing a fundamental revolution in its technology and viewing experience.
- 1.2 Not since the shift from black and white to colour has so radical a change in the nature of Australian television taken place. The 'revolution' is the introduction of digital television (DTV) and the planned switch-off of current analogue services.
- 1.3 DTV offers clearer, sharper pictures in widescreen format. As it requires less spectrum to broadcast, it also offers opportunities for many more channels, and additional features such as interactivity and datacasting.
- 1.4 DTV is already broadcasting in Australia – although not all the population is aware of its features and only a small proportion is equipped to view DTV. This is despite the scheduled switch-off of analogue services commencing in some metropolitan areas as early as 2008.
- 1.5 Australia has already commenced a rollout process for DTV. The Australian Government has legislated for the introduction of DTV broadcasting in Australia by enacting the *Television Broadcasting Services (Digital Conversion) Act 1998* (the Digital Act) as an amendment to the *Broadcasting Services Act 1992* (the BSA).
- 1.6 A key feature of the DTV regulatory framework was a requirement for commercial and national free-to-air broadcasters to commence DTV broadcasting on 1 January 2001 in capital cities, and in regional areas between 1 January 2001 and 1 January 2004.

- 1.7 Analogue broadcasting is currently scheduled to cease at the end of 2008 in the five main metropolitan markets. Analogue signals in many regional markets are scheduled to be switched-off by 2011.
- 1.8 During the implementation phase of DTV, analogue services are required to be simulcast with standard definition (SD) DTV and a mandated minimum of 1 040 transmission hours per annum for high definition (HD) DTV.
- 1.9 The purpose of the simulcast arrangements is to provide a transitional phase for broadcasters and viewers to minimise disruption during the conversion of free-to-air television services from analogue to digital.
- 1.10 With limited public awareness of the impending analogue switch-off, and given the small take-up rate of DTV by viewers, questions have been raised regarding the effectiveness of the current rollout plan and timetable.

Background to the inquiry

- 1.11 The Committee agreed on 16 March 2005 to conduct an inquiry into the uptake of digital television in Australia. The inquiry was referred by Senator the Hon Helen Coonan, the Australian Government Minister for Communications, Information Technology and the Arts.
- 1.12 The terms of reference for the inquiry call for the Committee to inquire into and report on:
- the rollout process for digital television, including progress to date and future plans;
 - options for further encouraging consumer interest in the uptake of digital television;
 - technological issues relevant to the uptake of digital television; and
 - future options.
- 1.13 The inquiry was advertised in *The Australian* on 19 and 23 March 2005 and *The Australian Financial Review* on 22 March 2005.
- 1.14 The Committee sought submissions from relevant Australian Government Ministers and from state and territory governments. In addition, the Committee sought submissions from a wide range of business organisations, including professional associations, consumer advocates, major industry groups, academics, media organisations,

television broadcasters and television equipment manufacturers and retailers.

- 1.15 The Committee received 97 submissions including five supplementary submissions. These submissions are listed in Appendix A.
- 1.16 Submissions were received from all national and free-to-air television broadcasters in Australia, from all levels of government, manufacturers of digital receivers, retailers of digital receivers and independent advisory and research groups. In addition, a number of individuals recorded their personal views and experiences in relation to the purchase, installation or viewing experiences of DTV.
- 1.17 The Committee received five exhibits to the inquiry, which were provided in addition to written submissions, received during public hearings or sent to the Committee by other parties. These are listed in Appendix B.
- 1.18 The Committee held 11 public hearings across Australia in Canberra, Sydney, Melbourne and Perth. The Committee called 46 witnesses. These witnesses are listed in Appendix C.
- 1.19 The Committee carried out a number of inspections including visiting commercial television stations, a manufacturer of DTV equipment as well as a research institute for interactive television.

Structure of the report

- 1.20 The inquiry covered a range of issues from the analogue switch-off date, to content and definition issues for DTV, international experiences, and future planning for spectrum allocation in Australia.
- 1.21 The policy and legislative background to the introduction of DTV is set out in Chapter 2. Inquiries being undertaken by the Department of Communications, Information Technology and the Arts (DCITA) are reviewed. The roll out plan is discussed along with take-up rates of DTV in Australia and other countries. This chapter also describes the technical requirements for DTV including the difference between SD and HD and their associated spectrum usage.
- 1.22 Chapter 3 considers the imperatives for analogue switch-off and the shift to DTV. It examines options for the switch-off date and a phased

in or nationwide approach. It also discusses the suggestion of subsidies and general assistance to assist take-up and installation.

- 1.23 Chapter 4 reviews content and quality aspects of DTV. This includes examining the restrictions on multichannelling, HD transmission quotas and datacasting.
- 1.24 Chapter 5 discusses the Australian Standards for DTV transmission and receivers and proposed revisions to these Standards. Market readiness strategies to increase the take-up of DTV are examined, and the report sets out the respective responsibilities of the Australian Government and industry.

Digital television in Australia

- 2.1 This chapter considers the benefits of DTV and the motivation for its introduction in Australia. An overview of the policy and legislative framework governing DTV rollout and analogue switch-off is provided, along with recent Australian Government reviews into DTV and broadcasting issues.
- 2.2 Data on DTV take-up rates is discussed, and the reasons for poor take-up examined. The chapter concludes with a comparison of DTV rollout processes and take-up rates in other countries.

What is digital television?

- 2.3 DTV is a new television technology that is replacing existing analogue free-to-air television in Australia.
- 2.4 DTV delivers television signals in a substantially more efficient way than the current analogue system. With analogue broadcasting, the signal is in the form of a continuous wave, whereas digital broadcasting signals are in the form of discrete bits of information.
- 2.5 Analogue television channels can transmit one continuous stream of programming and some limited data/text embedded in the main carrier signal. DTV is a broadcasting transmission system which uses digital modulation techniques to transmit television programs. Through compression technology, DTV broadcasting transmitters have the capacity to transmit an HDTV picture, or to transmit multiple programs at the same time using the same amount of bandwidth as used for analogue television. DTV also allows any residual transmission capacity to be used

to transmit data or information, either linked to programs or independently.¹

- 2.6 The digital television industry in Australia is using the DVB-T (Digital Video Broadcasting – Terrestrial) standard, first developed in Europe, rather than the American-developed ATSC (Advanced Television Systems Committee) standard. Digital Broadcasting Australia (DBA) claims that DVB-T is proving to be a very high quality system and is being used in many countries around the world. In Australia it will replace the analogue PAL (phase alternation by line) system.²
- 2.7 Australia has three commercial metropolitan television broadcasters and two national television broadcasters. The commercial metropolitan broadcasters are Network Ten, the Nine Network and the Seven Network. There are also a number of regional broadcasters. The national broadcasters are the Australian Broadcasting Corporation (ABC) and the Special Broadcasting Service Corporation (SBS). Commercial and national broadcasters currently transmit programs to the public in analogue mode, using a channel bandwidth of seven Megahertz (MHz).
- 2.8 Commercial and national broadcasters now also transmit programs to the public in digital mode, using an additional channel bandwidth of seven MHz.
- 2.9 The transmission of two channels is known as simulacasting and is designed to provide both types of signal during the digital television transition period.
- 2.10 Each network is required to transmit a certain amount of digital content in HD. The national broadcasters have extra content channels currently being transmitted in their seven MHz allocation.

Benefits of digital television

- 2.11 DTV offers a number of benefits to viewers, broadcasters and potentially to the Australian Government. The key potential benefits are outlined in this section.

1 www.acma.gov.au/ACMAINTER.65674:STANDARD:239602149;pc=PC_91833, accessed 25 October 2005.

2 www.dba.org.au/index.asp?sectionID=7#What_is_DTV, accessed 28 October 2005.

Pictures

- 2.12 DTV provides clearer, sharper pictures than analogue, with no 'snowy' or 'ghosted' pictures. DBA stated that DTV will provide improved picture resolution, similar to DVD (digital versatile disc) quality.³
- 2.13 The ABC claims that, for its viewers, DTV means the end of reception interference. Many of the ABC's existing analogue services are broadcast on Channels 0, 1 and 2, particularly in the capital cities. Transmissions on these low band frequencies are susceptible to local electrical interference. However, the ABC's DTV broadcasts will all transmit on higher channels, making reception interference less likely to occur.⁴

Sound

- 2.14 DTV provides improved sound quality, with programs broadcast in MPEG-2⁵, providing CD-quality stereo sound as standard. Some special programs are also broadcast in Dolby Digital 5.1 – a surround sound format available for both SD and HD viewers who have home theatre systems able to decode the special digital audio signal.⁶

Widescreen

- 2.15 DTV is also broadcast in 'widescreen', a picture similar in shape to most DVDs. Widescreen means that the picture is a third wider than the old analogue format, with an aspect ratio (or width to height ratio) of 16:9. Traditional television broadcasts have an almost square shape, with an aspect ratio of 4:3. Figure 1.1 shows the difference between the two screen sizes.

Figure 1.1 Aspect ratios of widescreen television and traditional analogue television.



3 www.dba.org.au/index.asp?sectionID=15, accessed 28 October 2005.

4 www.abc.net.au/reception/digital/digi_benefits.htm, accessed 26 October 2005.

5 MPEG-2 (1994) is the designation for a group of coding standards for digital audio and video, agreed upon by MPEG (Moving Pictures Experts Group), and published as the ISO/IEC 13818 international standard. MPEG-2 is typically used to encode audio and video for broadcast signals, including over-the-air DTV, direct broadcast satellite and Cable television. MPEG-2, with some modifications, is also the coding format used by standard commercial DVD movies.

6 www.abc.net.au/reception/digital/digi_benefits.htm, accessed 25 October 2005; Opac Pty Ltd, *submission no. 73*, p. 1; Eleanor Hillard, *submission no. 48*, p. 29.

Spectrum use

- 2.16 The Australian Consumers' Association (ACA) explained that digital transmission requires much less spectrum than analogue transmission, and is therefore a more efficient use of available spectrum. The digital equivalent to current television signals can be carried in about one quarter of the spectrum capacity currently dedicated to it.⁷
- 2.17 DTV has the ability to deliver additional features such as HDTV, or multiple program streams (multichannelling) and other enhancements such as interactive television – all in the same spectrum space currently used by one analogue channel.⁸
- 2.18 Given the pressures being experienced on spectrum allocation, particularly in the United States (US), a more efficient use of spectrum is a substantial advantage of DTV transmission.

Multichannelling

- 2.19 The more efficient use of spectrum can allow a small number of digital channels to be broadcast in the same spectrum allocation in which one analogue channel is broadcast. This is known as multichannelling.
- 2.20 The debate concerning multichannelling is considerable and is further discussed in Chapter 4.

Datacasting

- 2.21 Datacasting enables viewers to access transmitted text and images on topics such as weather, news and sport. Datacasting involves the insertion of prepared content into a broadcaster's transmission stream. The information is then extracted from the DTV broadcasting stream by the set-top box and is displayed on the television screen. Various styles of interaction between the viewer/user and the service provider may be included.⁹ It has been suggested that e-commerce and even government services could be delivered via datacasting.
- 2.22 A more detailed discussion on datacasting can be found in Chapter 4.

7 ACA, *submission no. 47*, p. 2.

8 www.abc.net.au/reception/digital/digi_benefits.htm, accessed 26 October 2005.

9 www.acma.gov.au/ACMAINTER.65690:STANDARD:1150845662:pc=PC_91870#datacast, accessed 26 October 2005.

Interactivity

- 2.23 Interactivity is a major feature of DTV, differentiating it from existing analogue services and potentially providing consumers with an enhanced DTV experience.
- 2.24 Interactivity allows viewers access to additional program-related content or in some instances the ability to communicate back to the broadcaster (for example, to provide a viewer opinion or to purchase merchandise).¹⁰
- 2.25 The ABC claimed that interactivity is already intrinsic to the consumer appeal of some subscription digital television channels.¹¹
- 2.26 The Interactive Television Research Institute (ITRI) explained that while the digitisation of television enables better sound and picture, it also enables a wide range of interactive services. This includes enhancements to television programming as well as stand-alone applications. ITRI's research has consistently demonstrated that such interactivity can significantly enhance the viewing experience.¹²

Standard Definition and High Definition digital television

Standard Definition

- 2.27 The digital television signal, carried in about one quarter of the spectrum capacity of an analogue signal and broadcasting at the same (or similar) resolution as analogue systems, is referred to as standard definition digital television or SDTV.¹³
- 2.28 SDTV in 4:3 aspect ratio has the same appearance as analogue television, minus the ghosting, snowy images and static noises.¹⁴ The SDTV picture resolution is 576 lines x 720 pixels @ 50Hz interlaced (576i).¹⁵
- 2.29 SDTV opens up the possibility of broadcasting four channels where one analogue channel currently exists. Therefore, with no increase in spectrum allocation, broadcasters could transmit at least four times as much in SD digital than what they currently broadcast in analogue.¹⁶

10 Samsung Electronics Australia, *submission no. 87*, p. 3.

11 ABC, *submission no. 45*, p. 8.

12 ITRI, *submission no. 46*, p. 5.

13 ACA, *submission no. 47*, p. 2; en.wikipedia.org/wiki/Standard-definition_television, accessed 26 October 2005.

14 en.wikipedia.org/wiki/Standard-definition_television, accessed 26 October 2005.

15 www.acma.gov.au/ACMAINTER.65690:STANDARD:1150845662:pc=PC_91870#sdtv, accessed 25 October 2005.

16 ACA, *submission no. 47*, p. 2.

- 2.30 At present, broadcasters are required to provide a digital SDTV signal at all times, even when HD programs are being broadcast. This is to ensure that viewers with SD receivers will always be able to receive a DTV service, even when the higher quality HD signal is being transmitted.¹⁷
- 2.31 An SD or HD set-top box or an SD or HD integrated television set is required to receive SDTV signals.

High Definition

- 2.32 HDTV refers to pictures that contain significantly more detail than other pictures as they contain a larger number of pixels.¹⁸ The minimum HDTV picture resolution is 576 lines x 720 pixels at 50Hz progressive scan (576p). Different resolutions of HD are discussed in Chapter 4.
- 2.33 HDTV pictures have an image resolution which is superior to SDTV pictures and existing analogue pictures, with up to six times the improvement in detail. HDTV pictures are also ghost free and in widescreen format. When viewed on an HDTV screen the viewer can enjoy cinema-quality viewing with Dolby surround sound. The benefits of HDTV pictures are particularly noticeable on larger screen sets and when using projection equipment.¹⁹
- 2.34 Broadcasters are required to transmit HDTV for a minimum of 1 040 hours per calendar year (an average of around 20 hours per week). HDTV is transmitted as well as the SDTV signal.²⁰
- 2.35 A HD set-top box or an HD integrated television set is required to receive HDTV signals.

Why was DTV introduced?

- 2.36 In 1992 the Australian Broadcasting Authority (ABA) convened a specialist group of representatives from the broadcasting and manufacturing sectors to work on the prospect that digital terrestrial television broadcasting (DTTB) should be introduced into Australia. The ABA's Specialist Group produced its Final Report in 1997.²¹

17 www.acma.gov.au/ACMAINTER.65690:STANDARD:1150845662:pc=PC_91870#sdtv, accessed 25 October 2005.

18 Nine Network, *submission no. 59*, p. 2.

19 www.acma.gov.au/ACMAINTER.65690:STANDARD:1150845662:pc=PC_91870#hdtv, accessed 26 October 2005.

20 DCITA, *submission no. 66*, p. 3.

21 Webb, P.J. (2003) *Digital Terrestrial Television in Australia*. Digital Broadcasting Australia Ltd, Broadcast Asia 2003 paper.

- 2.37 The report, *Digital Terrestrial Television Broadcasting in Australia*, represented the result of several years' consultation, research and international cooperation. The report contained the conclusions of the Specialist Group which led to the recommendations for the introduction of DTTB in Australia.²²
- 2.38 The ABA recommended the Australian Government support the early introduction of DTTB into Australia, as an HDTV system, but with sufficient flexibility to enable broadcasters to experiment with program offerings and find programming approaches acceptable to the Australian viewer.²³
- 2.39 In a July 1997 press release, Mr Peter Webb, the ABA Chairman said:
- DTTB will provide the foundation for television of the 21st century. The present analogue system will not meet the expectations and needs of viewers in the next century while cable and satellite television systems that use digital transmission are restricted by the lack of digital receivers in the home. DTTB opens up all sorts of new and exciting possibilities for viewers.²⁴
- 2.40 The two main benefits of the introduction of DTV were seen as:
- Overcoming transmission problems such as ghosting, 'snowy' pictures and interference; and
 - To provide enhanced television services such as wide screen and high definition formats.²⁵
- 2.41 Many other countries are now going to digital capture, production and broadcasting. The Seven Network stated that most of the world is going digital, with SDTV as the standard technology for the delivery of DTV.²⁶

22 ABA to release report on digital terrestrial television broadcasting, ABA media release, 28 January 1997, www.aba.gov.au/newspubs/news_releases/archive/1997/5nr97.shtml, accessed 28 October 2005.

23 Webb, P.J. (2003) *Digital Terrestrial Television in Australia*. Digital Broadcasting Australia Ltd, Broadcast Asia 2003 paper.

24 ABA backs introduction of digital television, ABA media release, 22 July 1997, www.aba.gov.au/newspubs/news_releases/archive/1997/70nr97.shtml, accessed 28 October 2005.

25 *Wide screen high definition television on the way*, ABA media release, 30 January 1997, www.aba.gov.au/newspubs/news_releases/archive/1997/7nr97.shtml, accessed 28 October 2005; *Why Digital?* www.digitaltv.com.au/why.html, accessed 28 October 2005.

26 Seven Network, *transcript of evidence 1 September 2005*, p. 12.

- 2.42 Sony Australia Ltd (Sony) discussed the move to high definition production:

The reality is that the world is moving to high [definition] whether we like it or not and the amount of production that is being done in high [definition] now in terms of high quality production and drama is very significant – as I said, 70 per cent of the US prime time is all in high [definition]; a lot of Europe is already moving to high [definition] transmission.²⁷

- 2.43 The Committee is cognisant of the fact that in order to have a competitive film and television production industry, Australia must keep up with digital capture, production and transmission trends exhibited by the rest of the world.

Policy and legislation background

Legislative framework

- 2.44 The Australian Government legislated for the introduction of DTTB in Australia by enacting the Digital Act as an amendment to the BSA²⁸ The main purpose of the Digital Act is to provide a regulatory regime for DTV broadcasting in Australia.²⁹
- 2.45 The framework set out by the Digital Act was further built upon by the *Broadcasting Services Amendment (Digital Television and Datacasting) Act 2000* and some subsequent amendments. Schedule 4 of the BSA relates to digital television broadcasting. Schedule 6 relates to datacasting services.
- 2.46 DCITA explained that the DTV regulatory framework places:
- A requirement on the existing commercial and national free-to-air broadcasters to commence digital terrestrial television broadcasts on 1 January 2001 in capital cities, and in regional areas between 1 January 2001 and 1 January 2004.³⁰
- 2.47 The framework does not impose any nationally applying analogue switch-off or digital rollout dates. Rather, it establishes a transition, or simulcast,

27 Sony, *transcript of evidence 7 September 2005*, p. 6.

28 DCITA, *submission no. 66*, p. 2.

29 www.acma.gov.au/ACMAINTER.65674:STANDARD:239602149;pc=PC_91833, accessed 25 October 2005.

30 DCITA, *submission no. 66*, p. 2.

period which is related to the date transmission commenced in particular regions. DCITA explained that there is:

A simulcast period of at least 8 years from the required commencement date in each area. The simulcast will last until at least the end of 2008 in metropolitan areas and until a series of later dates in regional areas depending on the timing of commencement. The simulcast period was intended to provide consumers with a range of equipment choices and time to convert to digital. (The length of the simulcast period is the subject of a statutory review scheduled to be conducted by 1 January 2006).³¹

2.48 During the simulcast period, broadcasters are required to:

Provide a simulcast of analogue services and digital standard definition television (SDTV), and a minimum amount of high definition TV (HDTV) transmissions.³²

2.49 In order to facilitate this simulcast period, the Australian Government has provided:

The loan of sufficient spectrum to each existing commercial and national broadcaster to enable them to provide all digital services required under the digital framework and to facilitate equivalent coverage between analogue and digital services:

- 7 MHz of spectrum enables a broadcaster operating in digital mode to transmit data at a rate of up to around 23 megabits per second (Mbit/s). An SDTV service typically requires 4 to 8 mbps. An HDTV version of that service requires between about 8 and 19 mbps depending on content, quality requirements and scanning parameters. Associated sound and service information data to operate the service requires around 1 to 2 mbps. Broadcasters have considerable technical flexibility to manage data within their channel; and
- analogue spectrum is to be resumed by the ABA from each broadcaster at the end of the simulcast period, having regard to its most efficient use.³³

2.50 DCITA explained the arrangements for lending spectrum to broadcasters. Each broadcaster was loaned sufficient spectrum to enable them to provide all digital services required under the digital framework and to

31 DCITA, *submission no. 66*, p. 2.

32 DCITA, *submission no. 66*, p. 2.

33 DCITA, *submission no. 66*, p. 3.

facilitate equivalent coverage between analogue and digital services. Essentially, a seven MHz channel was allocated to each broadcaster.³⁴

- 2.51 DCITA explained the HDTV transmission minimum requirements for broadcasters:

A requirement that broadcasters fill an HDTV quota of 1040 hours per calendar year (an average of around 20 hours per week), commencing July 2003 in state capitals. Commercial broadcasters are required to fill their quotas by transmitting 'true' HDTV programming whereas national broadcasters can fill their similar HDTV quota with 'upconverted' material.³⁵

- 2.52 The framework outlined a ban on the provision of multichannel broadcasting services:

A prohibition on multichannelling by commercial television broadcasters and limits on multichannelling by national broadcasters, designed to minimise the initial impact of new digital free to air (FTA) services on the pay TV sector.³⁶

- 2.53 The framework also outlined the delaying of further broadcasting licences:

A moratorium on the issue of new commercial television broadcasting licences until after 31 December 2006 (except in single and two-licence areas):

- the moratorium recognised that commercial broadcasters would need to spend approximately \$1 billion on digital conversion while being required to maintain high quality television services, including local content, during the conversion period.³⁷

- 2.54 DCITA explained that the framework discussed the regulations concerning datacasting:

Provisions for the potential introduction of 'datacasting services' - new, digital-only services that are different to traditional broadcasting services. Content restrictions apply to these services. The regime provides for the allocation of datacasting licences to

34 DCITA, *submission no. 66*, p. 2.

35 A distinction exists between material produced using HDTV cameras, or derived from 35 mm film (referred to as HDTV-originated, or 'native', material), and analogue or standard definition programming, which is produced in analogue or SDTV format and 'upconverted' or enhanced using various techniques before it is transmitted as an HDTV product. DCITA, *submission no. 66*, p. 3.

36 DCITA, *submission no. 66*, p. 3.

37 DCITA, *submission no. 66*, p. 3.

both new players and existing broadcasters, and spectrum has been reserved for potential new datacasters (there are, as yet, no standalone datacasting services, although a trial is currently underway in Sydney):

- the main restrictions on datacasting content relate to the provision of certain genres of programs commonly provided on FTA television;
- datacasting licensees are allowed to provide information-only programs;
- FTA broadcasters may use spare digital capacity on their allocated digital channels to provide datacasting services, subject to obtaining a datacasting licence, but cannot obtain a datacasting licence in other spectrum set aside for datacasting services; and
- from 1 January 2007, the range of services which could be provided by datacasters may broaden to include certain types of broadcasting services e.g. pay TV services, narrowcast services.³⁸

2.55 DCITA added that the conversion framework includes:

- the provision of financial assistance (around \$250 million over 13 years) under the Regional Equalisation Program. This assistance takes the form of rebates on licence fees and grants to assist regional and remote commercial broadcasters to undertake the conversion process. It is intended to meet half the broadcasters' costs for non-content aspects of their digitisation during the simulcast period; and
- funding for the full costs of the ABC's and SBS's digital transmission and distribution services.³⁹

2.56 DCITA stated that the framework adopted by the Australian Government recognises the high conversion costs of DTV to industry and consumers.⁴⁰

2.57 DCITA also explained that the framework is intended to provide for a managed transition to digital broadcasting by ensuring that consumers can continue to access high quality broadcasting services, and by providing ongoing regulatory certainty for broadcasters who have to make significant capital investments in digital technology.⁴¹

38 DCITA, *submission no. 66*, pp. 3-4.

39 DCITA, *submission no. 66*, p. 4.

40 DCITA, *submission no. 66*, p. 4.

41 DCITA, *submission no. 66*, p. 4.

- 2.58 DCITA further explained that the simulcast period was intended to provide consumers with time to consider their options and choose how and when to convert to DTV.⁴²
- 2.59 Various aspects of this regulatory framework are under review by DCITA. The review process is discussed next.

Australian Government Reviews

- 2.60 The Australian Government is in the process of conducting a number of reviews to help evaluate progress in implementing DTV and the effectiveness of the current regulatory framework.
- 2.61 Schedule 4 of the BSA required a number of digital policy reviews to be conducted by 1 January 2005. Several of the specific statutory reviews were grouped into four broad thematic reviews, each of which was launched in 2004 with the release of an issues paper and call for submissions in response.⁴³ The DCITA submission outlined the reviews to be conducted:
- The first thematic review examined whether restrictions on additional programming provided by free to air broadcasters, including multichannelling and other types of services such as pay television channels, should be modified. Submissions to this review were sought by 30 July 2004. The department received 38 submissions and one supplementary submission.
 - The second review covered matters relating to the end of the moratorium on the issuing of new commercial television licences, which concludes on 31 December 2006. In 2004 the Government announced its intention to amend the current legislative arrangements so that the power to allocate new commercial television broadcasting licences is vested in the Government rather than the ABA. This review provides an opportunity to consider how this change should be implemented.
 - This second review also examined the arrangements for the conversion of any datacasting licences to other types of broadcasting licence as well as the licence conditions that should apply to any new commercial television licences. Submissions to this review were sought by 24 September 2004. The department received 17 submissions.
 - A third review examined the efficient allocation of spectrum for television and datacasting services, while the fourth review examined the operation of legislation related to markets with
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42 DCITA, *submission no. 66*, p. 4.

43 DCITA, *submission no. 66*, p. 15.

only one or two commercial television broadcasters. Issues papers for both these reviews were released on 1 December 2004 and submissions were received.⁴⁴

- 2.62 There is a statutory obligation to report to Parliament on the outcome of these reviews. DCITA indicated that the Australian Government will consider these four thematic reviews and will respond as appropriate.⁴⁵
- 2.63 As of February 2006, the outcomes of the reviews have not been reported to Parliament.
- 2.64 The DCITA submission outlined further reviews to be conducted:
- A review of the viability of establishing an indigenous television broadcasting service and the regulatory arrangements that should apply to the digital transmission of such a service was also launched on 10 May 2004. Submissions closed on 30 September 2004. Forty-nine submissions were received. In addition to releasing an issues paper for public comment, DCITA conducted public consultation around Australia for this review.
 - A review of the HDTV quotas is required to be conducted by 1 July 2005. This review will examine the regulatory arrangements that should apply to HDTV transmissions in metropolitan, regional and remote areas of Australia. Submissions closed on 24 June 2005.
 - A review of the duration of the simulcast period is required to be conducted by 1 January 2006. This review will examine the process for the transition to full digitisation and the cessation of analogue broadcasting.⁴⁶
- 2.65 The Committee expects that the recommendations from this report will be incorporated into the reviews being conducted by DCITA.

Digital television rollout

- 2.66 This section of the report looks at the progress of the rollout of DTV infrastructure across Australia and the coverage of DTV transmissions available to date.

44 DCITA, *submission no. 66*, pp. 15-16.

45 DCITA, *submission no. 66*, p. 16.

46 DCITA, *submission no. 66*, p. 16.

Rollout planning

- 2.67 The Australian Communications and Media Authority (ACMA) was formed on 1 July 2005, from the merger of the Australian Broadcasting Authority (ABA) and Australian Communications Authority.
- 2.68 The ACMA plans the channels that radio and television services use, issues and renews licences, regulates the content of radio and television services and administers the ownership and control rules for broadcasting services.⁴⁷
- 2.69 The ACMA is responsible for managing the conversion of television transmissions from analogue to digital.⁴⁸
- 2.70 Schedule 4 of the BSA requires the ACMA to develop legislative schemes for the conversion of commercial and national television broadcasting services from analogue to digital mode over a period of time. The ACMA is empowered under the conversion schemes to develop Digital Channel Plans (DCPs) which will determine the channels to be allotted in each area and assigned to each broadcaster as well as the technical limitations and characteristics of those channels.⁴⁹
- 2.71 The ACMA's objective in preparing the DCPs is to enable a broadcaster to plan its digital transmission coverage to match its analogue coverage.⁵⁰ A full list of DCPs can be found on the ACMA's archive website.⁵¹

Rollout progress

- 2.72 DCITA claims that significant progress has been made in the rollout of digital free-to-air television transmissions in Australia.⁵²
- 2.73 Commercial and national digital broadcasting services commenced in Sydney, Melbourne, Brisbane, Adelaide and Perth on 1 January 2001.⁵³

47 www.acma.gov.au/ACMAINTER.65674:LANDING:1807859880:pc=RADIOTV,tlp=RADIOTV, accessed 25 October 2005.

48 DCITA, *submission no. 66*, p. 4.

49 www.acma.gov.au/ACMAINTER.65690:STANDARD:2129172694:pc=PC_91842, accessed 25 October 2005.

50 www.acma.gov.au/ACMAINTER.65674:STANDARD:506195048:pc=PC_91851, accessed 2 November 2005.

51 www.aba.gov.au/newspubs/radio_TV/broadcast_planning/DCPs.shtml, accessed 2 November 2005.

52 DCITA, *submission no. 66*, p. 5.

53 DCITA, *submission no. 66*, p. 5.

- 2.74 In other areas of Australia, television broadcasters were required to start digital transmissions at one site (at least) in each licence area some time between 1 January 2001 and 1 January 2004.⁵⁴
- 2.75 Digital services have also commenced in all regional licence areas. According to ACMA, an estimated 84 per cent of the Australian population now has access to digital services from all their local free-to-air broadcasters, and around 96 per cent of the population (or 95 per cent of households) has access to at least one DTV service.⁵⁵
- 2.76 DCITA, in quoting the ABA Annual Report 2003-2004, stated that by June 2004, 315 digital transmitters had commenced operation at 106 transmission sites covering a number of metropolitan areas and major regional centres across Australia.⁵⁶
- 2.77 The ACMA stated that, at 30 June 2005, 526 digital transmitters had commenced covering all metropolitan markets, a number of major regional centres and some remote areas.⁵⁷
- 2.78 DCITA explained the rollout progress of the national broadcasters:
- ... by the end of March 2005, implementation plans have been approved for 154 ABC digital television services and 117 SBS digital television services. It is estimated that ABC and SBS have around 440 and 230 analogue sites respectively.⁵⁸
- 2.79 Broadcast Australia stated that ABC digital television services now reach over 96 per cent of Australia's population.⁵⁹
- 2.80 Broadcasters are continuing to establish digital transmitters in some areas, particularly smaller regional areas. DCITA explained that the BSA requires broadcasters to achieve equivalent digital coverage as is currently achieved by analogue services as soon as practicable and by the end of the eight year simulcast period.⁶⁰
- 2.81 There is no deadline for the commencement of digital services in remote areas, however, DCITA explained that arrangements have been approved for the introduction of digital commercial television services in remote

54 www.acma.gov.au/ACMAINTER.65674:STANDARD::pc=PC_90055, accessed 25 October 2005.

55 DCITA, *submission no. 66*, p. 5.

56 DCITA, *submission no. 66*, p. 5.

57 ACMA (2005) *ABA Annual Report 2004-2005*, ACMA, p. 24.

58 DCITA, *submission no. 66*, p. 5.

59 Broadcast Australia Pty Ltd, *submission no. 41*, p. 8.

60 DCITA, *submission no. 66*, p. 5.

Western Australia (WA), expected to commence in 2006. DCITA added that negotiations are continuing with commercial licensees Southern Cross Broadcasting (Australia) Ltd (SCB) and Imparja, in the remote Central and Eastern Australia licence area, regarding the development of a digital conversion model.⁶¹

2.82 The ACMA's website provides a timeline of events for the rollout of DTV.⁶² The information from the timeline is summarised in Table 2.1.

Table 2.1 Digital television rollout: timeline of events.

Date	Event
July 1998	Introduction of the Television Broadcasting Services (Digital Conversion) Act 1998
March 1999	ABA releases the Commercial and Draft National Television Conversion Scheme
April 1999	ABA releases Draft Metropolitan Digital Channel Plans (Includes five mainland capital cities, Hobart, Newcastle, Canberra, Wollongong, Batchelor, Toowoomba)
July 1999	ABA releases documents to outline the technical and general assumptions used in allocating digital channels to broadcasters
July 1999	ABA releases Digital Channel Plans for several metropolitan markets (Brisbane and Toowoomba; Darwin and Batchelor; Sydney, Newcastle and Wollongong)
October 1999	Release of further Digital Channel Plans for metropolitan markets (Adelaide, Canberra, Hobart, and Melbourne)
22 Dec 1999	Announcement by the Minister: "Digital - New Choices, Better Services for Australians"
Mid 2000 to Jan 2001	Digital television transmitters set-up and testing of digital signal
1 Jan 2001	Commencement of Digital Transmissions in Metropolitan Areas (Five mainland capital cities, Hobart, Newcastle, Canberra, Wollongong, Batchelor, Toowoomba)
1 Jan 2001 to 1 Jan 2004	Commencement of Digital Transmissions in Regional Areas
1 Jan 2003	High-definition programming quotas come into effect
2005	Reviews to be finalised by Minister
31 Dec 2006	New commercial television broadcasting licences may be issued
2008	Prescribed end of analogue simulcast period in metropolitan areas

Source ACMA website: http://www.acma.gov.au/ACMAINTER.65674:STANDARD:239602149:pc=PC_91834

2.83 The ACMA stated that its intention is to make sure the rollout occurs quickly. The ACMA claimed that it has considered the digital implementation plans that each broadcaster develops and has planned all

61 DCITA, *submission no. 66*, p. 5.

62 www.acma.gov.au/ACMAINTER.65674:STANDARD:239602149:pc=PC_91834, accessed 25 October 2005.

the main transmission sites in the country. The ACMA added that they will have completed all repeater sites by May 2006, with the exception of the remote satellite markets.⁶³

2.84 The ACMA admitted that, although the bulk of the population will be covered very quickly, it is possible that some of the rollout of transmission repeaters, rather than main stations, may not be finished until 2012 in some regional areas.⁶⁴

2.85 The ACMA explained the rollout task:

The conversion scheme actually says that, during the eight years, [broadcasters] have to achieve the same coverage as soon as possible. That is relatively easy in markets that have one or two transmitters, such as Darwin or Adelaide, but it is an enormous challenge in some of the aggregated markets or in Tasmania, where you might have dozens or even 60 or 80 transmitters. It is an enormous logistical piece of work.⁶⁵

Broadcasters

2.86 Free TV Australia stated that free broadcasters have invested significantly in upgrading their television production and transmission facilities to digital technology, and that the free-to-air digital roll-out is expected to cost up to \$1 billion by the time it is complete.⁶⁶

2.87 Free TV Australia stated that '[t]echnically, the roll-out has been quicker and more successful ... than anywhere else in the world to date'.⁶⁷ They added that '[w]e have rolled out digital services across Australia with minimum interference to the existing analogue services'.⁶⁸

2.88 Free TV Australia explained that regional broadcasters are expected to complete their digital rollout in both SD and HD formats by 2012. However, by 2008 it is expected that the vast bulk of regional television audiences will have all their local services being transmitted in digital.⁶⁹

2.89 SBS claimed that the Australian digital transmission rollout has been highly successful and of a scale, speed and complexity unparalleled in

63 ACMA, *transcript of evidence 1 June 2005*, p. 11.

64 ACMA, *transcript of evidence 1 June 2005*, p. 16.

65 ACMA, *transcript of evidence 1 June 2005*, p. 16.

66 Free TV Australia, *submission no. 31*, p. 3.

67 Free TV Australia, *transcript of evidence 25 May 2005*, p. 3.

68 Free TV Australia, *transcript of evidence 25 May 2005*, p. 2.

69 Free TV Australia, *submission no. 31*, p. 7.

- international markets. SBS claimed that the rollout of SBS digital transmission services is due to be complete by 2007.⁷⁰
- 2.90 The ABC stated that it is now in the process of rolling out in-fill transmitters to meet its obligations to achieve the same level of coverage as is provided by its existing analogue services.⁷¹
- 2.91 Broadcast Australia is contracted to roll-out ABC digital services nationally, and claimed that ABC digital television services, broadcast from 131 transmitters⁷², now reach over 96 per cent of Australia's population.⁷³
- 2.92 The ABC added that it is required to match its analogue coverage in metropolitan areas by 2008 and in regional areas by 2012. The ABC claimed that it has already met its quota for metropolitan areas ahead of schedule.⁷⁴
- 2.93 The ABC explained that its transmitters will continue to be rolled out in regional areas over the next seven years, at a rate of approximately 40 new transmitters each year, in order to meet the regional deadline of 2012. The ABC claimed its digital signal will reach 98 per cent of the country, which is broadly equivalent to current analogue coverage.⁷⁵

Regional rollout

- 2.94 Regional broadcasters were required to commence DTV broadcasts between 1 January 2001 and 1 January 2004.⁷⁶ The end date for regional simulcast is projected to be 31 March 2011.⁷⁷
- 2.95 Regional broadcasters face a huge task in rolling out a full service to all areas, given the large number of transmitters involved.⁷⁸
- 2.96 However, regional broadcasters reported that rollout is expected to be complete around the same time as the scheduled metropolitan analogue switch-off.

70 SBS, *submission no. 62*, p. 4.

71 ABC, *submission no. 45*, p. 12.

72 ABC, *submission no. 45*, p. 12.

73 Broadcast Australia, *submission no. 41*, p. 8.

74 ABC, *submission no. 45*, p. 12.

75 ABC, *submission no. 45*, p. 12.

76 DCITA, *submission no. 66*, p. 2.

77 WIN, *transcript of evidence 1 September 2005*, p. 26.

78 www.aba.gov.au/broadcastserv/digital/tv/channels.shtml, accessed 1 November 2005.

- 2.97 WIN Corporation (WIN) stated that the majority of major regional areas already have digital reception.⁷⁹ WIN added that the rollout of its high powered transmitters will be complete in 2006 with coverage of approximately 85 per cent of WIN viewers. WIN added that the end of 2006 will see it moving into the next stage of the roll-out, which is the low powered transmitters, and then assessing the necessity for in-fill translators to achieve the legislated same coverage.⁸⁰
- 2.98 SCB stated that it has 215 sites at which digital transmitters must be installed. SCB explained further:
- In an impressive and highly committed engineering effort, we have delivered digital services to 26 of the 30 separate television markets in which we operate, reaching approximately 80 per cent of the total viewing population in those markets. We are now in the process of commissioning a number of low-power sites to cover the remainder of the population in each market.⁸¹
- 2.99 SCB stated that it will have completely rolled out digital transmission facilities in all markets by 2008.⁸²

Potential problems in achieving rollout

- 2.100 Some issues have been identified that may have an impact on achieving complete rollout and analogue switch-off.
- 2.101 The ABC is uncertain whether the current approach to spectrum planning for DTV will be able to truly achieve the objective of equivalent coverage. The ABC provided an example:

The Corporation has already identified digital broadcast areas where it has not been possible to achieve equivalent coverage to analogue services. For example, the ABC's analogue service to the Bega/Cooma region is transmitted on VHF Channel 8 from Brown Mountain, while its digital service will be transmitted using UHF spectrum. As a result, the ABC's coverage will be reduced by between 769 and 1,634 households, depending on the siting of the digital transmitter, a decline in effective coverage of between 7% and 14%.⁸³

79 WIN, *submission no. 56*, p. 1.

80 WIN, *transcript of evidence 1 September 2005*, p. 27.

81 SCB, *transcript of evidence 1 September 2005*, p. 16.

82 SCB, *transcript of evidence 1 September 2005*, p. 22.

83 ABC, *submission no. 45*, p. 13.

- 2.102 The ABC also stated that there are a number of areas where DTV services are currently operating at power levels below those ultimately planned to prevent interference with existing analogue transmissions:

It will not be known whether these services will be able to achieve equivalent coverage when operating at full power until the cessation of the analogue services; the installation of further transmitters may be necessary to ensure that the objective of equivalent coverage is met.⁸⁴

Interference management

- 2.103 DCITA stated that an interference management scheme was established and funded by the broadcasting industry to minimise any effects on consumers of interference to analogue transmissions caused by digital transmissions.⁸⁵

- 2.104 DCITA explained that:

The scheme was designed to protect viewers' analogue services and to ensure that if interference occurs, the problem is resolved quickly. As part of the scheme, an interference hotline was established, which gives viewers advice on, and assistance with, interference issues - particularly with interference to video cassette recorders, with poor reception of analogue services, and information on rollouts, where necessary.⁸⁶

- 2.105 Free TV Australia explained that:

... all free-to-view digital television broadcasters have co-operatively formed an Analogue Interference Assistance Scheme to inform analogue television viewers of possible interference to their reception (caused by near-by digital free-to-view television transmissions) and to manage and provide assistance in resolving interference problems.⁸⁷

- 2.106 Free TV Australia explained that the interference management scheme is designed to provide mechanisms to solve any problems so that the digital rollout takes place with minimal disruption to analogue viewing.⁸⁸

84 ABC, *submission no. 45*, p. 13.

85 DCITA, *submission no. 66*, p. 9.

86 DCITA, *submission no. 66*, p. 9.

87 Free TV Australia, *submission no. 31*, p. 10.

88 Free TV Australia, *submission no. 31*, p. 10.

- 2.107 Free TV Australia claimed that the broadcasters have now spent close to \$3 million on the scheme since its inception in December 2000. The scheme has received more than 300 000 calls, and more than 250 000 leaflets and brochures have been downloaded from the internet or sent out by the broadcasters to interested viewers.⁸⁹
- 2.108 Free TV Australia believes that a positive sign is that only 2 000 homes visits have been required to be authorised under the scheme.⁹⁰
- 2.109 Free TV Australia also stated that:
- The level of interference that has been caused to analogue reception during the roll-out of free-to-view digital television so far has been minimal compared to any estimate made prior to it commencing in December 2000.⁹¹
- 2.110 The Committee is satisfied that the interference management scheme is operating effectively, and credits the cooperation between broadcasters, DCITA and the ACMA.

Digital television coverage

- 2.111 Details of DTV coverage available to consumers is available from DBA.
- 2.112 DBA was formed to help make the transition from analogue to DTV as seamless as possible for the consumer. The DBA mission is to gain the cooperation and coordination of the free-to-air broadcasters, consumer electronics suppliers, retailers and installers in the promotion of the introduction of digital free-to-air television into Australia, to ensure the transition from analogue to digital occurs efficiently and effectively, and to the benefit of the television and associated industries, viewers and consumers.⁹²
- 2.113 DBA provides its members and consumers with information about DTV commencement dates and coverage, the functionality and availability of equipment, retailer locations and the range of DTV programs and enhancements to be broadcast. DBA also encourages training programs for sales staff, service technicians and antenna installers.⁹³

89 Free TV Australia, *submission no. 31*, p. 10.

90 Free TV Australia, *submission no. 31*, p. 10.

91 Free TV Australia, *submission no. 31*, p. 10.

92 www.dba.org.au/index.asp?sectionID=68, accessed 25 October 2005.

93 www.dba.org.au/index.asp?sectionID=29, accessed 25 October 2005.

2.114 DBA produces a bi-monthly newsletter, which includes an updated listing of the markets which, at that time, receive digital television. Table 2.2 below lists the television markets with DTV coverage.

Table 2.2 List of markets with digital television coverage – February/March 2005

State/Territory	All local broadcasters transmitting digital tv	Some local broadcasters transmitting digital tv
NSW/ACT	Sydney, Canberra, Newcastle, Wollongong, Central Coast, Griffith, Bowral/Mittagong, Orange & Central Tablelands, Wagga Wagga, Broken Hill, Lismore/Richmond/Tweed	Bathurst, Dubbo/Central Western Slopes, Grafton/Kempsey, Batemans Bay, Coffs Harbour, Port Macquarie/Taree/Forster, Murwillumbah, Upper Namoi, Ulladulla, Narooma, Nowra North, Cooma, Lithgow, South West Slopes, Tamworth, Armidale
Victoria	Melbourne, Hamilton/Western Victoria, Mildura/Sunraysia, La Trobe Valley, Ballarat, Shepparton/Goulburn Valley	Bendigo, Murray Valley
Queensland	Brisbane, Gold Coast, Sunshine Coast (Gympie, Nambour, Noosa), Rockhampton, Townsville, Cairns, Wide Bay, Toowoomba, Darling Downs	Southern Downs, Mackay, Gladstone, Boyne Island, Blackwater, Charters Towers
South Australia	Adelaide, Mt Gambier/Sth East, Renmark/Riverland, Spencer Gulf North	
Western Australia	Perth	Albany, Bunbury, Broome, Carnarvon, Central Agricultural, Geraldton, Kalgoorlie, Southern Agricultural, Port Hedland, Narrogin, Wagin, Esperance, Karratha, Manjimup
Tasmania	Hobart, Launceston, NE Tasmania	
Northern Territory	Darwin	Katherine

Source *Free to View Digital Television Information Bulletin [Aug-Sept 2005], Digital Broadcasting Australia, <http://www.dba.org.au/newsletter/1B-FebMar06-full.asp>*

2.115 Based on its May 2005 figures, DBA claimed that around 85 per cent of television households have all their local digital free-to-air channels available to them. DBA explained that this translates to 6.4 million of the 7.6 million Australian television homes.⁹⁴

2.116 The DBA supplementary submission provided updated figures:

In the period since May 2005, one further large coverage area, Richmond/Tweed in Northern NSW, has joined the list of coverage areas where a full range of local free to air services are now available in digital. Accordingly DBA estimates that some

94 DBA, submission no. 34, p. 3.

87% of the Australian population now has all local free to air television services available in digital form. In other words around 6.6 million of Australia's 7.6 million TV homes now have a full range of local free to view digital TV services available.⁹⁵

- 2.117 The DBA website provides a reception locator facility. Consumers can choose any region and location, or simply enter their postcode, to see details of what digital services are operational in that area and what services are expected. Information on the availability of DTV is provided by DBA, ACMA and the broadcasters.
- 2.118 The ACMA website provides a general locator facility, indicating which broadcasters are in a particular area, searchable by postcode.⁹⁶ The ACMA website links to the DBA website for DTV reception in particular areas.
- 2.119 The ACMA website provides a list of channel allocations for each network, in each area served, for every state.⁹⁷
- 2.120 The ABC has a comprehensive reception advice website that includes an introduction to DTV.⁹⁸ The website includes a reception locator facility, providing frequency information for all ABC services in a given area. The facility is searchable by postcode, town or suburb name, state or ABC service type, and coverage maps are provided.⁹⁹ The website also advertises the ABC 1300 number 'Reception Adviceline'.

Take-up rates in Australia

Measuring take-up

- 2.121 The Committee received evidence regarding DTV take-up rates from DBA, ACMA and a market research company called GfK Australia.

DBA data

- 2.122 DBA explained that there are at least three relevant ways to look at or measure DTV take-up. These are sales of digital receivers to retailers,
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95 DBA, *submission no. 92*, p. 1.

96 www.aba.gov.au/broadcastserv/broadcasters/postcode_acma.shtml, accessed 1 November 2005.

97 www.acma.gov.au/ACMAINTER.65690:STANDARD:2129172694:pc=PC_90056, accessed 1 November 2005.

98 www.abc.net.au/reception/digital, accessed 2 November 2005.

99 www.abc.net.au/reception/freq, accessed 2 November 2005.

television home take-up and converted television sets. DBA also noted that each of these view points is subject to some estimate.¹⁰⁰

Sales of digital receivers to retailers

- 2.123 DBA stated that sales to retailers are how the main consumer electronic industry statistics are reported. However, DBA points out that the main official reporting agencies do not include sales to retailers by entities that do not subscribe to the sales information service. DBA stated that it supplements the official data by collecting similar sales figures directly from those DBA members who do not subscribe to these services.¹⁰¹
- 2.124 Based on the sources described, DBA reported sales of 777 000 free-to-air digital television receivers as at 31 March 2005 and estimates that as at 1 May 2005 in the order of 820 000 have been sold to retailers. DBA added that digital receiver sales have been around 40 000 per month for the last nine months.¹⁰²
- 2.125 In its supplementary submission, DBA estimated that, at the end of June 2005, some 920 000 free-to-air DTV receivers (either set-top boxes or integrated DTV sets) had been sold by manufacturers and suppliers to retailers and installers.¹⁰³
- 2.126 DBA estimated that some 47 500 free-to-air DTV receivers per month were sold to retailers and installers during the June quarter.¹⁰⁴
- 2.127 DBA estimated that some 54 500 free-to-air DTV receivers per month were sold to retailers and installers during the September 2005 quarter, a 35 per cent increase on the same period in 2004.¹⁰⁵
- 2.128 DBA's September quarter figures report that suppliers have sold 1 085 000 free-to-air DTV receivers to retailers, with just over half that number sold in the past 12 months.¹⁰⁶

100 DBA, *submission no. 34*, p. 4.

101 DBA, *submission no. 34*, p. 4.

102 DBA, *submission no. 34*, p. 4.

103 DBA, *submission no. 92*, p. 1.

104 DBA, *submission no. 92*, p. 1.

105 DBA, www.dba.org.au/uploads/documents/DBA_Media_Release_03Nov2005.pdf, accessed 4 November 2005.

106 DBA, www.dba.org.au/uploads/documents/DBA_Media_Release_03Nov2005.pdf, accessed 4 November 2005.

Television home take-up

- 2.129 DBA stated that sales of digital receivers to retailers do not directly compute into free-to-air DTV home take-up or penetration rates. DBA explained that this is because a certain amount of sales to retailers are held in inventory. This is an estimate of around 50 000 receivers or one month of stock. DBA further explained that an unreported number of television homes will have more than one free-to-air DTV receiver. Therefore the home take-up rate will be less than the sales of digital receivers.¹⁰⁷
- 2.130 DBA added that, based on the United Kingdom (UK) experience, at the early stages of take-up, sales to viewers can be taken as a near proxy to home take-up or penetration. However for the purpose of completeness the DBA submission assumed around 50 000 free-to-air DTV homes have more than one free-to-air digital television receiver.¹⁰⁸
- 2.131 DCITA stated that The Office of Communications (Ofcom) in the UK calculates DTV penetration adjusted to incorporate the number of households with more than one digital set and estimates that around 25 per cent of sales in the last quarter of 2004 were for second sets. DCITA is not aware of any records on the percentage of sales which are second sets in the Australian market.¹⁰⁹
- 2.132 DBA explained that after putting these figures together:
- ... the current (1 May 2005) home take-up or penetration, based on the sales figures estimated by DBA is 720,000 (820,000 less 100,000) or around 11.2% of the homes in areas where a full suite of local free-to-view digital television services are available and 9.5% of all Australian television homes.¹¹⁰
- 2.133 As at 31 June 2005, DBA estimated that some 820 000 (after making allowances as calculated in the above example) homes in Australia had free-to-air DTV capability. This means that in the order of 10.8 per cent of all 7.6 million Australian television homes had the ability then to receive free-to-air DTV, up from 9.5 per cent in the previous quarter.¹¹¹

107 DBA, *submission no. 34*, p. 4.

108 DBA, *submission no. 34*, p. 5.

109 DCITA, *submission no. 66*, p. 7.

110 DBA, *submission no. 34*, p. 5.

111 DBA, *submission no. 92*, p. 1.

- 2.134 DBA estimated that, based on the September 2005 quarter figures, approximately 985 000 homes, or 13 per cent of Australian television homes, had free-to-air DTV capability.¹¹²
- 2.135 The DBA explained that there are some sales of digital receivers which are not reported through the official supplier sales channels or estimated by DBA. These include:
- direct importation of receivers by retailers;
 - supply of receivers to retailers by some non-DBA members/ non-sales report service subscribers; and
 - sales of free-to-air DTV peripheral communication interface cards enabling free-to-air digital television viewing on personal computers.¹¹³
- 2.136 DBA also stated that there will be some digital receivers that have been returned to retailers and perhaps some that are no longer being used.¹¹⁴
- 2.137 DBA explained that there are a number of homes in multi-unit dwellings where free-to-air digital signals are converted to analogue at the head end and then reticulated through to residents in analogue form. In the context of considering the cessation of analogue television signals, this latter development may be relevant, but it does not represent home take-up of free-to-air DTV.¹¹⁵
- 2.138 DBA concluded that the above factors would probably boost the 11.2 per cent and 9.5 per cent home up-take figures mentioned to around 12 per cent and 10.2 per cent respectively.¹¹⁶

Converted television sets

- 2.139 DBA's third estimate of take-up looks at the total number of analogue television sets in the marketplace, determining how many of those have been converted. DBA claims that it is generally accepted that the 7.6 million television homes in Australia have on average two working television sets each, producing an Australia wide household total of 15.2 million sets.¹¹⁷

112 DBA, www.dba.org.au/uploads/documents/DBA_Media_Release_03Nov2005.pdf, accessed 4 November 2005.

113 DBA, *submission no. 34*, p. 5.

114 DBA, *submission no. 34*, p. 5.

115 DBA, *submission no. 34*, p. 5.

116 DBA, *submission no. 34*, p. 5.

117 DBA, *submission no. 34*, p. 5.

- 2.140 DBA, using its estimate of 770 000 free-to-air digital receivers in people's homes (820 000 less 50 000 retailer inventories), calculated that around five per cent of the total working analogue television set population was converted as at 1 May 2005.¹¹⁸
- 2.141 DBA estimates that, at the current level of new television set sales, additions to the working inventory of analogue television sets each year in Australia could be as high as one million. Any television set to be used to watch free-to-air television after any analogue switch off date will need to be converted to digital in one way or another. Currently DBA estimates that there are around 14.5 million unconverted television sets in Australia, with that number being added to significantly each year.¹¹⁹

ACMA data

- 2.142 The ACMA commissioned Eureka Strategic Research (ESR) to conduct community research on digital media in Australian households. ACMA explained:

The purpose of the research was to understand how people are moving to the various digital media platforms, to look at the drivers and inhibitors towards the adoption of digital terrestrial television and then look at some general awareness and satisfaction issues relating to digital media.¹²⁰

- 2.143 Consultants from ESR presented to the Committee initial findings relating to free-to-air DTV, contrasting adopter households' motivations and experiences with the expectations and intentions of non-adopter households.¹²¹
- 2.144 The research was based on a nationally representative sample of 1 148 households with televisions. Within that sample, 149, or 13 per cent of households were free-to-air DTV adopters.¹²²
- 2.145 The Committee notes that this estimate of DTV penetration is slightly higher than that measured by DBA.
- 2.146 The research found that, of the 2 608 total televisions in the random sample of 1 148 households, 185, or seven per cent, were free-to-air DTV capable.¹²³

118 DBA, *submission no. 34*, p. 5.

119 DBA, *submission no. 34*, p. 5.

120 ACMA, *transcript of evidence 17 August 2005*, p. 2.

121 ACMA, *transcript of evidence 17 August 2005*, p. 2.

122 ACMA, *transcript of evidence 17 August 2005*, p. 3.

- 2.147 The Committee notes that this figure is slightly higher than the figure of five per cent presented by DBA.

GfK Australia data

- 2.148 GfK Australia specialises in retail tracking measurement, and consumer panel and ad hoc research.¹²⁴
- 2.149 GfK Australia collates the actual sales data from almost every electrical retailer in Australia. Data is obtained from retailer EFTPOS systems, processed and aggregated, and reports are made to the industry on exactly what is being purchased.¹²⁵
- 2.150 In reference to other DTV penetration measurements and data collection methods, GfK Australia commented:

Regardless of what the samples are saying about the number of households acquiring, as I say, this is actual sales data. We know how many set-top boxes are being bought, and it is only about 80,000 a year. At that rate of growth, you can aggregate the total number of sales over the last three or four years and it does not come to a very big number when you work that out as a penetration level.¹²⁶

- 2.151 GfK Australia added:

I do not think more than seven per cent of Australian households have terrestrial-only digital reception.¹²⁷

- 2.152 The Committee understands that there are slight differences in the way each organisation has collected and analysed data on DTV take-up. However, the Committee is cognisant of the fact that each estimate is not significantly different to the others, with the end result being that DTV take-up in Australia is very low.

123 ACMA, *transcript of evidence 17 August 2005*, p. 3.

124 GfK, *transcript of evidence 17 August 2005*, p. 15.

125 GfK, *transcript of evidence 17 August 2005*, p. 15.

126 GfK, *transcript of evidence 17 August 2005*, p. 18.

127 GfK, *transcript of evidence 17 August 2005*, p. 18.

Why is take-up slow?

2.153 Free TV Australia claimed initial consumer take-up of digital services was slow due to a number of factors:

- There was no digital consumer equipment available in the Australian market on 1 January 2001. The first digital set top boxes were underwritten by the commercial broadcasters and arrived in early 2001.
- In accordance with the roll-out schedule set by the ABA initial coverage was limited. For example most of the in fill translators in the metropolitan markets were not rolled out until late 2003. This meant that a digital set top box or receiver might work in one part of a metropolitan market, but not another.
- The lack of equipment and coverage made it difficult to promote digital equipment to consumers.¹²⁸

2.154 However, Free TV Australia claimed that take-up achieved by free-to-air DTV has been consistent with the traditional take-up rate for comparable consumer electronic devices such as DVDs, video cassette recorders (VCRs), colour television and radio at the same time after initial launch.¹²⁹

2.155 Network Ten claimed that, while the take-up of free-to-air digital was slow at the outset, the take-up of DTV in Australia compares well with the take-up of DTV in the UK.¹³⁰ Further discussion on the UK can be found later in this Chapter.

2.156 The subscription television sector claimed that it has contributed to the take-up of DTV in Australia. Further discussion on the subscription television sector can be found in Chapter 3.

No additional benefits

2.157 The Seven Network claimed that the primary reason for the low take-up of DTV in Australia is the lack of a clear value proposition for consumers.¹³¹

2.158 Many submissions to the inquiry aired views concerning the lack of additional benefits of taking up DTV.

2.159 Mr Michael Grant, a private individual, provided the following opinion on DTV:

128 Free TV Australia, *submission no. 31*, p. 9.

129 Free TV Australia, *submission no. 31*, p. 9.

130 Network Ten, *submission no. 60*, p. 8.

131 Seven Network, *submission no. 49*, p. 2.

The Australian public is clearly not going to endorse digital TV until there are significant benefits. The technical benefits of digital TV (widescreen, clearer pictures) are not going to encourage more than a small (early adopters) percentage of Australian to make the effort to upgrade to digital.¹³²

2.160 The Media Entertainment and Arts Alliance remarked that:

Given that Australians have long been known as very fast adopters of new technologies, the fact that take-up of digital services has been slow indicates that what is on offer – enhanced picture and sound quality – is nowhere near sufficiently attractive to drive the decision to acquire a set-top box.¹³³

2.161 The Australian Film Commission stated that the take-up of free-to-air DTV receivers has been slow, and is widely attributed to a lack of compelling new programming offering a point of difference to what is already available to analogue viewers.¹³⁴

2.162 The ACA claimed:

A current challenge for DTV is that there does not seem to be a particularly attractive proposition for consumers to motivate them to purchase a DTV receiver ... there is a paucity of receivers and integrated sets for consumers to choose from. There is also no critical improvement or innovation in services to motivate consumers.¹³⁵

2.163 The ACA added that 'transition is being driven by legislated push rather than market pull from consumers'.¹³⁶

Lack of content

2.164 The lack of additional benefits such as new content is believed to have contributed to slow take-up of DTV in Australia. This opinion was reflected in a number of submissions from viewers and from consumer groups.

2.165 The Seven Network believes that lack of content has contributed to slow DTV take-up.¹³⁷ However, the Nine Network and Network Ten believe that increased viewer choice will lead to poor quality programming.¹³⁸

132 Michael Grant, *submission no. 26*, p. 1.

133 Media Entertainment and Arts Alliance, *submission no. 58*, p. 9.

134 Australian Film Commission, *submission no. 54*, p. 2.

135 ACA, *submission no. 47*, p. 5.

136 ACA, *submission no. 47*, p. 6.

- 2.166 The issue of additional content is discussed in detail as part of the multichannelling issues in Chapter 4.

Poor consumer awareness

- 2.167 Broadcast Australia stated that there is a general lack of consumer awareness that DTV will one day replace the analogue service.¹³⁹
- 2.168 Samsung Electronics Australia Pty Ltd (Samsung) remarked that it is possible that limited awareness and confusion by consumers is contributing to the slow penetration rates.¹⁴⁰ Samsung recommended that, as the regulator of the industry, the Australian Government has a significant role in terms of informing consumers about choice and availability.¹⁴¹
- 2.169 LG Electronics Australia Pty Ltd (LG) claimed there are several reasons why DTV has not been embraced as widely as other technologies, most of which relate to awareness. LG stated that, in a highly technical arena, there has not been a concerted effort to make consumers aware of DTV.¹⁴²

Western Australian survey example

- 2.170 DTV broadcasting began in Perth on 1 January 2001. Two years later, the Western Australian Department of Industry and Resources (WADIR) conducted a comprehensive and statistically valid analysis of the communications needs of regional Western Australians.¹⁴³
- 2.171 WADIR explained that it surveyed over 1 000 households randomly selected throughout the state, including a control group of 100 in the metropolitan area.¹⁴⁴
- 2.172 One of the questions from the WADIR survey related to people's familiarity with DTV. Households were asked to select a statement which best described their level of understanding of DTV.¹⁴⁵

137 Seven Network, *submission no. 49*, p. 2.

138 Nine Network, *submission no. 59*, p. 1; Network Ten, *submission no. 60*, p. 3.

139 Broadcast Australia, *submission no. 41*, p. 12.

140 Samsung, *submission no. 87*, p. 6.

141 Samsung, *submission no. 87*, pp. 6-7.

142 LG, *submission no. 77*, p. 3.

143 WA Government (2003) *Telecommunications Needs Assessment*. Available at www.doir.wa.gov.au/tna, accessed 4 November 2005.

144 WA Government, *submission no. 89*, p. 2.

145 WA Government, *submission no. 89*, p. 2.

- 2.173 WADIR explained only 4.7 per cent of regional households and 6.9 per cent of metropolitan households had a sound understanding of DTV and had considered its use. Two years after its introduction, 29.3 per cent of regional households and 21.8 per cent of Perth households had never heard of DTV. A further 44.4 per cent of regional and 37.6 per cent of Perth households felt they could not explain the features of DTV.¹⁴⁶
- 2.174 WADIR claimed that the situation should have improved in the two years since the survey, therefore slow take-up would tend to indicate that household understanding and appreciation is still poor.¹⁴⁷
- 2.175 The WADIR submission recommended that further concerted efforts be made to have viewers clearly understand the benefits and limitations of DTV.¹⁴⁸

Analogue switch-off uncertainty

- 2.176 A submission from Mr James Cladingboel, a private individual, stated that:
- It is a widely held belief that analogue broadcasts will not cease in 2008 as indicated by the Government. While this assumption persists, the take-up of DTV will remain extremely slow.¹⁴⁹
- 2.177 Retravision Pty Ltd (Retravision) believes there is a great deal of confusion about the analogue switch-off date, and this is creating uncertainty amongst electronics suppliers and consumers. Retravision believes a firm switch-off date needs to be established so there is no uncertainty in the mind of consumers.¹⁵⁰
- 2.178 Sony believes current uncertainty around the analogue switch-off date is a major inhibitor to consumer take-up of DTV.¹⁵¹ Sony also stated that uncertainty is fragmenting industry effort, as resources continue to be directed towards marketing and sales of analogue equipment.¹⁵²
- 2.179 Further discussion on the analogue switch-off date can be found in Chapter 3.

146 WA Government, *submission no. 89*, p. 2.

147 WA Government, *submission no. 89*, p. 3.

148 WA Government, *submission no. 89*, p. 9.

149 James Cladingboel, *submission no. 35*, p. 3.

150 Retravision, *submission no. 76*, p. 2.

151 Sony, *submission no. 67*, p. 2.

152 Sony, *submission no. 67*, p. 6.

Bad experiences

2.180 The Committee received evidence concerning negative experiences with the use of DTV equipment. Several submissions were received from people who were very unsatisfied with digital products.

2.181 A submission from Mr Brian Sanders described a disappointing experience:

... it is little wonder, with word of mouth being such an influence, that take-up has been slow. Why would you risk what in many cases, (certainly in ours), amounts to an investment of thousands of dollars, only to be so totally disappointed and frustrated with the results. I have no hesitation in saying the purchase of a digital television has been one of the most unsatisfactory purchases I have ever made for my household.¹⁵³

2.182 Panasonic AVC Networks (Panasonic) in its evidence discussed DTV reception systems, which include:

... the antenna that sits on the roof, the cabling and the connectors through to a receiving device. The system itself is only as good as the weakest component.¹⁵⁴

2.183 Panasonic explained:

We believe the majority of people have a good experience from digital but there are a number of people who are having a bad experience with digital. The inquiries we get about product at our call centres show us that more than an acceptable level of people are having difficulties with the total system.¹⁵⁵

2.184 Panasonic summarised the issue of consumers having poor experiences with DTV products:

The point to all of this is that there needs to be an understanding of these consumer issues so that we can do something about them and about the negative comments about digital broadcasting. The old saying is: 'For everything that goes wrong, you get 10 people who are not going to move into the new technology. If it goes right, they are not going to worry'. [Consumers] have got analogue today and it is fine. It is not giving them a problem.¹⁵⁶

153 Brian Sanders, *submission no. 13*, p. 1.

154 Panasonic, *transcript of evidence 28 June 2005*, p. 27.

155 Panasonic, *transcript of evidence 28 June 2005*, p. 27.

156 Panasonic, *transcript of evidence 28 June 2005*, p. 28.

2.185 Further discussion on DTV equipment can be found in Chapter 5.

Changing trends

2.186 Foxtel Management Pty Ltd (FOXTEL) claimed that there is substantial evidence that DTV take-up by consumers is now accelerating rapidly, driven by the existing market forces¹⁵⁷ and participants in the television entertainment market.¹⁵⁸

2.187 Set-top box sales data from last three quarters provided by DBA indicates that sales of DTV receivers has increased considerably. The Committee is encouraged by this continued increase in set-top box sales.

2.188 Data provided by GfK Australia showed that consumers are embracing digital technology across the board, such as telecommunications, entertainment, audio and vision, imaging and home office.

DTV in other countries

2.189 Australia has the advantage of being able to assess the success of the initiatives in other countries in driving DTV and implementing a rollout plan. This section provides an overview on the rollout plans for the UK, Italy, Germany and the United States (US). It considers the use of regional or nationwide switch-off, mandated quotas for HD transmission, and subsidies for low income consumers to purchase DTV equipment.

2.190 Further detail on these initiatives is discussed in subsequent chapters in relation to options for Australia to facilitate greater DTV take-up.

2.191 While most countries are moving to DTV, the UK, Italy, Germany and the US are often cited as representing a diverse range of approaches, initiatives and successes. Each country has experienced challenges in DTV penetration and take-up rates. At the end of June 2005, there were the following estimates of take-up rates:

- UK – 63 per cent;¹⁵⁹
- Italy – 17.7 per cent;¹⁶⁰

157 FOXTEL, *submission no. 55, attachment 3*, p. 49.

158 FOXTEL, *submission no. 55*, p. 15.

159 Ofcom, *Digital Television Update – 2005 Q2*, p. 3, www.ofcom.org.uk/research/tv/reports/dtv/dtu_2005_q2/q2_2005.pdf, accessed 2 November 2005

- Germany – 25.7 per cent (as of June 2005 Berlin, Bremen and Hamburg have completely ceased analogue broadcasts);¹⁶¹ and
- US – 15 per cent.¹⁶²

United Kingdom

- 2.192 The UK digital television project was established in 2001. Ofcom, the independent regulator and competition authority for the UK communications industries, estimated that by the end of June 2005, 63 per cent of UK homes (15.7 million) were accessing DTV.¹⁶³
- 2.193 The switch-off process in the UK is coordinated by government bodies, broadcasting and community groups. The analogue switch-off process is being conducted in a region-by-region process with switch-off dates ranging from 2008 to 2012.¹⁶⁴
- 2.194 HD broadcasting has only recently started in the UK and has been largely driven by a shortage of spectrum. In contrast, HD production levels are increasing markedly.¹⁶⁵
- 2.195 The UK has introduced a logo system to assist consumers in product choices and this has assisted DTV take-up.
- 2.196 The UK analogue switch-off process is considered by many to be one of the most successful of any country.¹⁶⁶

Italy

- 2.197 Italian DTV is expanding rapidly. Almost every major network in Italy has started digital transmissions and in May 2005, 60 per cent of Italy was covered by DTV signal. By parliamentary law (known as the 'Gasparri

160 The Global Information Inc, *Top 10 European Countries by digital TV household penetration (year end)*, www.gii.co.jp/press/fi23873_en.shtml, accessed 2 November 2005.

161 The Digital Video Broadcasting Project, *Digital Television reaches nine million TV households*, www.dvb.org/index.php?id=231, accessed 21 November 2005.

162 Claudy, L., Spectrum Online, *Countdown to the end*, October 2003, www.spectrum.ieee.org/oct05/1911/dtvsb1, accessed 3 November 2005.

163 Ofcom, *Digital Television Update - 2005 Q2*, p. 3, www.ofcom.org.uk/research/tv/reports/dtv/dtu_2005_q2/q2_2005.pdf, accessed 2 November 2005.

164 *Digital UK*, www.digitaluk.co.uk/site/index.html, accessed 3 November 2005.

165 Nine Network, *submission no. 59*, p.5

166 Seven Network, *submission no. 49*, p. 2; DBA, *transcript of evidence 25 May 2005*, p. 6; Anthony Gallagher, *submission no. 94*, p. 1.

law'), Italy will switch wholly to DTV by 31 December 2006 with analogue transmissions ceasing by this date.¹⁶⁷

- 2.198 However Italy is lagging behind most European countries in the consumer take-up of DTV, with only 17.7 per cent of consumers estimated to have converted to digital by the end of 2005.¹⁶⁸
- 2.199 Italy has introduced a subsidy scheme available to households to facilitate the purchase of digital reception equipment. Contributions come in the form of a discount for which the retailer seeks reimbursement from the Italian Ministry of Communications.¹⁶⁹
- 2.200 In 2005 Italy formed the HD Council. The main aim of the council is to create and support initiatives to promote the use and dissemination of HD technologies in Italy.¹⁷⁰

Germany

- 2.201 In Germany, digital conversion is managed by state media regulators. Germany's main reason for digital transition is to increase the number of broadcasting channels.
- 2.202 The conversion to digital transmission is being conducted by regions across Germany. The Berlin-Brandenburg region was the first area in Germany to be converted from analogue to digital and this took place over 10 months from October 2002 to analogue switch-off in August 2003. The region of Berlin-Brandenburg had approximately three million households.¹⁷¹
- 2.203 The Berlin-Brandenburg model was considered a success and is being copied for analogue switch-off in other regions across Germany.¹⁷²

167 Interactive TV, *Submission No. 85*, p. 3; The Ministry of Communications, *Digital Terrestrial Television*, www.comunicazioni.it/en/index.php?IDNews=17, accessed 29 September 2005.

168 The Global Information Inc, *Top 10 European countries by digital TV household penetration (year end)*, www.gii.co.jp/press/fi23873_en.shtml, accessed 2 November 2005.

169 Interactive TV, *Submission No. 85*, p. 4; The Ministry of Communications, *Digital Terrestrial Television*, www.comunicazioni.it/en/index.php?IDNews=17, accessed 29 September 2005.

170 Space and Advanced Telecommunications Expo, 29 September – 1 October 2005, *The HD Council is born in Italy*, www.satexpo.it/en/news/hd.php?c=55623, accessed 29 September 2005.

171 DCITA, 'Driving Digital' – a review of the duration of the analogue/digital television simulcast period. Issues paper, September 2005.

172 DCITA, *submission no. 66*, p. 13, quoting Ofcom Consumer Panel, *Supporting the Most Vulnerable Consumers Through Digital Switchover*, Annex 2: Vulnerable consumers in switchover – Lessons from parallel experiences, pp. 7-11.

- 2.204 During the Berlin-Brandenburg analogue switch-off, financial assistance was provided through government agencies to two per cent of households for digital reception equipment.¹⁷³

United States

- 2.205 In 1997, the US Government set a 31 December 2006 deadline for analogue switch-off. However there were several exceptions that could extend the deadline. By the end of 2006, 85 per cent of households, by transmitter area, must be able to receive digital signals before the licences for analogue broadcasters could be revoked. If this target is not met, analogue broadcasting can continue.¹⁷⁴
- 2.206 Although the US commenced DTTB in 1998, less than five per cent of households were equipped to receive DTV at the end of 2004. Take-up is reported to be now gaining momentum. It is predicted that by the end of 2005 nearly 15 per cent of US households will have digital broadcast reception equipment, and nearly 40 per cent by the end of 2006.
- 2.207 However, given the slower than expected rate of adoption of DTV in the US, the 85 per cent of household's criteria is unlikely to be reached by the end of 2006. The US is currently examining options for DTV transition, including implementing a switch-off date and potentially removing or modifying the 85 per cent digital penetration threshold requirement.¹⁷⁵
- 2.208 HDTV has emerged as the principal driver of conversion to DTV in the US.¹⁷⁶ While the US Federal Communications Commission (FCC) does not mandate HDTV signals, it does require that HDTV be broadcasted during primetime.¹⁷⁷ All networks now transmit a large number of programs in HD. Sixty per cent of the prime time line up of the two major US broadcasters (NBC and ABC) is in high definition. By 2006 it is estimated that 30 per cent of all programming on the networks will be broadcast in

173 DCITA, *submission no. 66*, p. 13; ASTRA, *submission no. 50*, p. 17.

174 ITRI, *submission no. 46*, p. 9.

175 Kruger L.G. & Moore, L.K., CRS Report for Congress, *The Digital TV Transition: A brief overview*, August 2005, p. 2, www.dtvcoalition.com/images/media/RS22217.pdf, accessed 3 November 2005; Claudy, L., Spectrum Online, *Countdown to the end*, www.spectrum.ieee.org/oct05/1911/dtvsb1, accessed 3 November 2005.

176 FOXTEL, *submission no. 55, attachment 1*, p. 34.

177 Network Ten, *submission no. 60*, p. 16; Ferree W. K., *Chief of Media Bureau Federal Communications Commission, Copyright Piracy Prevention and the Broadcast Flag*, written statement to the Subcommittee on Courts, the Internet and Intellectual Property Committee on Judiciary, U.S. House of Representatives, 6 March 2003.

high definition.¹⁷⁸ The resolution for HD used in the US is different to that used in Australia.

- 2.209 The US has mandated that from July 2005 all television sets with screens of at least 91 cm must include a digital tuner. This move was introduced to further drive consumer take-up of DTV. Combinations of DTV monitors and set-top DTV tuners, if marketed together at one price, qualify as an integrated set. The mandate is operating on a five year roll-out schedule and starts with large screen televisions. The requirement for smaller sets and digital VCRs will be phased in from 2005 to 2007.¹⁷⁹
- 2.210 The mandate includes all other devices that incorporate television receivers, such as VCRs and personal video recorders (PVRs).

Learning from international initiatives

- 2.211 Strategies used by overseas countries to further consumer take-up of DTV have included promoting HDTV and imposing quotas or encouraging broadcasters to increase the amount of HDTV available to consumers. HD broadcasting is only just starting now in the UK and other parts of Europe but is increasing rapidly. The transition to HDTV in the US has not yet reached its peak but there is increasing availability of subscribed as well as free-to-air HD content.¹⁸⁰
- 2.212 Some European countries have introduced subsidies and have implemented consumer education and promotion strategies such as certified labels on products to further drive the take-up of DTV.¹⁸¹
- 2.213 The Committee notes the experiences of other countries and considers there are valuable lessons to be gained, particularly regarding the cost-effectiveness of subsidy solutions.
- 2.214 Further discussions of international initiatives, such as mandating digital tuners, set-top box subsidies and labelling options, will be discussed in subsequent chapters.

178 Nine Network, *submission no. 59*, p. 4.

179 Broadcast Australia, *submission no. 41*, pp. 12-13.

180 Nine Network, *submission no. 59*, p. 5.

181 Space and Advanced Telecommunications Expo, 29 September – 1 October 2005, *DTT two years on*, www.satexpo.it/en/news/tvdt.php?c=56456, accessed 3 November 2005.

Driving digital and switching off analogue

3.1 Free TV Australia stated that the switch to digital services is happening globally and Australia is at the forefront of that transition, particularly in relation to free-to-air digital services.¹

3.2 Free TV Australia explained:

[DTV] will permanently change the way that people view television. The legislative framework agreed to by parliament – I think this is a really important message for people to understand – is about free-to-view television. That is in recognition of the fact that the vast majority of Australians, around 78 per cent, continue to watch free TV services. We are probably unique in the world in our commitment to free TV services. This contrasts very starkly with other countries such as the UK, where the initial driver for digital television services has come from the pay TV sector.²

3.3 SBS claimed that while DTV is now available to most Australians, the level of consumer take-up to date is far from what is necessary to reach analogue switch-off by the statutory target of 2008 or any date within a reasonable period after that.³

3.4 SBS explained that influencing the consumer decision to convert from analogue to digital is made more challenging by the success and mass appeal of the existing analogue television market. SBS added:

At this stage in the development of the industry, consumers need compelling reasons to purchase digital receivers, involving a range

1 Free TV Australia, *transcript of evidence 25 May 2005*, p. 2.

2 Free TV Australia, *transcript of evidence 25 May 2005*, p. 2.

3 SBS, *submission no. 62*, p. 2.

of benefits that are identifiably greater than those currently available through analogue television. If digital is only regarded as a marginal improvement on the existing analogue service, it will remain difficult to convince consumers that digital is a necessity, rather than just a 'nice to have' alongside other new and emerging consumer devices.⁴

- 3.5 The ACA discussed the findings of the Productivity Commission's Broadcasting Inquiry report from 2000. The ACA stated that the following questions raised by the Productivity Commission⁵ remain unanswered:

The current policy framework does not address the key issues:

- who will drive the conversion?
- how will analog switch-off happen?
- when will the analog switch-off happen?⁶

- 3.6 The Committee considers that these remain key issues and this report seeks to address some of them in the following chapter. The chapter also address issues of future allocation of spectrum.

Drivers for DTV

- 3.7 Submissions to this inquiry provided comprehensive information on factors that will drive the take-up of DTV. Some of these factors, including quality, content, HDTV, new technologies, and promotion campaigns are briefly discussed below, with more detailed discussion to follow in Chapter 4.

- 3.8 SBS argued that no single driver will achieve the volume of digital take-up that will bring the market closer to analogue switch-off. It will require a combination of the following factors and regulatory change to support them:

- Receivers at acceptable prices that deliver significant audio-visual improvements on the analogue television experience;
- Extra content and services;
- Seamless, user friendly and durable technology; and

4 SBS, *submission no. 62*, p. 2.

5 Productivity Commission report on broadcasting, April 2000, <http://www.pc.gov.au/inquiry/broadcst/finalreport>.

6 ACA, *submission no. 47*, p. 4.

- Consumer understanding of the above, which may be assisted by awareness of a certain switch-off date.⁷
- 3.9 SBS added that while consumer awareness is increasing, the market needs to reach the point where consumers feel they are missing out on attractive programs and services if they do not have digital.⁸

Quality

- 3.10 Recent ACMA research found that enhanced picture experiences and the resolution of reception problems played a prominent role in household decisions to adopt DTV, with just over half (51.0 per cent) of adopter households citing picture and signal/reception related reasons for household DTV conversion.⁹
- 3.11 Network Ten stated that consumer awareness of the benefits of digital pictures and sound is rising, and having become accustomed to the high quality of DVD, many are keen to replicate that quality in their free-to-air television viewing.¹⁰

Content

- 3.12 The Australian Competition and Consumer Commission (ACCC) stated:
- It is widely recognised that digital TV as a delivery platform offers a number of benefits to consumers in terms of sharper picture quality and better sound quality et cetera. However, it appears that these features in and of themselves have not provided a sufficient value proposition for Australian consumers to make the investment in switching to digital at this time in any great numbers ... the ACCC's research ... tends to suggest that the uptake of digital TV will flow from consumers being offered new and innovative content and services which are able to meet their preferences and needs.¹¹
- 3.13 The ABC reported that evidence from overseas supports the proposition that greater program choice is as significant a factor, if not more significant, than image quality in encouraging consumers to purchase DTV equipment. The ABC claimed that Europe has little or no HDTV

7 SBS, *submission no. 62*, p. 2.

8 SBS, *submission no. 62*, p. 3.

9 ACMA (2005) *Digital Media in Australian Homes*. ACMA Monograph 1, p. 3.

10 Network Ten, *submission no. 60*, p. 17.

11 ACCC, *transcript of evidence 10 August 2005*, p. 1.

broadcasting, and that take-up has instead been most significantly influenced by increased choice.¹²

- 3.14 The ABC discussed the UK example, where nearly six in ten homes have access to DTV¹³:

Until recently, the UK television market was characterised by a relatively small number of free-to-air channels and a significant proportion of the population who were unlikely to ever subscribe to a pay TV service. This directly parallels the current state of the Australian television market. The rapid growth of the Freeview multichannel service, which provides audiences with access to more than 30 channels, has demonstrated a public appetite for increased viewing options ... an analysis of the UK's progress towards digital switchover by the communications regulator, Ofcom, identified increasing channel choices and low cost receiver units as key reasons for Freeview's success.¹⁴

- 3.15 The ABC stated that consumer response to additional DTV services demonstrates that a similar appetite for greater viewer choice exists in the free-to-air market in Australia.¹⁵
- 3.16 The ABC provided an example where recent evidence from Tasmania suggested that the introduction of an additional digital-only commercial station, Tasmanian Digital Television, into the Hobart market has resulted in a significantly higher take-up rate for DTV than elsewhere in the country.¹⁶
- 3.17 The ABC believes the Australian community would respond positively to the increased convenience and diversity of additional public broadcaster multichannels.¹⁷
- 3.18 The Seven Network claimed that experience from international markets suggests that DTV multichannelling is likely to be the most effective driver of DTV in Australia.¹⁸
- 3.19 The Seven Network explained that:
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12 ABC, *submission no. 45*, p. 2.

13 ABC, *submission no. 45*, p. 3, quoting:
Jason Deans, 'Most UK homes now have digital TV', *Media Guardian*, 30 March 2005.
media.guardian.co.uk/broadcast/story/0,7493,1448316,00.html

14 ABC, *submission no. 45*, p. 3.

15 ABC, *submission no. 45*, p. 3.

16 ABC, *submission no. 45*, p. 3.

17 ABC, *submission no. 45*, p. 3.

18 Seven Network, *submission no. 49, attachment 1, appendix 2*, p. 25.

One way of encouraging consumers to purchase [set-top boxes] is to enable broadcasters to provide a compelling [DTV] customer proposition, which can be best achieved through a free multichannel offering.¹⁹

- 3.20 SBS believes that currently the messages for selling DTV in Australia remain unclear. SBS added that:

Although there has been increased awareness about digital amongst consumers, I believe that to get enough people to go out and buy digital receivers consumers will need to feel that they are missing out if they do not convert to digital.²⁰

- 3.21 SBS further explained that reliable equipment, extra content and strong marketing will go a substantial way to taking the DTV market forward.²¹

New technologies in products

- 3.22 A number of submissions claimed that the inclusion of new technologies in products and even mandating digital tuners will drive take-up of DTV in Australia.

- 3.23 For example, Network Ten stated:

Introducing a mandate on the gradual phase-in of integrated digital tuners in television sets, as done in the US, will drive take-up even further and benefit consumers wishing to replace or upgrade their television set at a time of their choosing.²²

- 3.24 Sony claimed that there are sound reasons for the Australian Government to consider requiring manufacturers to integrate digital tuners in televisions sold in Australia. Sony stated:

... this move would further drive consumer take-up of DTV and encourage broadcasters to provide a stronger DTV/HD content offering in the knowledge that there is a growing customer base for this content. A model similar to that adopted in the US (requiring TV sets of certain sizes to include digital tuners by specified dates) could be adopted in Australia.²³

19 Seven Network, *submission no. 49, attachment 1, appendix 2*, p. 25.

20 SBS, *transcript of evidence 22 June 2005*, p. 29.

21 SBS, *transcript of evidence 22 June 2005*, p. 29.

22 Network Ten, *submission no. 60*, p. 2.

23 Sony, *submission no. 67*, p. 3.

- 3.25 Network Ten also discussed research which suggested that the growing market for DVD recorders will facilitate the transition to digital, with the majority of DVD recorders sold expected to contain integrated digital tuners by 2009, effectively replacing digital set-top boxes.²⁴

Spectrum usage

- 3.26 A further key driver for the switch to digital broadcasting is the more efficient use of spectrum. Higher quality images and sounds, and even more channels can be broadcast in the same spectrum currently used for one analogue channel.
- 3.27 Currently, each network is allocated spectrum for analogue broadcasting and additional spectrum for digital broadcasting. If analogue television is switched-off, a substantial amount of spectrum will be returned to the Australian Government for future uses.
- 3.28 Spectrum is increasingly being recognised as a valuable resource. The ACMA stated that spectrum is described in economic terms as being a finite, instantly renewable, natural resource. Because spectrum has the attributes of a limited resource, it has significant economic value and must be managed to maximise its overall benefit.²⁵
- 3.29 The ACMA website further explains the value and management of spectrum:

Spectrum is an increasingly important input resource to the economy, as more and more is used to provide communications services directly to industry and consumers, and as a major component of communications networks themselves. Current uses of the spectrum continue to grow while at the same time new services are continually being developed. Both the generic growth and the changing uses of spectrum need to be supported within what is a finite resource, which is largely already assigned to existing users. The challenge for spectrum managers is to facilitate change in the use of spectrum in an environment where the rate of technology change is increasing. Meeting this challenge requires careful planning and the need to make sometimes difficult choices about spectrum use.²⁶

24 Network Ten, *submission no. 60*, p. 17.

25 www.acma.gov.au/ACMAINTER.65674:STANDARD:506195048;pc=PC_2612, accessed 2 November 2005.

26 www.acma.gov.au/ACMAINTER.65674:STANDARD:506195048;pc=PC_2612, accessed 2 November 2005.

3.30 The ACMA discussed the more efficient use of spectrum as a result of converting television broadcasting to digital:

There are tremendous benefits both to broadcasters and to the wider community in moving completely to digital. It is an enormously more productive use of spectrum and there will be a huge thing which, worldwide, is being called the analog dividend – that is, large amounts of the radiofrequency spectrum now being used wastefully for analog could be used efficiently for digital services.²⁷

3.31 Broadcast Australia suggested that an important premise underpinning the public policy debate in relation to broadcasting in recent years has been the scarcity of spectrum and, therefore, the need to plan and utilise this resource as efficiently as possible.²⁸

3.32 However, Broadcast Australia believes that over the medium to long-term, it is possible that this scarcity issue will significantly diminish for two principal reasons:

- The emergence and widespread adoption of advanced DTV compression technologies; and
- The release for re-allocation of analogue television and radio channels currently used by incumbent broadcasters.²⁹

3.33 Broadcast Australia believes the following principles should apply to public policy concerning the efficient use of spectrum:

- Merit-based (rather than price-based) allocation of spectrum;
- Anti-hoarding policies such as “use it or lose it” requirements on licensees;
- Planning now for the adoption of advanced DTV compression technology once it becomes widely available;
- Maintain existing quality of spectrum by limiting permitted uses and managing potential interference issues through thorough planning.
- Use of single frequency networks where possible to ensure maximum use of available channels; and
- Good quality high power channels should not be squandered or used for translator services which could otherwise be serviced by a single frequency network.³⁰

27 ACMA, *transcript of evidence 1 June 2005*, p. 17.

28 Broadcast Australia, *submission no. 41*, p. 14.

29 Broadcast Australia, *submission no. 41*, p. 14.

30 Broadcast Australia, *submission no. 41*, p. 14.

- 3.34 With regard to the spectrum scarcity issue, ITRI expressed concern that Australia's digital conversion policy lacks a compelling driving principle. ITRI explained that in other DTV markets the policy rationales for digital conversion are clearer:

In the US, for example, digital migration is driven primarily by spectrum scarcity. In the UK, competition policy has largely driven the digital conversion agenda. In South Korea, digital policy has responded to market opportunities associated with the export of television production and reception equipment ...³¹

- 3.35 ITRI stated that:

Here the issues of spectrum scarcity, with some notable exceptions, are for the most part not a driving force. For most of Australia, there is nowhere near the type of scarcity that is driving change in the American or European markets.³²

- 3.36 ITRI suggested that the main driver for digital conversion in Australia should be the need to harmonize the television industry to fundamental change taking place globally.³³

Promotion

- 3.37 Sony stated that significant marketing and promotion of DTV and HDTV is vital to educate consumers and encourage the move to digital. However, Sony claimed that there has been relatively little marketing of DTV to date amongst stakeholders, including the Australian Government, broadcasters, manufacturers and retailers. Sony added that, although there has been some advertising by the networks, there have been no high-profile, extensive and coordinated promotional campaigns.³⁴

- 3.38 Sony claimed that effective marketing has been hindered by limited digital programming and services being offered, and the uncertainty around the analogue switch-off date. Sony believes that there must be a much greater future commitment on the part of stakeholders to marketing and promotion to support the drive to digital conversion.³⁵

- 3.39 Sony stated:

31 ITRI, *submission no. 46*, p. 10.

32 ITRI, *submission no. 46*, p. 10.

33 ITRI, *submission no. 46*, p. 10.

34 Sony, *submission no. 67*, p. 9.

35 Sony, *submission no. 67*, pp. 9-10.

It is also important to drive the entire marketplace, and that would involve a lot of promotion and certainly education – there is a lot of confusion with consumers in particular – and marketing of all of those answers to the consumer. We would need to explain how all that is going to work moving forward. We believe that there is a big need for the industry and government to help drive that education process and the promotion of DTV in the market.³⁶

- 3.40 The ACMA's recent research revealed some alarming results concerning the awareness of DTV in Australia. The research found that 16.8 per cent of the survey's 999 non-adopter households had never heard of DTV.³⁷
- 3.41 Another surprising finding was 38.0 per cent of all 1 148 households surveyed were unaware that analogue free-to-air television broadcasting will be replaced by DTV broadcasting in the future, and that special equipment will be required to receive those broadcasts.³⁸
- 3.42 The Committee is concerned that over one third of households may not be aware that analogue is to be switched off and some networks are not promoting their digital services appropriately.
- 3.43 The Committee is of the opinion that the ABC is not promoting its digital channel, ABC2, adequately. Advertising scheduled ABC2 programs on its main channel would raise awareness and encourage consumers to switch to digital.
- 3.44 The Committee notes that FOXTEL has been successful in convincing its viewers to switch to its digital platform, largely through advertising digital-only programs and events on its analogue service.
- 3.45 The Committee is of the opinion that each network, particularly through their websites and on-air promotions, should be doing as much as possible to promote the take-up of DTV.

Current initiatives to drive take-up

- 3.46 There are a number of initiatives already in place to assist in driving take-up of DTV in Australia. While take-up figures do still remain low, the Committee considers that this is due to a range of other factors – including debate around the switch-off date for analogue.

36 Sony, *transcript of evidence 7 September 2005*, p. 2.

37 ACMA (2005) *Digital Media in Australian Homes*. ACMA Monograph 1, p. 62.

38 ACMA (2005) *Digital Media in Australian Homes*. ACMA Monograph 1, p. 62.

- 3.47 This section reviews current Australian Government and private sector initiatives aimed at promoting, raising awareness and increasing the take-up of DTV.

DBA

- 3.48 The DBA plays a key role in driving take-up of DTV. Free TV Australia provided some additional background information on DBA:

DBA is a unique body which has members across four distinct areas of the free-to-view digital television industry. These include broadcasters, consumer electronic manufacturers and suppliers, installers and consumer electronic retailers.

The organisation has around 80 members currently. All the commercial and national broadcasters were foundation members and provide more than 40% of DBA's funding.

The organisation exists primarily to:

- enable the smoothest possible take-up of free-to-view digital television; and
- encourage the greatest possible take-up of free-to-view digital television.

- 3.49 Free TV Australia noted that DBA has set up a comprehensive free-to-air DTV website which attracts a high number of users. In March 2005, 114 000 unique visitors made use of the site with each spending more than five minutes per visit.³⁹
- 3.50 Free TV Australia explained that the website covers everything from the range of consumer electronic equipment available and its recommended retail price, to how to achieve better reception of free-to-air DTV services.⁴⁰
- 3.51 Free TV Australia stated that a significant part of DBA's efforts are directed at the consumer through the retailers. DBA encourages training programs for sales staff, service technicians and antenna installers.⁴¹
- 3.52 Free TV Australia further added that this activity is largely aimed at the regional areas because this is where all new rollout of digital free-to-air services is occurring.⁴²
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39 Free TV Australia, *submission no. 31*, p. 9.

40 Free TV Australia, *submission no. 31*, p. 9.

41 DBA, www.dba.org.au/index.asp?sectionID=68, accessed 3 November 2005.

42 Free TV Australia, *submission no. 31*, p. 10.

- 3.53 Free TV Australia also noted that DBA provides significant point of sale and hard copy education and assistance material to 1 700 member stores around Australia.⁴³
- 3.54 The Committee was particularly concerned by retailers' lack of interest in making contributions to this inquiry, despite direct approaches being made to a number of the major retailers.

Television campaign

- 3.55 Free TV Australia stated that Free TV Australia members launched a 'Digital Free-to-View' marketing campaign in late June 2003 aimed directly at encouraging consumers to make the switch to digital.⁴⁴
- 3.56 Free TV Australia explained that until then only 75 000 set-top boxes had been sold, reportedly due in part to the fact that the DTV rollout was limited. Free TV Australia added:
- By June 2003 however, there was sufficient coverage, equipment availability and content, to be confident that consumers attracted to the digital product would not be disappointed if they responded to the campaign and made the switch to digital.⁴⁵
- 3.57 The campaign featured television personalities from each of the networks (Bert Newton, Catriona Rowntree and Joanna Griggs) and focused on what Free TV Australia believed to be the key benefits of digital free-to-air television:
- better pictures, better sound, widescreen; and
 - no monthly payments.⁴⁶
- 3.58 Free TV Australia claimed that the campaign was highly successful in communicating to consumers the availability and benefits of digital free-to-air television.⁴⁷
- 3.59 Free TV Australia claimed that:
- Within three months the number of set top boxes sold had increased to 167 000. The campaign was also assisted by the Seven Network's highly successful digital coverage of the 2003 Rugby

43 Free TV Australia, *submission no. 31*, p. 10.

44 Free TV Australia, *submission no. 31*, p. 8.

45 Free TV Australia, *submission no. 31*, pp. 8-9.

46 Free TV Australia, *submission no. 31*, p. 9.

47 Free TV Australia, *submission no. 31*, p. 9.

World Cup. The coverage included two digital multi-view channels with statistics and alternate commentary. By the end of 2003 the number of set top box sales had risen to 250,000 and has continued at a consistent rate ever since.⁴⁸

- 3.60 Free TV Australia stated that broadcasters have continued to air the campaign and are looking at preparing a new version to air in the second half of 2005.⁴⁹

Network promotion

- 3.61 Each of the networks promotes DTV through their websites, and to a limited extent through broadcasting.
- 3.62 The Network Ten website has a prominent link to its DTV information pages. There are several pages of information promoting DTV including material discussing DTV in general, SD and HD services, DTV extras, and links to the DBA website.⁵⁰
- 3.63 The Nine Network's website has a link to its DTV webpage, where information is available on how to get DTV, digital picture quality and program enhancements.⁵¹ Again, the site has several links to the DBA's website.
- 3.64 The Seven Network has a dedicated DTV website⁵² which features comprehensive information; however there does not appear to be a direct link to it from the networks' regular website.
- 3.65 The SBS website has a prominent link to its DTV information page.⁵³ The webpage features FAQ-style information about DTV basics, including a promotional video. The webpage also features a link to Statements of Potential Interference Mechanisms, which are documents prepared by networks to assist viewers in particular areas that have signal interference problems. The website also has links to DBA, other networks, government sites and international organisations.

48 Free TV Australia, *submission no. 31*, p. 9.

49 Free TV Australia, *submission no. 31*, p. 9.

50 Network Ten, www.ten.com.au/main_idx.aspx?section=digitalTV, accessed 3 November 2005.

51 Nine Network, tvshows.ninemsn.com.au/article.aspx?id=22833, accessed 3 November 2005.

52 Seven Network Digital, www.sevendigital.tv/index.php, accessed 3 November 2005.

53 SBS, www.sbs.com.au/digital, accessed 3 November 2005.

- 3.66 SBS discussed how it is contributing to driving take-up of DTV:
- ... SBS' corporate strategy [is to use] digital broadcasting as a way to develop its capacity to deliver broader and richer services under its Charter to all Australians. SBS now provides six services on digital television, including two digital only multichannels and rebroadcasts of its two radio services, in addition to a range of enhanced and interactive content.⁵⁴
- 3.67 Further discussion on SBS's contribution to DTV can be found in Chapter 4.
- 3.68 The ABC's TV Reception website has links to DTV information. The web pages outline the benefits of DTV and, as explained previously in this chapter, feature a reception locator facility.⁵⁵
- 3.69 The ABC discussed how it is contributing to driving take-up of DTV:
- In the four years since the commencement of free to air digital television broadcasting in Australia, the ABC has sought to provide a digital television experience that extends beyond a simulcast of its analogue television broadcasts in order to promote the adoption of digital television by viewers.
- 3.70 Further discussion on the ABC's contribution to DTV can be found in Chapter 4.

Subscription television

- 3.71 The Australian Subscription Television and Radio Association (ASTRA) claimed that the subscription television sector has been the single greatest driving factor to encourage the take up of DTV in Australia.⁵⁶
- 3.72 ASTRA added:
- We think the increase in the publicity that surrounded the launch of digital – there was a lot of publicity leading up to that launch in March 2004, both from Foxtel and Austar – has generated more interest in digital take-up across the board, including free-to-air take-up.⁵⁷

54 SBS, *submission no. 62*, p. 2.

55 ABC, www.abc.net.au/reception/digital/, accessed 3 November 2005.

56 ASTRA, *submission no. 50*, p. 2.

57 ASTRA, *transcript of evidence 22 June 2005*, p. 3.

- 3.73 ASTRA explained that the launch of AUSTAR in 1995 was Australia's first taste of DTV. AUSTAR's services have continued, with services being offered predominantly in regional and rural Australia.⁵⁸
- 3.74 ASTRA stated that AUSTAR launched an enhanced television offering branded 'New AUSTAR Digital' in March 2004 with extensive publicity and marketing drives. As of March 2005, approximately 440 000 Australian homes are connected to AUSTAR's digital services.⁵⁹
- 3.75 ASTRA explained that FOXTEL launched its first DTV service (a digital satellite service) in March 1999. In 2004, FOXTEL launched its 'FOXTEL Digital' product which converted its existing analogue service to digital, providing a raft of new content and interactive digital features. The service targeted Australian consumers in mostly metropolitan areas.⁶⁰
- 3.76 ASTRA added:
- As part of its launch, FOXTEL embarked on an ambitious and extensive promotion of the benefits of digital television. A year on, approximately 63% of the more than 1 million homes connected to FOXTEL receive FOXTEL Digital services.⁶¹
- 3.77 FOXTEL claimed that the subscription television industry has helped drive DTV take-up:
- Through its innovation, subscription television exerts competitive pressure on other digital television providers - free-to-air broadcasters and DVD - and benefits Australian audiences by inspiring and driving digital innovation and enhancing competition.⁶²
- 3.78 Singtel Optus Pty Ltd (Optus) also believed the Committee should recognise the contribution the subscription television industry has made and is making to drive the take-up of DTV services in Australia.⁶³
- 3.79 ASTRA stated that, collectively, there are more than one million Australian households that subscribe to digital subscription television services, representing approximately 65 per cent of subscription television homes. With an estimated total of seven million households in Australia,

58 ASTRA, *submission no. 50*, p. 2.

59 ASTRA, *submission no. 50*, p. 2.

60 ASTRA, *submission no. 50*, p. 2.

61 ASTRA, *submission no. 50*, pp. 2-3.

62 Foxtel, *submission no. 55*, p. 16.

63 Optus, *submission no. 33*, p. 2.

approximately 14 per cent of Australian homes receive DTV through subscription television providers.⁶⁴

- 3.80 ASTRA pointed out that, currently, digital services provided by ABC, SBS and the Nine Network are available on (sometimes multiple) subscription television platforms.⁶⁵
- 3.81 ASTRA believes the aggressive promotion of DTV by subscription television operators has had the effect of dramatically growing the awareness of DTV and its benefits and opportunities to consumers.⁶⁶
- 3.82 ASTRA claimed that this has directly benefited the sale of set-top boxes necessary to receive free-to-air DTV.⁶⁷ ASTRA also believes it is highly likely that as digital subscription television continues to be promoted to Australians, the growth in set-top box sales will continue.⁶⁸
- 3.83 AUSTAR described further measures to drive digital take-up. In May 2005, AUSTAR announced its plans to launch a personal digital recorder (PDR) in the second quarter of 2006 which includes a free-to-air digital tuner. The addition of this tuner will allow AUSTAR subscribers to access free-to-air digital signals without the cost of purchasing a separate free-to-air digital set-top box.⁶⁹

Retransmission of free-to-air networks

- 3.84 DCITA explained the relationship between the free-to-air networks and the subscription television sector:

The national broadcasters' digital services are retransmitted nationally on digital pay TV networks ... Foxtel retransmits the digital services of the Nine Network in the metropolitan markets of Sydney, Melbourne and Brisbane. As yet, the Seven and Ten Networks have not entered into agreements for the retransmission of their services via the digital satellite pay TV platforms ... retransmission agreements are a commercial matter.⁷⁰

- 3.85 DCITA discussed some of the details concerning retransmission arrangements:

64 ASTRA, *submission no. 50*, p. 3.

65 ASTRA, *submission no. 50*, p. 3.

66 ASTRA, *submission no. 50*, p. 3.

67 ASTRA, *submission no. 50*, p. 3.

68 ASTRA, *submission no. 50*, p. 3.

69 AUSTAR, *submission no. 74*, p. 1.

70 DCITA, *submission no. 66*, pp. 8-9.

Due to the requirement that commercial services may only be broadcast within the area for which they are licensed, digital pay TV operators and commercial broadcasters negotiate retransmission on an area-by-area basis and ensure that viewers are not able to view out-of-area broadcasts. Due to capacity and cost constraints, digital satellite pay TV operators do not currently retransmit the regional commercial broadcasters' services.⁷¹

- 3.86 DCITA explained that local cable subscription television providers, Transact and Neighbourhood Cable, provide all of the relevant free-to-air commercial services for their areas, including the national broadcaster's services including ABC2.⁷²
- 3.87 The Committee recognises the subscription television sector's claims that it has contributed to the take-up of DTV in Australia.
- 3.88 The Committee is aware that the penetration of some digital free-to-air services is higher than currently estimated, due to the retransmission of those networks on subscription television platforms. However, not all free-to-air channels are retransmitted on subscription television, the retransmission of channels varies between regions, and it also depends on the subscription television programming choices and transmission capacity.

Options for analogue switch-off dates

- 3.89 During the course of the inquiry there has been considerable media comment on the slow take-up of DTV in Australia, and the possibility of delaying analogue switch-off. Media comment was particularly evident following the discussion of the analogue switch-off issue by the Minister for Communications, Information Technology and the Arts at Senate Estimates hearings in May 2005, and following the announcement of DCITA's review of the switch-off date on 27 September 2005.
- 3.90 During Senate Estimates hearings in May 2005, the Minister (Senator The Hon Helen Coonan) acknowledged that DTV take-up is not high and that the Australian Government would have to examine options analogue switch-off options.

71 DCITA, *submission no. 66*, p. 8.

72 DCITA, *submission no. 66*, pp. 8-9.

- 3.91 Senator Coonan also added that DCITA's review would look critically at extending the current date.⁷³
- 3.92 In announcing DCITA's review of the analogue switch-off date, Senator Coonan suggested that switch-off may have to be delayed, as an analogue switch-off date of 2008 in metropolitan areas seems unachievable.⁷⁴
- 3.93 Opinion on analogue switch-off dates is deeply divided, ranging from maintaining the planned phasing out of analogue, switching off sooner, opting for a later date, and not setting a date at this time. This section discusses the various options raised in submissions to the inquiry.

Need for a certain analogue switch-off date

- 3.94 Several submissions to this inquiry stated that a definite analogue switch-off date will drive the take-up of DTV in Australia.
- 3.95 SBS believes that increased public awareness of a certain analogue switch-off date will provide a particular incentive for digital take-up.⁷⁵
- 3.96 Panasonic believes the Australian Government must take greater ownership and become more actively involved in the DTV transition process by establishing a formal timeline, strategy and milestones for analogue switch-off.⁷⁶
- 3.97 Retravision is of the view that there is a great deal of confusion about the actual analogue switch-off date.⁷⁷
- 3.98 Retravision added that a firm date needs to be established and clearly communicated to ensure suppliers and consumers know exactly where they stand and can plan accordingly.⁷⁸
- 3.99 Retravision explained that:
- ... reaffirming the date will ensure that suppliers are left in no doubt so that their product road maps can be planned and

73 Senate Environment, Communications, Information Technology and the Arts Legislation Committee, *Budget Estimates, transcript of evidence 23 May 2005*, p. 146.

74 *Review to drive digital take-up*, media release by the Minister for Communications, Information Technology and the Arts, 27 September 2005, www.minister.dcita.gov.au/media/media_releases/review_to_drive_digital_take-up, accessed 16 November 2005.

75 SBS, *submission no. 62*, p. 3.

76 Panasonic, *submission no. 42*, p. 1.

77 Retravision, *submission no. 76*, p. 2.

78 Retravision, *submission no. 76*, p. 2.

communicated in sufficient time to ensure adequate stock of digital ready product is available.⁷⁹

3.100 Retravision added that setting a switch-off date will:

... provide the necessary incentive to equipment suppliers, content suppliers, retailers and the public to prepare for a firm introduction date. This, coupled with a clear and compelling information campaign, should ensure the public reap the full benefits of digital television in Australia.⁸⁰

3.101 Retravision also explained that delaying analogue switch-off can:

... have damaging ramifications as it did when the phase out date for analogue mobile phones was delayed. Growth rates of digital handsets slowed and manufacturers delayed the release of new digital models to the extent that the Australian market was up to 2 years behind other markets.⁸¹

3.102 The ABC believes that the date for analogue switch-off should be clarified:

Currently, there is no expectation within the broadcasting industry that the simulcast period will run for eight years; instead, it is widely anticipated that an unspecified, but longer period will be required. This absence of a fixed timetable for analogue switch-off further reduces incentives for consumers to consider purchasing digital receiver equipment.⁸²

3.103 The ABC explained that an established analogue switch-off date, even one that is relatively remote, would increase pressure on consumers to consider purchasing digital receiver equipment.⁸³

3.104 The ABC believes that the Australian Government is required to take an active role in encouraging Australians to adopt DTV to ensure that switch-off occurs by any nominated date.⁸⁴

3.105 In addition, the ABC discussed how setting a particular analogue switch-off date would give broadcasters certainty:

... certainty about the date on which analogue transmissions will cease would allow broadcasters and transmission service

79 Retravision, *submission no. 76*, p. 2.

80 Retravision, *submission no. 76*, p. 3.

81 Retravision, *submission no. 76*, p. 2.

82 ABC, *submission no. 45*, p. 10.

83 ABC, *submission no. 45*, p. 11.

84 ABC, *submission no. 45*, p. 11.

providers to make more effective decisions about whether existing analogue equipment should be replaced or refurbished to extend its life.⁸⁵

3.106 Although Broadcast Australia stated that it is too early to establish a switch-over date for analogue television, the organisation added that when the analogue switch-off occurs:

... it is important from a public interest perspective that it is planned and communicated to consumers, service providers, manufacturers and broadcasters with a long transition period.⁸⁶

3.107 Sony believes that current uncertainty around analogue switch-off is a major inhibitor to consumer take-up of DTV.⁸⁷ Sony also believes that this uncertainty is fragmenting the industry effort, as resources continue to be directed towards marketing and sales of analogue equipment.⁸⁸

3.108 Sony determined that there is a need for clarity around the analogue switch-off date. In its submission, Sony strongly urged the Australian Government to determine and announce a date for the shut down of the analogue network.⁸⁹

3.109 Sony explained:

A decision to shut down the analogue network will focus the efforts of all stakeholders on the success of digital conversion. It will assist consumers with their purchasing decisions and will also assist the equipment supply industry with product planning, which is necessarily long-range.⁹⁰

3.110 When asked about switch-off dates in other countries converting to DTV, Sony explained:

In certain markets there are clear cut-off dates. Italy and Germany have already done that. There are other markets where it is being progressed on a slower basis. They are saying, 'Okay, at this time we're going to move this market and then we'll move to another area and move this one.' That would certainly be our suggestion in terms of clarity. For a particular segment of the market we would say, 'We're now turning off analogue,' and then we would move

85 ABC, *submission no. 45*, p. 11.

86 Broadcast Australia, *submission no. 41*, p. 18.

87 Sony, *submission no. 67*, p. 2.

88 Sony, *submission no. 67*, p. 6.

89 Sony, *submission no. 67*, p. 6.

90 Sony, *submission no. 67*, p. 6.

to another segment. That obviously has to be based on the take-up rate of the community at the time. We are not saying the whole country has to be switched off at once; we are saying that it needs to be clearly communicated to everyone in the industry and of course consumers that there is a time frame for analogue to cease.⁹¹

- 3.111 A submission from Mr Nigel Pearson, a private individual, stated that each time the switch-off date is delayed there will be less incentive for consumers to buy equipment capable of receiving DTV signals.⁹²
- 3.112 The Committee is concerned that is indeed the case and concludes that setting a definitive switch-off date is imperative to reduce consumer uncertainty and provide the necessary incentive for consumers to take-up DTV technology.

Maintain planned switch-off dates

- 3.113 A small number of submissions to the inquiry indicated that it is still possible for analogue switch-off to occur as currently planned.
- 3.114 Retravision stated that it did not see any need at this point in time to alter the 2008 date.⁹³
- 3.115 Retravision added:
- While the take up of digital television has been slow to date it is still believed a cutover date of 2008 is not only achievable but needs to be clearly reaffirmed.⁹⁴
- 3.116 Interactive TV Pty Ltd, an Australian company that produces a range of set-top boxes, stated that:
- ... the analogue signal should be switched off in line with the Government's original estimates, as the technology exists now at the right price to encourage take-up of digital television by Australian households.⁹⁵

91 Sony, *transcript of evidence 7 September 2005*, p. 2.

92 Nigel Pearson, *submission no. 25*, p. 1.

93 Retravision, *submission no. 76*, p. 2.

94 Retravision, *submission no. 76*, p. 3.

95 Interactive TV, *submission no. 85*, p. 2.

Accelerate switch-off plan

3.117 Sony believes that it will be vital for the success of DTV broadcasting that a decision on an early analogue switch-off is made as soon as possible.⁹⁶

3.118 Sony explained that:

While it may be difficult to achieve the 2008 target, it is imperative that the Government commit to meeting a short-term target for analogue shutdown. This will allow more resources to be directed to promoting DTV/HD and encourage increased consumer take-up.⁹⁷

3.119 SCB claimed that it is on schedule in providing 100 per cent digital coverage for its markets:

We are well on track. It is quite an engineering effort. It is thought in some government circles that the government does not see a lot from its licence fee rebates. A visit to the market might show that it is a massive effort. We are driving it as hard as we can. We are totally committed.⁹⁸

3.120 When asked about a suitable analogue switch-off date, SCB stated:

I don't think there is any chance of a switch-off in 2008 ... obviously that period of time has to be lengthened. Maybe 2012 or beyond is more realistic.

3.121 Despite SCB's opinion on the need to extend the analogue switch-off date, the regional network stated that it will be ready for analogue switch-off sooner than later, with rollout complete in all markets by 2008.⁹⁹

3.122 When asked how long after rollout would the network consider switching off, SCB stated that it had not set a time.¹⁰⁰

3.123 However, the network explained:

I think that our penetration will be so great even at the end of 2006 and in 2007 that we can be really looking for a time [for switch-off] forward from there.¹⁰¹

96 Sony, *submission no. 67*, p. 2.

97 Sony, *submission no. 67*, p. 2.

98 SCB, *transcript of evidence 1 September 2005*, p. 21.

99 SCB, *transcript of evidence 1 September 2005*, p. 22.

100 SCB, *transcript of evidence 1 September 2005*, p. 22.

101 SCB, *transcript of evidence 1 September 2005*, p. 22.

- 3.124 SCB stated that it would be preferable to not simulcast for five years after 2008, and that it would be keen to switch off as early as possible.¹⁰² SCB remarked that the rollout has placed a particular burden on regional broadcasters, which have large numbers of transmission sites and large coverage areas.¹⁰³
- 3.125 SCB explained:
- Licence fee rebates offered under the regional equalisation plan cover less than half the total costs of new equipment and increased operating expenses. The extension of the simulcast period, which is clearly required, based on the present and projected levels of digital penetration, will cause further considerable financial pressure for regional broadcasters.¹⁰⁴
- 3.126 SCB is of the view that any extension of the simulcast period should see a corresponding extension of funding under the regional equalisation plan to meet the increased cost of simulcasting.¹⁰⁵
- 3.127 SCB discussed how it is planning for analogue switch-off and the potential for maintenance costs to increase if switch-off is delayed:
- ... we, like other broadcasters, have effectively been running down our analogue broadcasting equipment to focus on our investment in digital in anticipation of the analogue switch-off ... the extension of the simulcast period will necessitate further investment in upgrading and maintaining older analogue equipment. It should not therefore be assumed that simulcasting beyond the presently scheduled switch-off dates will not necessitate substantial capital spending in regional markets.¹⁰⁶
- 3.128 WIN pointed out that regional DTV broadcasting commenced three years after metropolitan simulcast began, and that analogue switch-off is projected to be 31 March 2011.¹⁰⁷
- 3.129 WIN explained that DTV services will have been available for a considerable time in some larger regional markets by the proposed analogue switch-off date. Canberra, for example, will have had DTV services for 10 years by the analogue switch-off time.

102 SCB, *transcript of evidence 1 September 2005*, p. 22.

103 SCB, *transcript of evidence 1 September 2005*, p. 16.

104 SCB, *transcript of evidence 1 September 2005*, p. 16.

105 SCB, *transcript of evidence 1 September 2005*, p. 16.

106 SCB, *transcript of evidence 1 September 2005*, p. 16.

107 WIN, *transcript of evidence, 1 September 2005*, p. 26.

3.130 WIN stated that it would prefer an analogue switch-off date that is sooner rather than later, and that the simulcast period should not be extended beyond the original switch-off date of 2011.¹⁰⁸

3.131 The analogue switch-off date for regional broadcasters is of major concern to WIN because of the increase in operating costs, which WIN claimed are in the order of 250 per cent, as a consequence of the requirement to simulcast services.¹⁰⁹

3.132 WIN further explained:

It is of major concern that, if the take-up of digital services stalls and the simulcast date is not in place but is extended indefinitely, broadcasters who have rolled the services out and built their digital infrastructure on the legislation that is currently in place will not have the financial capacity to maintain triplecasts when the availability of analogue transmitting equipment is already placing undue pressures on regional broadcasters.¹¹⁰

3.133 WIN added:

Our companies are prepared to work with all stakeholders to ensure that a suitable model is put together to ensure the take-up of the digital technology is moved forward and to ensure that the simulcast period is not extended beyond the financial capability of regional broadcasters.¹¹¹

Delay switch-off date

3.134 Several submissions to the inquiry suggested that an analogue switch-off date of 2008 would not be possible.

3.135 Samsung stated:

Clearly reaching a point where analogue switch off is possible remains a significant challenge, let alone by the proposed target date of 2008 in metropolitan areas.¹¹²

3.136 The Seven Network was also of the opinion that consumer interest in DTV is low and will not allow for analogue switch off in a reasonable period of time.¹¹³

108 WIN, *transcript of evidence*, 1 September 2005, p. 27.

109 WIN, *transcript of evidence*, 1 September 2005, p. 27.

110 WIN, *transcript of evidence* 1 September 2005, p. 27.

111 WIN, *transcript of evidence* 1 September 2005, p. 27.

112 Samsung, *submission no. 87*, p. 6.

3.137 However, some evidence received by the Committee indicated that the switch-off date would only need to be delayed by a year or two.

3.138 LG suggested that, having considered the potential challenges of remaining with the current analogue switch-off timeframe, most Australians are not yet ready for the move.¹¹⁴

3.139 LG stated that the current framework should remain in place, with the following key milestones:

- the sale of analogue televisions should cease by 2008; and
- analogue switch-off should follow some time after, perhaps by a point in 2010.¹¹⁵

3.140 LG explained how it decided upon that particular timeframe:

We are certainly not basing that [proposed switch-off date] on a particular set of evidence that is overwhelming but, rather, we think we need to provide a certainty to manufacturers, retailers and consumers so that we are not living in continuous uncertainty as to when that occurs.¹¹⁶

3.141 LG also explained that:

We do not want to see consumers disadvantaged. We think that might be the case if we were rigid about 2008 being that switch-off date for analogue.¹¹⁷

Switch-off dates cannot be set

3.142 Several submissions to the inquiry claimed that the challenges for setting a switch-off date at this time were too great. Some suggested that an analogue switch-off date should not or could not be set at this stage.

3.143 The difficulties facing Australia and other countries in setting a switch-off date were outlined by the ACMA. The ACMA summarised the current proposed analogue switch-off dates:

The law says that there will be a simulcast period of eight years – and, yes, in the five major metro markets that ends in 2008; it ends at later periods in regional markets. It is eight years or such longer

113 Seven Network, *submission no. 49*, p. 4.

114 LG, *submission no. 77*, p. 1.

115 LG, *submission no. 77*, p. 1.

116 LG, *transcript of evidence 28 June 2005*, p. 37.

117 LG, *transcript of evidence 28 June 2005*, p. 37.

period as is prescribed by the minister. So in fact it is open-ended.¹¹⁸

- 3.144 The ACMA believes that determining an analogue switch-off date is not possible at this stage:

That is really not on the agenda yet. I do not think any country in the world has seriously countenanced an analogue switch-off until the percentage of people using the analogue system is very low. In Australia at present we are at the bottom end of the S curve in terms of digital uptake – it is just not on the horizon. I would not be talking up the prospects of turning off the analogue system unless some serious thinking had been done, and I would expect that the government would be the place where that thinking was done, about what the criteria were for when we no longer need that analogue system.¹¹⁹

- 3.145 The ACMA also discussed how important television as a service is to Australians:

... we are dealing here with an essential service. The analogue television system is the nation's audiovisual PA system. It is about as significant to people as having hot water on tap. It is not something that you lightly switch off.¹²⁰

- 3.146 The ACMA explained the conversion process:

If you look at the way the law was written at the time the digital conversion scheme was designed, you will see that it is very big on how we get the signal out – it is very detailed and very prescriptive. But all it says about how you actually effect the conversion is that the minister can prescribe a date later than 2008, but it could be as few as eight years, and that the [ACMA] shall decide which channels are used for which in that environment. In other words, it is very light on detail.¹²¹

- 3.147 The ACMA further explained the challenges faced by any conversion timeframe:

At that time, in 2001, there were no countries anywhere in the world that had successfully made this transition. Now, in 2005, we are seeing cities convert in different parts of the world which have

118 ACMA, *transcript of evidence 1 June 2005*, p. 5.

119 ACMA, *transcript of evidence 1 June 2005*, p. 16.

120 ACMA, *transcript of evidence 1 June 2005*, p. 16.

121 ACMA, *transcript of evidence 1 June 2005*, p. 17.

very different ways of enjoying their television. But we are yet to see a major economy convert, either. We are watching market leaders like the British. I think we have a lot to learn from the experiences they have. But I do not think anybody underestimates the size of the job of winning people from the analogue system to the digital. I am not thinking of people ... who are interested in the new options. I am thinking of the 30 or 50 per cent that are very happy with what they have and see the TV as a long shelf life item which they can then put in the teenager's room or out in the garage and still keep using.¹²²

- 3.148 Panasonic believes that analogue switch-off remains a significant challenge for the Australian Government and industry:

This is demonstrated by a simple analysis of the transition task that faces industry if an analogue television broadcasting switch-off in metropolitan areas by 2008 were to be achieved.¹²³

- 3.149 The ABC stated:

On current trends, it seems unlikely that analogue broadcasting will be able to be switched off until a considerable time after the end of the eight-year simulcast period anticipated in the BSA.¹²⁴

- 3.150 The ABC explained:

Currently more analogue television receivers than digital receivers are sold annually. This is adding to the overall Australian analogue receiver population that needs to be replaced or augmented by the purchase of a digital television receiver and is reducing the likelihood of an early switch-off date for analogue television.¹²⁵

- 3.151 SBS was also of the opinion that the current analogue switch-off schedule is not possible:

Until there is much more certainty in the market, I just cannot see analog switch-off as a reality. So I would say that certainly the 2008 date, as we sit here, is literally impossible.¹²⁶

122 ACMA, *transcript of evidence 1 June 2005*, p. 17.

123 Panasonic, *submission no. 42*, p. 2.

124 ABC, *submission no. 45*, p. 5.

125 ABC, *submission no. 45*, pp. 10-11.

126 SBS, *transcript of evidence 22 June 2005*, p. 32.

- 3.152 Free TV Australia discussed analogue switch-off in Australia and drew on international examples:

I will make one quick point about analog switch-off. The legislation is very carefully worded. It does not say there will be a switch-off in 2008. That would be the earliest point for consideration, or 'such longer period as is prescribed'. Nowhere in the world has anyone met any of the early analog switch-off dates. Even if the UK gets to 2012, it will have been 14 years from beginning to end, since they started in 1998. Although the Labour government did say in their manifesto in the lead-up to the election that they were committed to 2012 as the end point, at this stage in the UK two villages in Wales have switched off and all the village members were provided with set-top boxes, subsidised by the government. They are being used as a test trial area to see how that will work. There is no market anywhere yet, that we know of, where there will not need to be some form of government direction or intervention to reach a switch-off date.¹²⁷

- 3.153 Network Ten also discussed international comparisons and stated that the network was not aware of any absolute switch-off date anywhere around the world.¹²⁸

- 3.154 Network Ten added that, in realistic terms, there are a number of years to go before the analogue service can be switched off in Australia.¹²⁹

- 3.155 When asked if it was agreeable to continue transmitting in analogue indefinitely, Network Ten stated:

Not indefinitely. The technology is moving faster and the take-up is accelerating so I do not think it is indefinite ... I do not know what the right date is. If 10 per cent or 20 per cent of the population say that spending \$100 or \$50 is too much for them then at some point there is going to be an issue for every country around the world for the final part of analog-to-digital switch-off.

- 3.156 Network Ten also added:

It will not go on forever because analog is a dying technology and there will come a time, if it has not reached that date, when the networks will not be able to replace the analog technology. It is not

127 Free TV Australia, *transcript of evidence 25 May 2005*, p. 6.

128 Network Ten, *transcript of evidence 28 June 2005*, p. 2.

129 Network Ten, *transcript of evidence 28 June 2005*, p. 3.

a matter of forever. But it is a matter of making sure that you do it for the right reason.¹³⁰

- 3.157 The Nine Network also stated that it is not possible at this stage to set an analogue switch-off date.¹³¹ The Nine Network claimed that achieving complete conversion will be difficult:

As everybody around the world is finding, the ability to find a commercial solution to 100 per cent conversion is extremely difficult.¹³²

Switch-off dates set by market forces

- 3.158 The ACA agreed with the findings of the Productivity Commission, particularly concerning the importance of a firm analogue switch-off timetable. However, the ACA suggested that the best guide to set this timetable is the behaviour of consumers in the marketplace:

The most effective thing the Government can do is ensure that analogue TV broadcasting remains in place until such time as most consumers have made a choice to purchase a digital TV, assuming the market has given them a compelling reason to do so. The ratio of time allowed to equipment life cycle in the mobile phone space, applied to television, implies a period of fifteen to twenty years adjustment may well be appropriate.¹³³

Committee comment

- 3.159 The Committee is of the opinion that the current analogue switch-off timeframe set for 2008 may not be possible at this stage.
- 3.160 However, the Committee agrees with submissions to the inquiry that claimed a certain nominated and widely publicised analogue switch-off date will assist greatly in driving the take-up of DTV.
- 3.161 The Committee is reluctant to see a nominated analogue switch-off date extended for any significant period.
- 3.162 The Committee is also concerned that any significant extension will see additional cost burdens placed on regional broadcasters. The additional

130 Network Ten, *transcript of evidence 28 June 2005*, pp. 2-3.

131 Nine Network, *transcript of evidence 28 June 2005*, p. 22.

132 Nine Network, *transcript of evidence 28 June 2005*, pp. 21-22.

133 ACA, *submission no. 47*, p. 8.

cost to the national broadcasters as a result of any analogue switch-off date extension is also likely to be significant.

- 3.163 Based on the rollout to date and the plans of all broadcasters, the Committee concludes that an analogue switch-off date of 1 January 2010 is achievable.
- 3.164 However, before making a recommendation to that effect, it is necessary to consider how the switch-off is implemented. Again, there are a number of options and these are considered in the following section.

Options for implementing analogue switch-off

- 3.165 While a decision on a date for analogue switch-off is vital for a number of reasons, there also remains the issue of how the switch-off is implemented – that is, the switch-off plan.

- 3.166 The ABC determined that:

An appropriate role for Government is to take leadership in working with all sectors of industry to develop a formal time frame, strategy and milestones for the switch-off of analog television services.¹³⁴

- 3.167 The Committee recognises that there are two main options for an analogue switch-off plan:

- Maintain the phased switch-off as planned (analogue turned off eight years after digital was turned on for each market area); or
- Nominate a date when analogue can be switched off at the one time for all areas.

- 3.168 This section of the report looks at options for implementing analogue switch-off. The section concludes with the Committee recommendation on the date for analogue switch-off and the plan for how best to implement that switch-off across Australia.

Phased switch-off plan

- 3.169 The ABC claimed that any analogue switch-off strategy could consider the possibility of switching-off analogue services on a market-by-market

¹³⁴ ABC, *submission no. 45*, p. 11.

- basis.¹³⁵ The ABC added that a market-by-market switch-off plan has been proposed to government in the UK by the regulator Ofcom.¹³⁶
- 3.170 Switch-off in the UK is being carried out on a region-by-region basis over a number of years, with switch-off dates ranging from 2008 to 2012.¹³⁷
- 3.171 Germany's conversion to digital is also taking place by region. The first area in Germany to be converted to digital was completed in August 2003.¹³⁸ The final region is to be converted in 2006.¹³⁹
- 3.172 Panasonic suggested that a switch-off plan could include the potential for a region or market-based approach similar to that taken during rollout.¹⁴⁰
- 3.173 Panasonic also suggested:
- One possible option might include a trial analogue switch-off in a suitable market located in regional Australia when an appropriate penetration level for digital terrestrial television has been reached.¹⁴¹
- 3.174 The Nine Network supported the idea of analogue switch-off using a market based approach:
- We do not have to have a date where it switches off all around Australia. If you look at the United Kingdom, they have switched off two villages in Wales – I think it is 45 households – and it is a starting point. Again, the switch-off can be phased in a similar way to the digital start-up.¹⁴²
- 3.175 WIN suggested that the Australian Government should consider a staggered regional analogue switch-off.¹⁴³ WIN added that a staggered analogue switch-off will need the cooperation of all stakeholders to ensure that it is managed as efficiently as possible.¹⁴⁴

135 ABC, *submission no. 45*, p. 11.

136 ABC, *submission no. 45*, p. 11.

137 www.digitaluk.co.uk/site/index.html, accessed 3 November 2005.

138 Seven Network, *submission no. 49*, p. 46.

139 DCITA, *submission no. 66*, p. 13;

www.digitag.org/WebLetters/2005/April2005.pdf, accessed 3 November 2005.

en.wikipedia.org/wiki/List_of_digital_television_deployments_by_country#Germany, accessed 3 November 2005.

140 Panasonic, *submission no. 42*, p. 5.

141 Panasonic, *submission no. 42*, p. 5.

142 Nine Network, *transcript of evidence 28 June 2005*, p. 22.

143 WIN, *transcript of evidence 1 September 2005*, p. 27.

144 WIN, *transcript of evidence 1 September 2005*, p. 27.

- 3.176 In discussing the possibility of switching off analogue in particular markets, WIN stated:

When we say switching off, we have not put to you a switch-off program, although we are flagging that we have got things in our mind. We think that we would have to give the market at least 12 months promotion to say: this is the target date. If six months out we have a date just flashing and then finally it gets dimmer and dimmer, that will force the community to do something.¹⁴⁵

Simultaneous nation-wide analogue switch-off

- 3.177 Sony believes that there must be a national analogue switch-off, and that regional markets should not be exempted from this requirement.¹⁴⁶

- 3.178 Sony added:

Otherwise, regional and rural viewers risk becoming 'second-class citizens' when it comes to benefiting from the Government's DTV policy.¹⁴⁷

- 3.179 However, Sony did suggest that the Australian Government could look at a number of models to implement analogue switch-off, including a staged switchover.¹⁴⁸

- 3.180 When asked if it were to consider an early switch-off trial, SCB stated that analogue switch-off should be across all markets at once and as early as possible.¹⁴⁹

- 3.181 SCB clarified its position regarding particular markets and the burden of operating costs if switch-off is delayed:

If there is a tail in some very small markets around the country, we can cater for that, even if they are not ready to meet an earlier switch-off date. But at least we do not have the dual cost right across all markets.¹⁵⁰

145 WIN, *transcript of evidence 1 September 2005*, p. 38.

146 Sony, *submission no. 67*, p. 6.

147 Sony, *submission no. 67*, p. 6.

148 Sony, *submission no. 67*, p. 6.

149 SCB, *transcript of evidence 1 September 2005*, p. 23.

150 SCB, *transcript of evidence 1 September 2005*, p. 23.

Committee comment

- 3.182 The Committee understands that DTV rollout is well advanced and that all broadcasters, including regional broadcasters, will be rolled out ahead of schedule.
- 3.183 The Committee was particularly pleased to hear that the large regional broadcasters will be ready to switch-off analogue well ahead of the scheduled date of 2011. In considering a switch-off date and plan, the Committee is concerned to ensure that regional areas are not disadvantaged.
- 3.184 The Committee concludes that a certain switch-off date is imperative to drive product and retailer readiness, and to enable consumers to prepare and make informed choices. The Committee also notes that set-top box prices will be, to a large degree, determined by the size of the market, hence the importance of a nationwide switch-off as opposed to switching off regional areas first. A nationwide switch-off will ensure the most competitive pricing and hence the greatest benefits to consumers.
- 3.185 Given that evidence confirms a switch-off is achievable for 2010, the Committee recommends a nationwide approach to switch-off. This has definite advantages for regional consumers who are assured of access to DTV, and for regional broadcasters who will not continue to bear the financial impost of simulcast maintenance.
- 3.186 A nationwide switch-off will also assist in promotion campaigns for DTV. It will also drive down the costs of DTV equipment and so make it more affordable for all consumers, both metropolitan and regional.
- 3.187 Evidence confirms that a nationwide switch-off date of 2010 provides adequate time for broadcasters, manufacturers and retailers to plan appropriately. While this date extends the scheduled switch-off date in some metropolitan areas by up to two years, it does not pose extended financial burdens on regional broadcasters to continue simulcasting for a prolonged period.

Recommendation 1

The Committee recommends that the Australian Government switch-off analogue television nationwide on 1 January 2010.

Subsidies and general assistance

- 3.188 This section considers suggestions that subsidies or other forms of assistance should be provided by the Australian Government to assist with DTV take-up, equipment purchase and installation.

Subsidies to purchase set-top boxes

- 3.189 Several submissions raised concerns that there will be groups of consumers that will potentially be disadvantaged or left behind by analogue switch-off. There is the possibility that there will be particular socio-economic groups that may be unable to manage their own conversion to DTV. Of particular concern are the elderly, the disabled and low income groups.
- 3.190 Free TV Australia discussed this particular issue and provided an example from the US:

The debate in the US around analog switch-off is focused very much on the fact that the people who do receive free-to-air over-the-air signals are largely in poorer rural communities. There are about 20 million of them which is the total population of Australia, and there is a very strong battle there about those people needing to continue to receive their services. There is an issue in every country around low and fixed income households and the transition to digital.¹⁵¹

- 3.191 The Seven Network also commented on international examples:

Towards the end of the DTT migration process it is likely that government intervention will also be required to migrate remaining analogue households to digital and to switch-off analogue signals. Once digital reaches a certain penetration level, it will be more cost effective to subsidise the migration to digital of those remaining on analogue than to run analogue and digital services simultaneously. The Berlin regional government took this approach and is the first territory to achieve analogue switch-off as a result. The UK government has indicated that it will also subsidise STBs under certain conditions.¹⁵²

151 Free TV Australia, *transcript of evidence 25 May 2005*, pp. 4-5.

152 Seven Network, *submission no. 49, attachment 1, appendix 2*, p. 21.

- 3.192 Sony indicated that where affordability is an issue, the Australian Government may wish to consider a subsidy scheme to complete the conversion to DTV.¹⁵³
- 3.193 The Australian Capital Territory (ACT) Government claimed that subsidies for set-top boxes may need to be considered to ensure that disadvantaged groups have access to DTV when analogue is switched off. The ACT Government added that technical assistance may also need to be provided as there may be a significant lack of understanding of the new technologies by some disadvantaged groups.¹⁵⁴
- 3.194 The ACA briefly discussed the issue:
- Even were scarce public resources to be marshalled to subsidise households to acquire [a set-top box] or converter for one analogue TV receiver, the chances are that households will have many receivers. In addition the number of receivers is likely to be at least roughly reflective of socio-economic status, which would raise significant equity issues around Government subsidy of entertainment for the better-off.¹⁵⁵
- 3.195 Some submissions to the inquiry provided examples of general subsidies being provided to consumers for the purchase of DTV receivers, in order to drive take-up.
- 3.196 Movies Online Ltd discussed the US example:
- In order to encourage the general public in the United States of America to convert from analogue to digital broadcast television, law-makers in 2004 introduced a Bill to pay a subsidy to consumers to make it happen. The intention of the Bill was to provide a tangible incentive for consumers to move to digital thereby clearing the way for clawing back analogue spectrum for other purposes.¹⁵⁶
- 3.197 The Italian Government introduced a range of measures to further consumer take-up of DTV including a subsidy program. Interactive TV Pty Ltd stated that in Italy:
- ... consumer adoption has been encouraged by a government rebate scheme, initially at 150 euros per household, which has

153 Sony, *submission no. 67*, p. 7.

154 ACT Government, *submission no. 72*, pp. 3-4.

155 ACA, *submission no. 47*, p. 8.

156 Movies Online Ltd, *submission no. 43*, p. 5.

since been reduced to 70 euros. The uptake was 10 percent of all households within three months.¹⁵⁷

Other assistance

- 3.198 In addition to subsidies provided to a small number of households, some countries have implemented a range of assistance measures to facilitate consumer transition to DTV.
- 3.199 DCITA provided some details on Germany's Berlin-Brandenburg example of analogue switch-off. This area became the first region in the world to switch off its analogue signal in August 2003.
- 3.200 DCITA indicated that due to the high penetration of non-terrestrial television (cable and satellite) in the Berlin-Brandenburg region, only six per cent of the population (an estimated 160 000 people) relied solely on terrestrial reception for access to television services. Around 90 000 homes relied on analogue terrestrial reception for second and third sets.¹⁵⁸
- 3.201 DCITA provided some details on how the conversion process worked in Germany:
- The process began when suitable digital converter boxes were available for less than €200.
 - Many retailers offered an installation service which included a tutorial on using the equipment and a money-back guarantee if the equipment proved unsuitable.
 - A hotline was set-up to handle consumer enquiries, which received 26,000 calls and generated 600 visits to households to resolve problems.
 - Six thousand cases received financial assistance through local state social security and 90 cases received help through a broadcast assistance charity.
 - Those eligible for financial assistance were issued with a voucher which could be redeemed for a particular receiver chosen by the regulator on the basis of technical requirements and value.
 - The communication campaign for analogue switch-off, including the hotline which ran for nine months, cost around €1 million.
 - The cost of funding the 6 000 cases eligible for assistance was around €0.5 million.¹⁵⁹

157 Interactive TV, *submission no. 85*, p. 4.

158 DCITA, *submission no. 66*, p. 13.

159 DCITA, *submission no. 66*, p. 13.

- 3.202 Mr Alex Encel, a private individual, put to the Committee an even broader proposal of subsidies. Rather than provide a subsidy to households to purchase a set-top box, Mr Encel proposed the Australian Government 'bulk buy' sufficient set-top boxes to supply one to every household in Australia.¹⁶⁰
- 3.203 Mr Encel's plan was to have every household television in Australia displaying digital broadcasts, enabling a basic close down of analogue television transmission in 2006, at zero net cost.¹⁶¹
- 3.204 Mr Encel explained that, if the Australian Government bulk brought enough set-top boxes to provide every household with a digital tuner, the projected cost of this exercise was calculated at \$150 million.¹⁶²
- 3.205 Offsetting this cost would be the projected savings of \$150 million, being the combined cost of \$50 million a year for the ABC and SBS to maintain analogue transmissions for another three years.¹⁶³
- 3.206 Mr Encel added:

There are a lot of other expenses involved in maintaining analogue transmissions other than those faced by the ABC and SBS.

However without going into those and basing it on anticipated government costs alone, under the proposed plan the net cost to government of a general analogue close down in 2006 would be close to zero (or possibly a net gain) over a three-year period even if an optimistic 2009 closedown target was achieved.¹⁶⁴

Committee comment

- 3.207 The Committee is of the opinion that providing subsidies is not the answer to achieving digital conversion in Australia.
- 3.208 The Committee understands that subsidies have been used in other countries to drive early DTV take-up. However, the Committee is aware that the cost of set-top boxes has reduced substantially in recent times, and hence international examples may not be relevant for the Australian context.

160 Mr Alex Encel, *submission no. 93*, p. 1.

161 Mr Alex Encel, *submission no. 93*, p. 1.

162 Mr Alex Encel, *submission no. 93*, p. 1.

163 Mr Alex Encel, *submission no. 93*, p. 1.

164 Mr Alex Encel, *submission no. 93*, p. 1.

- 3.209 The Committee notes that the cost of a set-top box may be reduced to as little as \$50 – this is vastly different to early international examples where the cost of set-top boxes was substantially more. In many instances digital tuners are being integrated into DVD players and other equipment.
- 3.210 The Committee notes that set-top box prices are likely to drop even further, and will be driven down by the certainty of an analogue switch-off date and particularly by the approach of a nationwide switch-off.
- 3.211 The Committee is also of the view that the Australian Government has established an adequate lead time for the introduction of DTV, and that a subsidy to push take-up is not necessary. Australian consumers have been provided with sufficient time to plan and budget for the conversion to DTV.
- 3.212 The Committee is of the view that a subsidy program could be an expensive proposition. The Committee is also of the opinion that there may be difficulties in managing a subsidy program, and that administering any sort of subsidy program would not be a cost effective use of taxpayers' money.
- 3.213 There are more appropriate means of providing support to low income earners, such as is already done through health and other concessions. Given that a set-top box represents a one-off cost to receive DTV, that the cost is not substantial, and that the projected date for switch-off is not until 2010 – four years from now – the Committee does not consider subsidies a cost-effective solution.
- 3.214 With regard to issues raised concerning disadvantaged groups, the Committee is of the view that electronics retailers have a unique opportunity to provide particular services for a number of groups. Given the fierce competition that is likely to ensue for the consumer 'switch-over dollar', the Committee anticipates that there will be a range of installation type assistance provided. The Committee considers there will also be opportunities for retailers to step up with greater product information at the point of sale. This is discussed further in Chapter 5 as industry responsibilities.
- 3.215 If retailers wish to secure the set-top box purchase of some consumers, they will need to offer services such as the installation of DTV receivers to disadvantaged groups such as the elderly, the disabled, and those that have a lack of understanding of digital technologies.
- 3.216 The Committee also notes the extensive assistance provided by the DBA regarding installation, troubleshooting and DTV equipment.

- 3.217 In summary, the Committee does not consider it is appropriate for the Australian Government to offer subsidies or provide further assistance to purchase DTV equipment.
- 3.218 The DTV rollout and nationwide analogue switch-off provides the framework for retailers and manufacturers to provide cost effective assistance as part of the high demand for DTV equipment that will ensue.

Spectrum issues

- 3.219 An issue closely associated with the implementation of DTV and the switch off of analogue television is the matter of spectrum use. This inquiry has not considered in depth matters of spectrum allocation and management. However they are discussed here in relation to the future planning needed to manage the return of analogue spectrum.
- 3.220 Given the emergence of a range of new technologies reliant on access to spectrum, the Committee considers that a more efficient use of spectrum is a strong imperative to provide a definite switch-off plan for the short to medium term.
- 3.221 As explained in Chapter 2, the Australian Government loaned seven MHz of spectrum to each existing commercial and national broadcaster to enable them to provide all digital services required under the digital framework. Each network is then required to return their analogue spectrum to the Australian Government.
- 3.222 Some submissions questioned why spectrum should be returned to the Australian Government. Others considered options for the use of returned analogue spectrum, and how to allocate and better manage spectrum to meet current and potential future needs.

Returned spectrum

- 3.223 When asked why the Australian Government would need spectrum back, ASTRA explained:

I think it would be in the government's interest to get it back, and then you deliver new services and then it is open to government to decide what those services can be allocated for. Isn't that what we are about – delivering new services to consumers? The government gets benefits in terms of what is paid for that. We have seen that in commercial radio. Commercial radio did not

want new entrants, yet there have been new entrants who have paid a lot of money for that spectrum and are delivering services and making it more competitive for the commercial radio market, and no-one has fallen over. You can see it working in that area ... that spectrum could be used for so much more than it is currently being used for.¹⁶⁵

3.224 Movies Online Ltd discussed the return and reallocation of spectrum:

... there was going to be a prescribed window with the clawback of frequency allocation, which is a finite resource and in a very valuable band. Obviously there would be many other applications – probably some that we may not have even thought about at this time – so that that spectrum could then be allocated to utilisation.¹⁶⁶

3.225 The Nine Network warned that spectrum must be used efficiently and with careful planning:

... if you sell all the spectrum now and do not leave any slack for contingencies, you will end up with a very locked up and congested band in the same way that the British are finding. You have had various discussions today and earlier hearings about MPEG4 and mobile TV, and a lot of other things are coming. If you think that you will need some transition capability in the future – and it could be five years or 10 years from now – selling off all the spectrum now and not having any capacity within the broadcast services band would be a little dangerous.¹⁶⁷

3.226 Alternatively, the ACA believes there is no urgency in returning spectrum to government as it believes that there is no great need or demand to make the analogue spectrum available for anything else.¹⁶⁸

3.227 In its submission the ACA stated:

... it is unclear why there would be any urgency to [reclaim analogue spectrum], given the prohibition on further broadcasters, the failure of the datacasting model to attract commercial attention, and the probable disinterest of telecommunications

165 ASTRA, *transcript of evidence 14 September 2005*, pp. 27-28.

166 Movies Online Ltd, *transcript of evidence 2 September 2005*, p. 15.

167 Nine Network, *transcript of evidence 28 June 2005*, p. 19.

168 ACA, *transcript of evidence 7 September 2005*, p. 17.

companies in acquiring further large chunks of spectrum on which to run additional mobile services.¹⁶⁹

Other uses for spectrum

3.228 With regard to returned spectrum, Broadcast Australia recommended that the Australian Government:

- Ensure that analogue spectrum is available at the conclusion of the simulcast period for alternative uses and is allocated through an open, competitive process; and
- Prescribe market entry arrangements for the utilisation of available (and planned) digital spectrum in order to support the development of the industry.¹⁷⁰

3.229 The New South Wales (NSW) Government recommended that the Australian Government implement the following uses for unused digital spectrum:

... permanently allocate some of the non-simulcast digital spectrum in metropolitan and regional Australia for Government and public information services, community television services, indigenous television services and new commercial datacasting services.¹⁷¹

3.230 The NSW Government added that the Australian Government must ensure that:

... decisions about spectrum allocation and use include conditions to guarantee that Commonwealth and State Governments can use datacasting to deliver online services without additional cost to government.¹⁷²

Unused digital channels

3.231 Broadcast Australia claimed that there are two national channels that have been identified by the ACMA for digital terrestrial datacasting services, which are currently almost totally unutilised.¹⁷³

3.232 Broadcast Australia stated that it is currently running a datacasting trial in Sydney.¹⁷⁴ Details of the datacasting trial are discussed in Chapter 4.

169 ACA, *submission no. 47*, p. 4.

170 Broadcast Australia, *submission no. 41*, p. 18.

171 NSW Government, *submission no. 83*, p. 11.

172 NSW Government, *submission no. 83*, p. 11.

173 Broadcast Australia, *submission no. 41*, p. 9.

3.233 Broadcast Australia recommended the permanent allocation, on a merit basis, of these two digital-only channels:

To the extent that one or both of the available channels are not allocated post-2006 as additional commercial FTA broadcasting licences, it is [Broadcast Australia's] view that these should be made available on a permanent basis for datacasting and, potentially, other innovative broadcasting-related services.¹⁷⁵

3.234 Broadcast Australia believes that:

... it is in the public interest for both planned digital channels to be permanently allocated in the short- to medium-term for the provision of additional digital-only services to consumers.¹⁷⁶

3.235 Broadcast Australia stated that the Australian Government's position should be to allocate the spectrum rather than the situation to date where these channels have effectively been mothballed.¹⁷⁷

3.236 Broadcast Australia added that the onus should be on those who oppose allocation of spectrum to establish an overwhelming case that allocation is not in the public interest.¹⁷⁸

3.237 Broadcast Australia recommended that the Australian Government:

... can and should now commence deliberations on the allocation of these two national digital channels, as a central component of the next phase of Australia's digital conversion process, which will be driven by key policy changes resulting from the current government policy reviews on the key issues impacting DTV.¹⁷⁹

3.238 The ABC argued that the retention of the two unused datacasting channels in all metropolitan and regional areas can be regarded as an inefficient use of spectrum.¹⁸⁰

3.239 The ABC claimed that it would be more appropriate for these channels to be reallocated as additional digital terrestrial television channels to eliminate or reduce spectrum congestion issues in particular markets.¹⁸¹

174 Broadcast Australia, *submission no. 41*, p. 9.

175 Broadcast Australia, *submission no. 41*, p. 9.

176 Broadcast Australia, *submission no. 41*, p. 9.

177 Broadcast Australia, *submission no. 41*, p. 9.

178 Broadcast Australia, *submission no. 41*, p. 9.

179 Broadcast Australia, *submission no. 41*, p. 9.

180 ABC, *submission no. 45*, p. 8.

181 ABC, *submission no. 45*, p. 8.

3.240 The University of Technology, Sydney Programmers' Society (UTSPS) suggested that the Australian Government investigate the possibility of aggregating the metropolitan SDTV signals into a single multiplex broadcasts, using a single unused channel per market.¹⁸²

3.241 The UTSPS claimed that:

Such a move would allow the broadcasters to keep their dedicated spectrum and maximise their potential under a more rigorous multichannel and HD regime.¹⁸³

3.242 UTSPS further explained the possible arrangements:

The five free-to-air networks would share a channel where their main signal, currently mandated under triplecasting, would be relocated. It would replace the triplecast signal on their main signal where it is currently occupying valuable bitrate that could be more useful for experimental and innovative purposes.¹⁸⁴

Fourth commercial network

3.243 ITRI recommended that a channel be allocated for the provision of a fourth commercial television network, which would be limited to broadcasting on digital spectrum only.¹⁸⁵

3.244 ITRI elaborated on its recommendation:

We would recommend no artificial constraints be imposed on the provision of this channel (i.e. datacasting inhibitions), but rather suggest that by limiting its availability to digital alone there is sufficient market incentive for the channel to help stimulate digital take up. This service could commence in 2007, thereby honouring the moratorium on new TV channels enshrined in the existing legislation.¹⁸⁶

3.245 The ACCC is also in favour of a fourth network, if spectrum is available:

... we have consistently put a position that says where there is available spectrum there should be consideration given to a further FTA licence.¹⁸⁷

182 UTS Programmers' Society, *submission no. 32*, p. 7.

183 UTS Programmers' Society, *submission no. 32*, p. 7.

184 UTS Programmers' Society, *submission no. 32*, p. 7.

185 ITRI, *submission no. 46*, p. 14.

186 ITRI, *submission no. 46*, p. 14.

187 ACCC, *transcript of evidence 10 August 2005*, p. 3.

- 3.246 When asked about other uses for spectrum in the future, the ACCC stated that the Australian Government may have several options for the use of any spectrum that becomes available after analogue switch-off.¹⁸⁸

Community broadcasting

- 3.247 The Community Broadcasting Association of Australia (CBAA) claimed that community television is the only free-to-air service which has not been given access to digital spectrum despite the Australian Government's longstanding and unequivocal commitment that such access would be provided.¹⁸⁹

- 3.248 CBAA quoted a 1998 media release from the Minister for Communications, Information Technology and the Arts:

The community television sector will be guaranteed free access to the spectrum needed to broadcast one standard definition channel.¹⁹⁰

- 3.249 CBAA added that the community television sector is greatly disappointed that, seven years later, the Australian Government has not set in place the regulatory framework for digital community television.¹⁹¹

- 3.250 CBAA further explained the plight of the community television sector:

The time for digital conversion of community television has arrived. Community television stations are ready and able to make the transition. Australian consumers who purchase digital receivers should no longer lose access to this important and valuable community resource.¹⁹²

- 3.251 CBAA explained that the increasing take-up of DTV poses a great threat to the sustainability of the community television sector, because community television is excluded from digital platforms.¹⁹³

- 3.252 CBAA discussed revenue and funding and the viability of the sector:

The business model developed by the sector and enshrined in the *Broadcasting Legislation Amendment Bill (No 2) 2002* allows stations to generate revenue through sponsorship and sale-of-airtime.

188 ACCC, *transcript of evidence 10 August 2005*, p. 3.

189 CBAA, *submission no. 84*, p. 1.

190 CBAA, *submission no. 84*, p. 1.

191 CBAA, *submission no. 84*, p. 1.

192 CBAA, *submission no. 84*, pp. 1-2.

193 CBAA, *submission no. 84*, pp. 1-2.

Community television receives no regular government funding. The [community television] business model will only remain viable if community television can be accessed by the whole free-to-air television audience.¹⁹⁴

3.253 CBAA made several recommendations to this inquiry, which included:

- the Australian Government implement its longstanding commitment to providing free spectrum for digital community television;
- any legislative and regulatory framework for the digital carriage of community television include sufficient provision for digital community television in rural and regional areas; and
- in the long term, a full seven MHz channel be assigned for use by community television.¹⁹⁵

3.254 CBAA explained that it does not want to see the sector disadvantaged:

Community television should not be disadvantaged in relation to the commercial and national broadcasters by being allocated less spectrum than they currently enjoy. Without an equal allocation of spectrum, the sectoral diversity of digital television will be significantly reduced from that of the current analog environment. Moreover, community television would be relegated to a marginal and disadvantaged position within the broadcasting environment.¹⁹⁶

3.255 Several submissions to this inquiry discussed particular community television channels in Australia.

3.256 Mr Glen Hosking, a private individual, discussed a Brisbane example:

Currently community TV such as BRIS31 is NOT broadcast in a digital format. These community TV channels typically have low powered transmitters and subsequently poorer reception is experienced compared with commercial stations and ABC and SBS. These community channels however enjoy a cult following of viewers ... I believe it would be an excellent outcome for the Australian community if community channels such as BRIS31 are broadcast in the digital spectrum. This would be a cheap way of increasing the uptake of digital TV.¹⁹⁷

194 CBAA, *submission no. 84*, p. 1.

195 CBAA, *submission no. 84*, p. 2.

196 CBAA, *submission no. 84*, p. 8.

197 Mr Glen Hosking, *submission no. 57*, p. 1.

3.257 Mr Matthew Sharp, a private individual, discussed a Melbourne example:

Ironically, the station which has the most marginal and difficult reception of all, and could benefit most from digital transmission, the community station Channel 31, is the only station which has not even had digital spectrum allocated to it. With OzTam figures showing that over one million Melburnians tune in to Channel 31 each week, this seems to be an overlooked opportunity to get digital receivers into homes.¹⁹⁸

3.258 In January 2006, the Committee launched a new inquiry into community broadcasting. This inquiry will consider the role of community broadcasting in Australia, and opportunities and threats to ensure a robust network of community broadcasters.

Other uses

3.259 The introduction of digital radio broadcasting has been identified as a potential use for spectrum that will become available upon analogue switch-off.

3.260 In a 14 October 2005 media release announcing a framework to guide the introduction of digital radio in Australia, the Minister for Communications, Information Technology and the Arts, Senator The Hon Helen Coonan stated:

Significant spectrum limitations currently exist for the introduction of digital radio in key markets (including major metropolitan and adjacent areas). The Government will consider releasing additional spectrum for new digital radio services in relevant markets following the closure of analogue television services, subject to demand and other competing uses for the spectrum.¹⁹⁹

3.261 Meridian Connections Pty Ltd called for an assessment of spectrum in Australia:

A total re evaluation of all spectrum, including the terrestrial spectrum allocated to commercial TV, is an urgent and essential

198 Mr Matthew Sharp, *submission no. 51*, p. 2.

199 *Framework for the introduction of digital radio*, media release by the Minister for Communications, Information Technology and the Arts, 14 October 2005; www.minister.dcita.gov.au/media/media_releases/framework_for_the_introduction_of_digital_radio, accessed 6 November 2005.

program before any further commitments that could relate to Government's "long term" digital transition plan.²⁰⁰

Committee comment

- 3.262 While the Committee received evidence regarding the future allocation of spectrum, a decision on the issue is beyond the scope of this inquiry.
- 3.263 The Committee considers that the return of the analogue spectrum provides the Australian Government with a unique opportunity to strategically consider spectrum needs and allocation in order to meet future technology uses in Australia.
- 3.264 This type of strategic consideration should take into account the efficiency of current spectrum allocation, and in particular the impact of HD, SD and new compression technologies for broadcasters' programming choices. It should also consider opportunities to increase the range and diversity of current television broadcasting, and the spectrum needs of new technologies.
- 3.265 In addition, it should investigate the spectrum needs of new technologies, recognising that the efficiency gains in spectrum use may be countered by the emergence of a diversity of technologies (beyond television) which also require spectrum.
- 3.266 The Committee recommends that an independent study is commissioned to consider current spectrum allocation and future requirements.

200 Meridian Connections Pty Ltd, *submission no. 52*, p. 25.

Recommendation 2

The Committee recommends that the Australian Government commission an independent study into Australia's current spectrum allocation and future requirements, reporting by 1 January 2008, and taking into account:

- **options for the utilisation of returned spectrum following analogue switch-off;**
- **re-allocation of television network spectrum to group together broadcasters and provide a more consolidated width of returned spectrum for future allocation;**
- **additional television networks, including community broadcasting stations offering a range of programming aimed at indigenous and minority ethnic and community groups; and**
- **the spectrum needs of future technologies, in particular wireless and other emerging technologies.**

Content and quality

- 4.1 This chapter largely deals with diametrically opposed views concerning the main drivers for DTV take-up in Australia.
- 4.2 Many submissions to the inquiry claimed that multichannelling will be the primary driver for DTV take-up, while other submissions claimed that HDTV broadcasting will drive take-up. This chapter reviews current policy on multichannelling and HDTV, and considers policy options beyond analogue switch-off.
- 4.3 This chapter also looks at datacasting and problems associated with DTV reception.

Multichannelling

- 4.4 Opinion on whether restrictions on multichannelling in Australia should be lifted is deeply divided. This section of the Chapter gives an overview of multichannel services in Australia, and outlines the arguments for and against the lifting of free-to-air multichannelling restrictions, and the possibility of subscription multichannelling by commercial networks.
- 4.5 Following this review of the evidence received regarding options to change the multichannelling restrictions, the Committee sets out its conclusions and recommendations.
- 4.6 Several submissions refer to the UK's Freeview platform in their arguments. A brief outline of this service is also provided.
- 4.7 Currently, there is a prohibition in Australia on multichannelling by commercial television broadcasters and limits on multichannelling by national broadcasters. DCITA explained that this was designed to

minimise the initial impact of new digital free-to-air services on the subscription television sector.¹ DCITA has conducted a review examining whether restrictions on multichannelling should be modified; however it has yet to report to Parliament.²

Multichannel services

ABC

4.8 The ABC stated that Australia's first digital terrestrial multichannel service, ABC Kids, was launched in August 2001, followed in November 2001 by a second multichannel service, Fly.³

4.9 The ABC claimed that ABC Kids extends its commitment to children's broadcasting, and offers entertaining, engaging and commercial free programming from 6am until 6pm daily.⁴

4.10 The ABC's annual report for 2001-2002 provided further details on ABC Kids:

Programming is divided into age zones for children from pre-school age until early teens with a strong mix of local and overseas programming including *Playschool*, *Bob The Builder*, *Bananas in Panamas*, *Tracey McBean*, *Old Tom*, and *The Saddle Club*. The children's digital channel is run in conjunction with programming on the main television service. The digital channel enables the ABC to offer high quality children's programming across the day.⁵

4.11 The digital youth channel, Fly, offers information, music, animation and entertainment for a teenage and youth audience. The ABC's annual report for 2001-2002 explained:

Fly is an innovative service made by young Australian producers and animators using new consumer DVD and PC technology to provide information and lifestyle content for young people. It deals with technology, environment, fashion, music, work, careers, school, health and relationships, with high levels of animation using the work of emerging artists from various genres.⁶

1 DCITA, *submission no. 66*, p. 3.

2 DCITA, *submission no. 66*, pp. 15-16.

3 ABC, *submission no. 45*, p. 1.

4 ABC, *Annual Report 2001-2002*, p. 57.

5 ABC, *Annual Report 2001-2002*, p. 57.

6 ABC, *Annual Report 2001-2002*, p. 57.

- 4.12 The ABC explained that the ABC Kids and Fly multichannel services, launched with non-recurrent funding, closed in June 2003, as the broadcaster was unsuccessful in its application for additional funding.⁷
- 4.13 The ABC explained that, in August 2004, the ABC Board approved a proposal and an associated business case for the establishment of a new digital channel, ABC2:⁸
- The Board determined that the ABC should participate actively in the digital media environment despite its funding constraints. ABC2 launched in March 2005 as a less costly operation than its predecessors as a result of its format and use of digital automation systems and processes. The Corporation has identified a sustainable basis of funding for the channel.⁹
- 4.14 The ABC's website discussed the content of ABC2, stating that it is showcasing new documentaries and performance pieces that have never been shown on Australian television.¹⁰
- 4.15 ABC2 features:
- ... a broad range of new and time-shifted ABC programming – children's, regional, arts, public policy, social commentary, international news, music and information ... young families will enjoy its daytime focus on *ABC Kids*, bridging the gap between 10 am and 3 pm every weekday with pre-school viewing, and a "Rollercoaster" hour for older kids between 6 pm and 7 pm ... there's new content too, created exclusively for ABC2 and the complementary ABC Broadband channel. This is mostly short, interstitial content -- animations, music videos and kids' education programs, plus a series of short pieces featuring stories from around the country ... there's a focus on music as well – some from the ABC's extensive archives and the Studio 22 catalogue, as well as a series of high profile names in concert, never seen before on the ABC.¹¹

7 ABC, *submission no. 45*, p. 1.

8 ABC, *submission no. 45*, p. 1.

9 ABC, *submission no. 45*, p. 1.

10 www.abc.net.au/tv/abc2/faqs.htm, accessed 28 November 2005.

11 www.abc.net.au/tv/abc2/about.htm, accessed 28 November 2005.

SBS

- 4.16 SBS now provides six services on DTV, including two digital only multichannels and rebroadcasts of its two radio services, in addition to a range of enhanced and interactive content.¹²
- 4.17 Since 2001, SBS has been broadcasting in digital a simulcast of its main channel. It also commenced broadcasts of its two radio services on digital television, delivering programs in 68 languages.¹³
- 4.18 Since 2002, SBS has broadcast the digital-only World News Channel:
- This multichannel broadcasts language news services from 17 countries in 16 languages, 24 hours per day. This was developed as a trial, low cost service. As a result, the morning programming largely duplicates the programs available on the main-channel WorldWatch program and updates them throughout the day. Since its launch, SBS has used its research and development partnerships with technology companies to add some automated features, including weather and text news headlines with pictures. The news and data service aggregates content that is produced for the SBS website database and reproduces it in a visual format for television. Customised technology has been developed to enable this service to operate efficiently and inexpensively.¹⁴
- 4.19 Since 2002, SBS has also broadcast the digital-only SBS Essential, an electronic information guide for SBS programs. It contains:
- ... information about SBS programs, short news items and weather information. It has also been used as the channel on which enhancements to main channel programming are provided. An example was the UEFA Champions League Soccer finals in April 2004 where viewers were able to watch the match on the main channel and then switch to SBS Essential to view a loop of highlights and additional data on the match.¹⁵
- 4.20 SBS claimed that it has been developing innovative but low cost digital features, enhancements and interactive services for its digital services in active partnerships with technology companies.¹⁶

12 SBS, *submission no. 62*, p. 2.

13 SBS, *submission no. 62*, p. 3.

14 SBS, *submission no. 62*, p. 3.

15 SBS, *submission no. 62*, p. 3.

16 SBS, *submission no. 62*, p. 3.

- 4.21 SBS stated that it is working on projects for future enhancements including:
- Adding multimedia to the World News Channel through the production of a video feature that takes top stories from World News programs and provides English subtitled text, allowing all Australians access to other countries' news perspectives;
 - Adding repackaged SBS-produced English language international news grabs developed for the web to the multichannel;
 - Further enhancing SBS Essential with extended previews of SBS programs and repackaged video broadband material;
 - Interactive television enhancements, including development on interactive sports applications for The World Game soccer program; and
 - Interactive SBS radio program guides.¹⁷

International multichannelling models – UK Freeview service

- 4.22 Several submissions to this inquiry discussed the UK's Freeview platform as an example or model of a DTV service that could be replicated in Australia. Some submissions indicated that the model is a useful driver for DTV take-up, while some submissions dismissed its usefulness because of the inability to directly compare the Australian and UK television markets.
- 4.23 The Nine Network explained that Freeview is a hybrid free and subscription multichannelling service, which has been a significant driver for the take-up of digital in the United Kingdom.¹⁸
- 4.24 DCITA discussed the Freeview platform and the role the British Broadcasting Corporation (BBC) plays in operating the service:

The BBC has played an import role in the development of digital terrestrial television in the UK. It is one of three shareholders in Freeview, the UK's digital terrestrial television (DTT) platform. The BBC's services occupy two multiplexes on Freeview. On these multiplexes the BBC provides a digital version of both its analogue television channels, BBC1 and BBC2, as well as six more digital-only television channels (two channels for children, a youth channel, an arts/culture oriented channel, a news channel and a parliamentary channel), and an interactive channel. Eleven BBC

17 SBS, *submission no. 62*, p. 4.

18 Nine Network, *submission no. 59*, p. 8.

digital radio services are also available on Freeview. The BBC's digital television services are also available on digital pay TV platforms and are broadcast unencrypted to satellite viewers without a pay TV subscription. Some of these digital-only services are very popular and are likely to have contributed a great deal to digital takeup in the UK.¹⁹

- 4.25 The Seven Network also discussed the Freeview platform and its value in driving take-up of DTV:

The UK has the strongest uptake of digital television in the world. The Freeview digital television service is now in almost 5 million UK homes. Freeview has achieved 19% penetration in only 2 1/2 years since its launch. By contrast, penetration in Australia is only around 9%, 4 1/2 years after launch of digital terrestrial television.²⁰

- 4.26 In its review on multi-channelling, DCITA raised the question of whether the Freeview DTV platform may be a workable model for Australia.²¹

- 4.27 The Nine Network explained that the difference in television markets makes it difficult to use Freeview as a model for DTV services in Australia:

However, due to the very different nature of broadcasting in the UK and Australia it is difficult to draw direct comparisons between the introduction of digital television in the two countries and difficult to view the high take-up of Freeview as a guide to the potential success of free to air multi-channelling in Australia.²²

- 4.28 The Nine Network also discussed funding models for both countries:

The funding model for television is very different in the United Kingdom with a television licence fee paid by all citizens resulting in very high levels of public funding to the sector, a relatively small number of advertiser based broadcasters and a very strong subscription television sector. In contrast Australia has lower levels of public funding, a relatively higher number of commercial broadcasters and a weaker subscription sector.²³

19 DCITA, *submission no. 66*, p. 11.

20 Seven Network, *submission no. 49*, p. 2.

21 DCITA, 'Provision of services other than simulcasting by free-to-air broadcasters on digital spectrum', Issues paper, May 2004.

22 Nine Network, *submission no. 59*, p. 8.

23 Nine Network, *submission no. 59*, p. 8.

4.29 FOXTEL also discussed the difference between the Australian and UK television markets:

The different characteristics of the UK television market are integral to the existence of the Freeview model. The unique market forces and characteristics that enable Freeview (principally the financial and content leadership of the publicly funded BBC) do not exist in Australia ... The Freeview model appears incapable of being adopted by the commercial broadcasters in Australia to promote digital conversion and, without a massive increase in funding, neither of the public broadcasters the ABC nor SBS are in a position to develop a Freeview-like platform from which to promote digital take-up in Australia.²⁴

4.30 Network Ten explained that, given the fundamental differences in the structure and size of the respective markets, comparisons between Australia, the UK and the US are limited.²⁵

4.31 Network Ten stated that:

... claims that the UK's Freeview service could be replicated in Australia are highly misleading. Freeview operates in a market three times the size of Australia's and is not "free" to viewers. It is driven almost entirely by the BBC, which is funded by the Television Licence Fee of £126.50 (\$305 AUD) paid by every television set owner every year.²⁶

4.32 Network Ten also stated:

The BBC has used its scale and large chunks of its vast £2.8 billion budget to create new programming and run extensive marketing campaigns on Freeview. However, even with this level of support, less than 5% of the Freeview audience watches the BBC's digital-only channels and BBC Three and Four have been found to be poor value for money which do little to connect the BBC with viewers or drive digital takeup.²⁷

24 FOXTEL, *submission no. 55, attachment 1*, pp. 39-40.

25 Network Ten, *submission no. 60*, p. 3.

26 Network Ten, *submission no. 60*, p. 3.

27 Network Ten, *submission no. 60*, p. 3.

4.33 The Seven Network stated that Australia cannot simply replicate the Freeview service:

... which relies heavily on BBC content and the BBC's high funding base as well as a higher population base for advertiser funded channels.²⁸

4.34 The Seven Network added that:

Our [DTV] platform must be tailored to Australian market conditions and is only sustainable if advertiser funded models are supplemented by subscription services to ensure long term viability.²⁹

Arguments for multichannelling in Australia

4.35 The Seven Network was the only commercial network to advocate multichannelling. A number of other submissions also suggested multichannelling was a key driver to the take-up of DTV in Australia. Both SBS and ABC favoured lifting restrictions on multichannelling.

Multichannelling as a driver for take-up

4.36 The Seven Network claimed that the single most effective driver to encourage take-up of DTV in Australia would be to permit commercial broadcasters to provide multichannel services.³⁰

4.37 The Seven Network claimed that the primary reason for the low take-up of DTV in Australia is the lack of a clear value proposition for consumers, and that multichannelling is an essential consumer driver to ensure the successful transition from analogue to digital.³¹

4.38 The Seven Network stated that Australia is the only major DTV market that has not implemented multichannel services as part of its DTV platform. The network also claimed that there is strong consumer demand for multichannel services.³²

4.39 In 2004, the Seven Network commissioned research from Crosby Textor³³ to ascertain the attitudes of Australian consumers towards multichannel

28 Seven Network, *submission no. 49*, p. 8.

29 Seven Network, *submission no. 49*, p. 8.

30 Seven Network, *submission no. 49*, p. 2.

31 Seven Network, *submission no. 49*, p. 2.

32 Seven Network, *submission no. 49*, p. 2.

33 www.crosbytextor.com.au/profile_who.htm.

services. The Seven Network claimed that the results showed an overwhelming interest in greater choice and diversity of services.

4.40 The Seven Network's submission outlined the key findings of the research:

- Free to air television is highly valued particularly for Australian content and first run programming;
- 57% of viewers think there is not enough variety on free-to-air television;
- 81% of people are aware of the transition from analog to digital broadcasting but very few understand what digital can deliver outside of better pictures and sound. Consequently, most saw no hurry to adopt digital television;
- 58% of people are not currently aware of the potential for multichannelling services on the terrestrial platform;
- 86% of people support introduction of multichannelling;
- 91% of people support free multichannelling;
- 59% of people say they would pay something to receive multichannel services; and
- More content and greater choice is the most compelling reason to support multichannelling.³⁴

4.41 The Committee noted that the Seven Network did not provide any details or documentation regarding the conduct of the survey.

4.42 The ABC believes that the key to encouraging consumer interest in the take-up of DTV is to provide audiences with greater choice through additional services and new content that is interesting and engaging.³⁵

4.43 The ABC explained:

Evidence from overseas supports the proposition that greater program choice is as significant a factor, if not more significant, than image quality in encouraging consumers to purchase digital television equipment. Europe has little or no HDTV broadcasting. Instead, take-up has been most significantly influenced by increased choice.³⁶

4.44 The ABC also discussed the Freeview model as a driver for DTV take-up:

The rapid growth of the Freeview multichannel service, which provides audiences with access to more than 30 channels, has demonstrated a public appetite for increased viewing options. In

34 Seven Network, *submission no. 49*, p. 6.

35 ABC, *submission no. 45*, p. 2.

36 ABC, *submission no. 45*, p. 2.

the two-and-a-half years since its October 2002 launch, Freeview's audience has grown to 4.59 million UK homes. An analysis of the UK's progress towards digital switchover by the communications regulator, Ofcom, identified increasing channel choices and low cost receiver units as key reasons for Freeview's success.³⁷

4.45 The ABC claimed that consumer response to additional DTV services demonstrates that a similar appetite for greater viewer choice exists in the free-to-air market in Australia.³⁸

4.46 The ABC discussed an Australian example:

... recent evidence from Tasmania suggests that the introduction of an additional digital-only commercial station, Tasmanian Digital Television, into the Hobart market has resulted in a significantly higher take-up rate for digital television than elsewhere in the country.³⁹

4.47 The ABC explained its role in stimulating DTV take-up, and the need to develop multichannel services:

The Corporation is uniquely placed to create an environment that will stimulate consumer interest and mitigate consumer risk. However, the ABC needs the ability to strengthen and enhance existing multichannel services with original content and to develop new multichannel services. In so doing the ABC can also clear the way for further investment by industry.⁴⁰

4.48 When asked if the ability to multichannel would be enough to drive digital take-up, the ABC stated:

I think that innovative, attractive and comprehensive services being offered by the public broadcasters would certainly be an added incentive for take-up of digital services in the immediate future ... the more content and choice which is available to audiences, the greater the incentive.⁴¹

37 ABC, *submission no. 45*, p. 3.

38 ABC, *submission no. 45*, p. 3.

39 ABC, *submission no. 45*, p. 3.

40 ABC, *submission no. 45*, p. 4.

41 ABC, *transcript of evidence 22 June 2005*, p. 26.

4.49 SBS also claimed that extra content and services are needed to make digital distinctive and necessary as a consumer purchase.⁴² SBS added:

The experience in international markets demonstrates that new and interesting digital-only content and services are needed to drive consumer uptake. This should include distinctive and innovative multichannels that offer extra viewer choice and address unmet audience demand. Public broadcasting is well placed to provide attractive viewing choices that significantly drive uptake.⁴³

4.50 SBS discussed its development of multichannel services:

SBS treats the development of extra services seriously. Our core planning processes include regularly looking at the types of extra programming we can put on the spectrum, and we regularly trial and model new services. This is all about using digital to make our charter content deeper, richer and more compelling. We look forward to the day when the resource base of the organisation can fully accommodate our digital vision.⁴⁴

4.51 Broadcast Australia is firmly of the view that multichannelling is a critical element in the take-up of DTV.⁴⁵ Broadcast Australia believes that provision of additional flexibility to broadcasters in relation to multichannelling could be a significant factor in motivating consumers to move from analogue to digital.⁴⁶

4.52 The Northern Territory (NT) Government is also of the opinion that the major impediment to DTV take-up appears to be the lack of a value proposition for the consumer:

The Australian Government policies relating to simulcasting and multichannelling by commercial broadcasters and the lack of a datacasting service appears to have diluted any value proposition to the consumer by failing to offer choice and an easily distinguishable superior product from the one that they currently use.⁴⁷

42 SBS, *submission no. 62*, p. 2.

43 SBS, *submission no. 62*, p. 2.

44 SBS, *transcript of evidence 22 June 2005*, p. 29.

45 Broadcast Australia, *submission no. 41*, p. 4.

46 Broadcast Australia, *submission no. 41*, p. 4.

47 NT Government, *submission no. 27*, p. 1.

- 4.53 Sony is firmly of the view that take-up of digital television is driven by consumer choice, in particular the ability to access a wide range of digital programming.⁴⁸
- 4.54 Sony stated that access to digital content is a key driver of take-up, particularly given the example of the successful UK DTV market, but is severely limited under the current Australian policy setting.⁴⁹
- 4.55 Sony believes that there is significant content available for additional channels:
- Firstly, the entire suite of programs, which presently appear on the free-to-view network schedules, could be retransmitted or repackaged to appear on multichannels. Secondly, there are many hours of programs from multiple sources not otherwise committed, which could appear on multichannels. Such sources are both locally and internationally based, and cross the entire range of program material, i.e. news, sport, feature films and episodic television programs.⁵⁰
- 4.56 Sony believes that multichannelling provides an opportunity for broadcasters to develop new programming, marketing and advertising business models, which will benefit consumers and the broadcasters.⁵¹

Restrictions

- 4.57 Many submissions to the inquiry raised the issue of multichannelling restrictions. Some suggested that current restrictions on multichannelling for commercial networks could be lifted. Others argued for greater flexibility in the content restrictions that apply to the ABC and SBS multichannelling. Comments were also received in relation to enhanced programming restrictions.

Lift multichannelling restrictions

- 4.58 The Seven Network strongly supports the removal of the current restrictions on multichannelling. The Seven Network believes that the reasons for the existing restrictions on multichannelling are no longer valid:

48 Sony, *submission no. 67*, p. 7.

49 Sony, *submission no. 67*, p. 3.

50 Sony, *submission no. 67*, p. 7.

51 Sony, *submission no. 67*, p. 8.

The rationale for prohibition of multichannelling services in 1998 to protect the “fledgling pay television industry” is no longer relevant. The pay TV sector has undergone significant growth and restructure since that time, with over 1.5 million subscribers, generating revenues in excess of \$1.2 billion per annum and having become a monopoly industry. The policy justification for the prohibition of multichannel services no longer exists.⁵²

- 4.59 In its evidence to the Committee, the Seven Network further described the situation regarding the protection of the subscription television industry, and the review of multichannelling restrictions:

When multichannelling was considered in 1998 and again in 2000 ... the decision about multichannelling was about the state of the subscription television industry at that time. The state of the subscription television industry has changed absolutely and totally since that time, so the justification for banning multichannelling in 1998 and 2000 really no longer applies and there is no reason to continue with that policy. The reason that a review of multichannel services was set in the legislation for the current year was precisely to examine whether that justification continued to exist, and it does not.⁵³

- 4.60 SBS also explained that consolidation of the subscription television sector in recent years has created a market where it complements and co-exists with free-to-air television and restrictions are no longer sustainable.⁵⁴

- 4.61 Broadcast Australia believes that:

... there should be no restrictions imposed on the number of multichannels to be provided by FTA broadcasters except to the extent imposed by technical quality and ongoing compliance with the minimum requirements for HDTV ...

- 4.62 The Western Australian (WA) Government stated that it supports the position that broadcasters should be able to multichannel, and that this should be based on their assessment of costs and benefits. The WA Government also stated that multichannelling should not be restricted to the subscription television platform.⁵⁵

52 Seven Network, *submission no. 49*, p. 2.

53 Seven Network, *transcript of evidence 1 September 2005*, p. 11.

54 SBS, *submission no. 62*, p. 7.

55 WA Government, *submission no. 89*, p. 7.

- 4.63 Sony believes it is desirable to remove current restrictions on multichannelling so that broadcasters can make their own commercial judgments and consumers can have the opportunity to access more digital programming.⁵⁶
- 4.64 UTSPS stated that multichannelling restrictions should be lifted in readiness for the 2008 Beijing Olympic Games:
- Events such as Olympic Games, tennis tournaments and soccer tournaments need to be fully leveraged by broadcasters who have licences to a full spectrum channel ... networks have a fairly unusual opportunity to deliver an integrated multichannel package, live to the viewer, and promote it as such. If restrictions were lifted to allow for this, Australians would be given unparalleled value in their free and accessible coverage of sports.⁵⁷

Restrictions on national broadcasters

- 4.65 The ABC stated that the most straightforward way to achieve greater DTV take-up would be to allow broadcasters the flexibility to design and deliver content and services that are appealing to audiences.⁵⁸ The ABC claimed that the current restrictions on broadcasters simply do not give the industry the flexibility it needs to develop the content that audiences are seeking.⁵⁹
- 4.66 The ABC explained that its ability to offer multichannel services is currently constrained by the genre restrictions applying to the content of national broadcaster multichannels, under subclause 5A(2) of Schedule 4 of the BSA.⁶⁰
- 4.67 The ABC's submission outlined a number of consequences of these restrictions:
- they prevent the ABC from utilising much of its existing archive material and time shifting current material from the ABC main channel;
 - they prevent the ABC from exploiting its particular strengths and program expertise in areas such as national news, national current affairs, drama, comedy, sport and entertainment; and
 - by restricting the scope of multichannel services to a list of specific genres, they undermine one of the main benefits of

56 Sony, *submission no. 67*, p. 3.

57 UTSPS, *submission no. 32*, p. 3.

58 ABC, *submission no. 45*, p. 13.

59 ABC, *submission no. 45*, p. 13.

60 ABC, *submission no. 45*, p. 6.

digital television to audiences, namely the provision of greater choice and diversity of programs and services.⁶¹

- 4.68 The ABC stated that many of its programs that cannot be broadcast would be popular with audiences and could be provided cost-effectively. The genre restrictions remove this affordable programming option and therefore present a direct financial impediment to providing multichannel services.⁶²
- 4.69 The ABC is currently inhibited in its ability to transmit national news and current affairs programming on a multichannel service – although the list of permissible genres includes regional news and current affairs and international news.⁶³ It is also prevented from rebroadcasting older, landmark Australian drama programs and from making the most effective use of the vast resource that is in the ABC archives.⁶⁴
- 4.70 The ABC has already received requests from audience members for ABC2 to carry currently prohibited programs, such as archival Australian drama series, sports, and a daily news program.⁶⁵
- 4.71 The ABC proposed that these genre restrictions be lifted to allow national broadcasters to provide the Australian public with greater access to the full range of publicly funded programs.⁶⁶
- 4.72 SBS also believes that multichannelling genre restrictions on the national broadcasters should be immediately lifted or substantially relaxed, adding that the market should be given the maximum ability to find the best models for delivering new free-to-air services.⁶⁷
- 4.73 SBS stated:
- SBS has consistently supported relaxation of content restrictions on both public broadcaster multichannelling and believes that it would be appropriate and positive for the whole industry.⁶⁸
- 4.74 SBS also stated that national broadcasters should be funded to develop innovative digital services through their multichannelling capacity.⁶⁹

61 ABC, *submission no. 45*, p. 6.

62 ABC, *submission no. 45*, p. 6.

63 ABC, *submission no. 45*, p. 6.

64 ABC, *submission no. 45*, p. 7.

65 ABC, *submission no. 45*, p. 7.

66 ABC, *submission no. 45*, p. 6.

67 SBS, *submission no. 62*, p. 7.

68 SBS, *transcript of evidence 22 June 2005*, p. 29.

69 SBS, *submission no. 62*, p. 8.

- 4.75 The Australian Film Commission (AFC) stated that, with regard to the current genre restrictions, there needs to be a more flexible environment to prompt innovative digital programming. Constraints on the broadcasters translate into constraints on innovative content.⁷⁰
- 4.76 UTSPS also supports the easing of genre restrictions on the ABC and SBS.⁷¹ UTSPS claimed that:
- ABC and SBS have the ability to provide the greatest promotion of digital free-to-air terrestrial in Australia, while simultaneously presenting a minimal threat to all commercial broadcasters in the free-to-air and subscription industries.⁷²
- 4.77 UTSPS made the following recommendations:
- allow the ABC to screen any programming it has produced;
 - allow the ABC to rebroadcast all its radio networks on DTV, each of which reduces the available television picture quality by one per cent;
 - allow SBS to include the English language news services of its overseas partners, from whom SBS already broadcasts the foreign language versions;
 - allow SBS to include any self-produced news services with an overseas focus;
 - expressly allow the ABC to screen sport and comedy; and
 - allow SBS to provide its viewers the maximum benefit from its World Cup football rights.⁷³
- 4.78 Broadcast Australia is of the view that multichannelling content should not be unduly constrained by artificial genre rules and should be a choice for the individual broadcaster. Broadcast Australia added that there does not appear to be any strong public policy reason to support the more restrictive treatment of national broadcasters on this issue.⁷⁴
- 4.79 Broadcast Australia also stated that any new policy should provide the ability for broadcasters to transmit third-party content on their multi-

70 AFC, *submission no. 54*, p. 5.

71 UTSPS, *submission no. 32*, p. 4.

72 UTSPS, *submission no. 32*, p. 4.

73 UTSPS, *submission no. 32*, p. 4.

74 Broadcast Australia, *submission no. 41*, p. 12.

channels as is currently available to the subscription television sector and datacasters.⁷⁵

Enhanced program restrictions

- 4.80 In its submission the ABC discussed restrictions on providing enhanced program material as part of a DTV service.
- 4.81 The ABC explained that under subclause 19(14) of Schedule 4 of the BSA, broadcasters are permitted to provide digital program enhancements, such as additional camera angles and user-selectable score information for a sporting event.⁷⁶
- 4.82 However, while such enhanced programming would provide a further point of difference between digital and analogue television, it is subject to significant restrictions.⁷⁷
- 4.83 The ABC claimed that the legislation was framed at a time when there was little understanding in the industry, whether in Australia or overseas, of the kinds of interactivity that would actually appeal to viewers. To date, Australian broadcasters have provided relatively few program enhancements.⁷⁸
- 4.84 The ABC explained the key restrictions:
- In accordance with paragraph 19(14)(i) of Schedule 4, program enhancements must be “closely and directly linked to the subject matter of the primary program”. This prevents general channel enhancements, such as news headlines or weather information that viewers can elect to bring up or dismiss from their screens when they choose. Such channel enhancements can then only be provided under the restrictive datacasting provisions in Schedule 6 of the Act. Given the limitations placed on the bandwidth for additional services by the existing “triplecast” requirements, it is likely that such enhancements would be small interactive items transmitted in parallel to broadcast television channels.
 - Program enhancements must be simultaneous with the primary program, which prevents the option of complementary information following a program. Research from BBC Interactive TV shows that many enhancements are more

75 Broadcast Australia, *submission no. 41*, p. 12.

76 ABC, *submission no. 45*, p. 6.

77 ABC, *submission no. 45*, p. 6.

78 ABC, *submission no. 45*, p. 6.

appropriately shown after the program, when they do not distract audiences from the main narrative.⁷⁹

- 4.85 The ABC recommended that the enhanced program restrictions should be lifted to allow broadcasters to provide interactive programs, which will appeal to audiences and encourage digital take-up.⁸⁰

Multichannel promotion by networks

- 4.86 UTSPS stated that networks should be encouraged to cross-promote their multichannel services further, which will assist in driving DTV take-up.⁸¹ UTSPS explained:

For promotional purposes of an emerging technology, there is a large inherent advantage to having one network operating two or more channels; we have this fairly rare advantage in Australia but it is not being used.⁸²

- 4.87 UTSPS discussed the BBC's use of cross-promotion:

When BBC launched a second channel in the 1960s, they immediately started promoting the programming of one channel on the other ... [the BBC has] reused this technique for the launch of their digital channels ... this has also provided the convenience to all viewers on all channels of promoting the programming on the main channel(s).⁸³

- 4.88 UTSPS recommended that the ABC should be asked to mix all their program lineups with names and times of programs from both channels (ABCTV and ABC2), and SBS should be asked to do the same for SBS1 and SBS2.⁸⁴
- 4.89 UTSPS analysed promotion currently undertaken by the national broadcasters:

The current situation is absurd, with both networks seemingly avoiding any mention of their new services for fear of complexity, or dilution of the perceived quality of their original service; shows

79 ABC, *submission no. 45*, p. 6.

80 ABC, *submission no. 45*, p. 6.

81 UTSPS, *submission no. 32*, p. 4.

82 UTSPS, *submission no. 32*, p. 4.

83 UTSPS, *submission no. 32*, p. 4.

84 UTSPS, *submission no. 32*, p. 4.

from ABCTV repeated on ABC2 are promoted as such, only on ABC2.⁸⁵

4.90 UTSPS explained that:

... when the viewer sees a lineup of shows “coming up tonight”, and is informed of both channels at once, this will immediately promote digital TV uptake, and simultaneously answer the viewers’ curiosity of “what is on there”. Ironically, ABC’s website works like this right now.⁸⁶

4.91 The ABC website’s FAQ provides a basic answer as to why there is little promotion of ABC2 on main ABC service:

ABC2’s tight budget prevents us from producing detailed promotions for all programs, although more general information about viewing times is being broadcast. Detailed information about each program, including a synopsis, is available on ABC2’s online schedule, including links to program web sites as appropriate.⁸⁷

4.92 The Committee is concerned that the networks, in particular the national broadcasters that have multichannel services, are not doing enough to promote the additional DTV services currently available.

4.93 The Committee noted that FOXTEL promotes on its analogue channels material that is broadcast on its digital-only service.

4.94 The Committee suggests that the national broadcasters should do considerably more to promote their digital services, including running programming details of DTV services on their analogue broadcasts.

Arguments against multichannelling in Australia

4.95 A number of submissions were opposed to any changes to the multichannelling restrictions. These included the commercial networks such as WIN, the Nine Network, Network Ten, and representatives from the subscription television sector.

4.96 It was suggested that lifting restrictions on multichannelling could lead to a decline in programming quality as well as imposing additional costs on networks. Issues were also raised regarding impacts on the subscription television sector.

85 UTSPS, *submission no. 32*, p. 4.

86 UTSPS, *submission no. 32*, p. 4.

87 www.abc.net.au/tv/abc2/faqs.htm, accessed 28 November 2005.

Decline in quality and increase in costs

- 4.97 The Nine Network believes that introducing more channels will lead to the fragmentation of the existing free-to-air audience.⁸⁸
- 4.98 At face value, more television programs delivered for free would appear to be attractive to viewers and would therefore assist the take-up of digital services. However the Nine Network believes the quantity of programs may increase but the quality will decrease.⁸⁹
- 4.99 The Nine Network believes that, with limited or no additional advertising revenue to fund new channels, and without significantly detracting from existing expenditure, broadcasters will have limited resources to produce new product or purchase programming of a reasonable quality.⁹⁰
- 4.100 The Nine Network also claimed that new channels would contain very little if any newly produced programming, adding that financial constraints would mean any programs that were newly produced would be limited to very inexpensive programming, for example chat/talk shows.⁹¹
- 4.101 The Nine Network believes that this situation is not dissimilar to subscription channels in Australia, which produce very few original programs.⁹²
- 4.102 The Nine Network explained its finding that multichannelling is not in the network's best interests:

If we create more channels on top of the channels that we are creating now ... we see no basis on which the advertising dollar that comes into the network would increase. It is important to note that, as a mature industry, we are not going to gain more viewers, because we have the whole of the population anyway, minus a very small proportion ... so, without seeing the advertising power growing in any way - even if we take the cheapest channel we could possibly think of, we would need to take revenue from our main channel to apply to that second channel ... - there will be a decrease in quality across the board. That will necessarily mean that the quality of the program, particularly expensive programs

88 Nine Network, *submission no. 59*, p. 7.

89 Nine Network, *submission no. 59*, p. 7.

90 Nine Network, *submission no. 59*, p. 7.

91 Nine Network, *submission no. 59*, p. 7.

92 Nine Network, *submission no. 59*, p. 7.

we are producing like drama, will decrease with respect to the amount of money that we spend on it.⁹³

4.103 Network Ten believes the introduction of free-to-air multichannelling will threaten the quality of the current system without delivering any discernable consumer benefit.⁹⁴

4.104 Network Ten believes that:

While free-to-air multichannelling offers a superficial promise of more diversity and choice, in reality viewers are likely to be faced with less.⁹⁵

4.105 Network Ten elaborated:

Free-to-air multichannelling is likely to result in dispersal of the current quantity of high-quality, first-run content across more channels, increasing the costs for broadcasters and fragmenting audiences without any offsetting lift in revenue. This would impact negatively on diversity, as networks would be less able to invest in high cost programming such as domestic and international news, quality Australian drama, and documentaries.⁹⁶

4.106 Network Ten explained that broadcasters will be forced to cut local programming investment because advertising revenue is drawn away from supporting content on the primary channel and used to fund new digital services.⁹⁷

4.107 Network Ten added that meeting the costs of programming content for two or three additional channels without any additional revenue and without impacting on the primary channel is not a realistic proposition for a commercial free-to-air broadcaster.⁹⁸

4.108 Network Ten added that:

Discretionary spend on expensive Australian programming, particularly high quality drama and some sports telecasts, would be in jeopardy. There is no doubt that it is becoming increasingly

93 Nine Network, *transcript of evidence 28 June 2005*, pp. 15-16.

94 Network Ten, *submission no. 60*, p. 3.

95 Network Ten, *submission no. 60*, p. 3.

96 Network Ten, *submission no. 60*, p. 3.

97 Network Ten, *submission no. 60*, p. 18.

98 Network Ten, *submission no. 60*, p. 18.

difficult to finance high-end Australian drama, and free-to-air multichannelling would only exacerbate those difficulties.⁹⁹

4.109 Network Ten discussed the comparison between Australian and overseas DTV markets:

It is also not legitimate to claim that, as in the UK and the US, free-to-air multichannelling will be attractive to advertisers wishing to reach highly targeted 'niche' audiences because the vastly different sizes of those markets makes comparisons with Australia meaningless.¹⁰⁰

4.110 Network Ten provided evidence regarding multichannelling, advertising revenue and program quality:

We are sitting here saying that we do not think that multichannelling makes any sense. Yet I am a broadcaster and on another test somebody could say to you, 'But don't you want to put out one, two, three or four channels?' The problem is that I cannot afford to. I cannot afford the content. The advertising pie does not grow, because we are restricted to just advertising. You will actually reduce the quality and the content that we are giving to Australian people.¹⁰¹

4.111 Network Ten added:

At the moment the free-to-air networks, by definition, have one revenue source: advertising. If we put on an extra channel tomorrow, I do not think the advertising pay is going to grow by one dollar. So the extra costs of the content start to eat away the profitability of the industry. So, yes, you have more choice but, effectively, who is paying for it? If you multiply that by hundreds of channels, some of them might be cheap channels; some of them might be expensive channels. It is a subject of argument.¹⁰²

4.112 SCB does not support the introduction of multichannelling and does not believe that it would drive digital penetration:

Among other things, we consider that multichannelling will fragment the free-to-air television market, resulting in a decline in overall quality of programs. A fragmentation would make the medium less attractive to advertisers and multichannelling would

99 Network Ten, *submission no. 60*, p. 19.

100 Network Ten, *submission no. 60*, p. 19.

101 Network Ten, *transcript of evidence 28 June 2005*, p. 7.

102 Network Ten, *transcript of evidence 28 June 2005*, p. 10.

increase programming costs beyond our financial capacity in regional markets. We believe multichannelling is likely to strengthen competing and emerging media, such as Pay TV, IPTV, the internet and DVDs, at the expense of free-to-air television.¹⁰³

4.113 In discussions concerning multichannelling and its likely impact on regional broadcasting, SCB stated:

One [issue] is affordability for us to pay for programs because the networks, as generous as they are, will not give them to us, so we have to pay for them. There is no additional revenue. The markets we appeal to are quite small. Whilst there are a large number in the regional market, each market is quite small. Putting extra services in to those markets and then expecting to get some sort of revenue that will support the programs that are being provided is not realistic and it will not happen, so the cost will be significant for us and will not be affordable.¹⁰⁴

4.114 When asked about the opportunities for smaller businesses to be able to advertise on multichannels SCB added:

... I do not believe there are any extra dollars for television. Any sizeable business in a regional market is already buying TV and they are buying it on a cost per thousand basis. If they have to buy a number of channels, it will still be based on the same cost per thousand.¹⁰⁵

4.115 WIN discussed the decisions it made concerning multichannelling and HD services:

Multichannelling, therefore, for regional broadcasters would mean that it would be necessary to rebuild our network infrastructure to have the capability to deliver such services – a financially impossible task, having invested heavily in HD to comply with the legislation ... we therefore delivered HD on the basis that Australia was locked into HD and that commercial broadcasters would not have the ability to multichannel under the legislation.¹⁰⁶

4.116 WIN also explained the possible impacts that multichannelling would have on its operations:

103 SCB, *transcript of evidence 1 September 2005*, pp. 16-17.

104 SCB, *transcript of evidence 1 September 2005*, p. 19.

105 SCB, *transcript of evidence 1 September 2005*, p. 20.

106 WIN, *transcript of evidence 1 September 2005*, p. 27.

In WIN's case, where we have 24 markets in operation, we have presentation and commercial play-out facilities at a number of key locations around the country. We would have to triple those to provide an asynchronous play-out for that multi-channel event. So, taking the worst case scenario, if we were to take high definition down, for instance, or turn it off, and replace that with two standard definition multichannel services – which I believe is possible, and we have to compete with our competitors, so if they decide to do it, we have to do it – we would have to then triple our presentation facilities and our play-out service systems.¹⁰⁷

4.117 WIN commented that multichannelling will cause technical and infrastructure costs to treble:

...due to the presentation systems themselves and the server systems that we all have to use now to play our commercials. All that infrastructure – the technical aspects – would triple in size. The other important aspect is that the people part of it would also treble under the requirement. We will have to have people to drive this system. Every channel requires everything from scheduling people right through to operations and presentation systems to get down to that grassroots level. There would be a huge number of people required to facilitate this.¹⁰⁸

4.118 When the Committee suggested that multichannelling would open up advertising to local small businesses, WIN explained:

I think what we have to understand is that for regional broadcasters the national advertising dollar share is approximately 22 per cent of the national spend. The remainder is local advertising dollars, so it is the local greengrocer, dress shop and hairdresser or whatever that are funding us. We split our markets, as you know, because of the local licence conditions and whatever, so we have all these separate feeds to the markets. It does not matter how many channels we have; we only have a certain population in our broadcast split, and we only have so many greengrocers and so on who will fund that.¹⁰⁹

107 WIN, *transcript of evidence 1 September 2005*, p. 30.

108 WIN, *transcript of evidence 1 September 2005*, p. 32.

109 WIN, *transcript of evidence 1 September 2005*, p. 30.

- 4.119 Movies Online Ltd stated that the free-to-air broadcasters should not be permitted to utilise digital bandwidth for multichannelling, claiming that the spectrum allocated to them was to be used to broadcast HD services:

The current extent of multichannelling is to enable free-to-air broadcasters to fill 7Mhz bandwidth to enable the broadcasting of standard definition TV and the same program to be broadcast simultaneously in HDTV.¹¹⁰

- 4.120 Movie Online Ltd stated that free-to-air television broadcasters do not need to multichannel their services to provide diversity of program content.¹¹¹

- 4.121 Movies Online Ltd added:

... we submit that great diversity of television content currently available to the Australian consumer demonstrates that there is no requirement for free-to-air television broadcasters to provide a greater diversity of programming than already delivered on analogue. For example, pay/subscription television/multichannels and the advent of IPTV utilising either cable or wireless will provide greater diversity for consumers.¹¹²

- 4.122 Mr Steve Mercer, a private individual, raised further points concerning the introduction of multichannelling and its impact on program quality. Mr Mercer claimed that:

... competition under a multichannelling policy would require the three commercial networks to double or triple their content to populate new channels (this assumes that Network Seven would multichannel and that the other commercial broadcasters would be forced to quickly follow to maintain market share).¹¹³

- 4.123 Mr Mercer added that content quality may become poor:

It is hard to see how quality of content can be maintained under a free for all scenario. For example, we could see a proliferation of 24 [hour] shopping channels or regional 'info-bulletins'. I think that many viewers would not watch multichannels with poor content. It would certainly boost DTV uptake in the short term, but would

110 Movies Online Ltd, *submission no. 43*, p. 3.

111 Movies Online Ltd, *submission no. 43*, p. 3.

112 Movies Online Ltd, *submission no. 43*, p. 3.

113 Mr Steve Mercer, *submission no. 39*, p. 4.

not necessarily result in an increased viewing audience and corresponding revenue.¹¹⁴

- 4.124 Mr Mercer believes that production of Australian content will also be negatively impacted:

The need to increase content may result in a squeeze in local production costs ... while this could result in more jobs in the short term, it may not be sustainable into the future. For example, if an Australian audience, used to generally high quality local content, is increasingly turned off by lower quality content, they may desert such programming and be driven elsewhere to find quality viewing ...¹¹⁵

- 4.125 Mr Mercer added that:

Ultimately, it may be more cost effective for networks hungry for programming to regionalise local productions (to meet any mandated requirements) and source higher quality material from overseas. This would erode the Australian production industry over time.¹¹⁶

Subscription television sector

- 4.126 Some of those opposed to lifting restrictions on multichannelling cited the impact of any immediate free-to-air multichannelling on the subscription television sector.

- 4.127 ASTRA believes that a moratorium against multichannelling on the existing commercial television broadcasters should remain until at least 2008, allowing the subscription television sector a fair period to consolidate the investments that have recently been made in new digital services.¹¹⁷

- 4.128 ASTRA stated that:

This is consistent with the protection given by Government to the commercial broadcasters for their digital conversion by way of the moratorium on additional commercial television licences until at least 2007. Through this moratorium, the existing commercial

114 Mr Steve Mercer, *submission no. 39*, p. 4.

115 Mr Steve Mercer, *submission no. 39*, p. 4.

116 Mr Steve Mercer, *submission no. 39*, p. 4.

117 ASTRA, *submission no. 50*, p. 2.

networks were given at least 6 years of protection from the time of the commencement of their digital services in January 2001.¹¹⁸

4.129 ASTRA claimed that if free-to-air multichannelling were allowed, then:

... it needs to be a phased-in approach so that it provides some certainty for our investment – we suggest until at least 2008. In terms of protection, the free-to-air networks were given at least six years and commercial radio have been given at least five years for their conversion to digital.¹¹⁹

4.130 ASTRA explained further:

We need certainty for our investment because we did not get any incentives to convert to digital. That was a decision that we made. We thought it was important to move forward with digital, so we did not get the other incentives about converting our business to digital. All we are asking for is that certainty. We are saying: not until 2008. So if you are going to introduce it, phase it in ...¹²⁰

4.131 ASTRA discussed the impact of free-to-air multichannelling:

Allowing free-to-air multi-channelling by the existing, protected commercial networks would be to effectively give new commercial television licences to those companies only – and they would use their first-mover advantage to lock up and hoard available programming (as they continue to do with sport using the anti-siphoning regime) and corner additional advertising revenue.¹²¹

4.132 FOXTEL claimed that the issue of commercial network multichannelling is intrinsically linked to the issues of a possible fourth commercial television network and datacasting and cannot be considered in isolation from each other.¹²²

4.133 FOXTEL explained:

Australia's restrictive sports broadcasting system known as the "anti-siphoning" regime is also linked to the issues of multi-channelling and the possibility of a 4th commercial network. To give the commercial networks the new advantage of multi-channelling, without first correcting the inequity of the anti-siphoning system, would only compound the destructive impacts

118 ASTRA, *submission no. 50*, p. 2.

119 ASTRA, *transcript of evidence 22 June 2005*, p. 2.

120 ASTRA, *transcript of evidence 22 June 2005*, p. 5.

121 ASTRA, *submission no. 50, attachment 1*, p. 2.

122 FOXTEL, *submission no. 55*, p. 8.

of the system on competition from subscription television and inevitably occasion it the most severe and probably irreparable commercial harm.¹²³

4.134 FOXTEL believes that there is a public benefit in avoiding the introduction of commercial free-to-air multichannelling until it can be introduced at a time that does not have a detrimental effect on innovation and competition in the television entertainment market.¹²⁴

4.135 FOXTEL also believes that the anti-competitive regulation of sports broadcasting through the sports ‘anti-siphoning’ regime should be abolished prior to allowing multichannelling by the commercial broadcasters.¹²⁵

4.136 FOXTEL made the following recommendations to the inquiry:

- Subscription television should be given a minimum four year period from the commencement of its digital services in March 2004 to establish its digital investments before any commercial network multichannelling is introduced. This compares with the minium [sic] seven years of regulatory stability given to commercial television broadcasters and the five years given to commercial radio.¹²⁶
- Further, if commercial network multi-channelling on the terrestrial broadcasting services bands is introduced, which should not be before 2008 in any event, it should be as part of a balanced deregulation of the broadcasting services regime that includes removal of the anti-competitive sports anti-siphoning regime that is hindering the growth of sports television services for consumers.¹²⁷

Subscription multichannelling

4.137 A further option canvassed related to commercial networks being permitted to offer subscription multichannelling.

4.138 The Seven Network believes that a successful multichannel DTV platform will require multiple revenue streams, both advertising and subscription based.¹²⁸

123 FOXTEL, *submission no. 55*, p. 8.

124 FOXTEL, *submission no. 55*, pp. 9-10.

125 FOXTEL, *submission no. 55*, p. 10.

126 FOXTEL, *submission no. 55*, p. 9.

127 FOXTEL, *submission no. 55*, p. 9.

128 Seven Network, *submission no. 49*, p. 7.

- 4.139 The Seven Network explained that this is particularly the case in Australia, where the market is small and niche channels have a greater reliance on multiple revenue streams to be sustainable.¹²⁹
- 4.140 The Seven Network discussed figures recently released by the UK's OfCom, indicating that the balance of television industry finance is shifting, and that subscription revenue has now overtaken advertising to become the largest single source of revenues for the television industry in the UK.¹³⁰
- 4.141 The Seven Network recognises that multichannelling's ability to grow the advertising pie or to lead to a significant redistribution of advertising dollars to television is likely to be limited, particularly given the small size of the Australian market.¹³¹
- 4.142 The Seven Network recognised that the UK's Freeview model may not work in Australia:
- Australia cannot simply replicate the Freeview service which relies heavily on BBC content and the BBC's high funding base as well as a higher population base for advertiser funded channels. Our DTT platform must be tailored to Australian market conditions and is only sustainable if advertiser funded models are supplemented by subscription services to ensure long term viability.¹³²
- 4.143 During discussions concerning advertising and the introduction of free and subscription multichannels, the Seven Network stated:
- I think you would need both. I think there is room for increasing the pie for advertising dollars. Also, there is an increasing interest from advertising clients in purchasing opportunities to buy both mass and niche propositions. We can see that through, for instance, the growth in advertising on pay TV, which I think in past years has grown by something between 30 per cent and 40 per cent per year. Over \$100 million is now going into pay TV advertising ... that it is indicative of an interest by advertisers in being able to buy niche propositions as well as, obviously, a continuing strong interest in buying mass propositions. We believe there is some room to grow advertising for both freeware and pay

129 Seven Network, *submission no. 49*, p. 7.

130 Seven Network, *submission no. 49*, p. 7.

131 Seven Network, *submission no. 49*, p. 7.

132 Seven Network, *submission no. 49*, p. 8.

in terms of selling to advertisers different proposition than are currently available to them.¹³³

- 4.144 Network Ten supports subscription multichannelling for existing commercial broadcasters, explaining that:

Allowing subscription multichannelling in the broadcasting services band (BSB) is the only way to introduce quality programming and competition without downgrading current free-to-air services. A new digital terrestrial subscription platform will drive digital television and provide real diversity at a low cost to the 70 per cent of Australians who either cannot afford or do not want FOXTEL's digital service.¹³⁴

- 4.145 Network Ten discussed the free-to-air network's opinions on subscription multichannelling:

There have been a lot of differences, as I understand it, from all three free-to-air networks on multichannelling, but even the Seven Network have said in their submission that free-to-air multichannelling without subscription is uneconomical. We have always been of that view, as are, I believe, Nine.¹³⁵

- 4.146 The Nine Network stated that:

... commercial television licensees should not be permitted to use the digital terrestrial spectrum to run a different type of service (i.e. subscription services) using the spectrum that has been allocated for a specific purpose, namely a commercial television broadcasting service.¹³⁶

- 4.147 However, the Nine Network, in its submission, stated that:

... it is not difficult to assume that free to air multi-channels without funding from subscriptions would struggle to even meet pay television's level of production.¹³⁷

133 Seven Network, *transcript of evidence 1 September 2005*, p. 3.

134 Network Ten, *submission no. 60*, p. 3.

135 Network Ten, *transcript of evidence 28 June 2005*, p. 10.

136 Nine Network, *submission no. 59*, p. 9.

137 Nine Network, *submission no. 59*, p. 7.

- 4.148 ASTRA believes that there should not be any subscription multichannelling on terrestrial services.¹³⁸ ASTRA explained its position:

We think it is a very poor public decision to allow commercial networks to exploit that public spectrum, which is loaned to them, for a service that the public must then pay for. We consider that consumers are benefiting from growing digital services, which are providing choice, diversity and innovation, with most people choosing to access those services through their digital set-top boxes and remote control.¹³⁹

- 4.149 ASTRA discussed subscription multichannelling and competition in the television industry:

The Government should not assist the commercial networks to continue to use regulation to suppress the threat of competitive entry. Their position is one entirely formed from self preservation without any thought to benefits to consumers created by competition and real choice. The Seven Network has proposed that multichannelling while initially free should be operated under a subscription basis after 2007. Network Ten has only recently indicated its interest in being able to multichannel but only on the basis that it too can operate such services on a subscription basis and that only the incumbent terrestrial broadcasters be allowed to do so. In other words, Network Ten wants to exclude any new entrants to competition and charge for public spectrum.¹⁴⁰

- 4.150 FOXTEL also believes that any multichannel services by commercial broadcasters should be free:

When and if they are permitted to multi-channel, the only service the commercial broadcasters should be allowed to provide on their digital spectrum in addition to their primary simulcast service should be "free" so that all members of the public can access and benefit from it.¹⁴¹

- 4.151 Broadcast Australia believes that multichannelling should be free-to-air and not subscription based which would subvert the objective of new services in the free-to-air environment.¹⁴²

138 ASTRA, *transcript of evidence* 22 June 2005, p. 2.

139 ASTRA, *transcript of evidence* 22 June 2005, p. 2.

140 ASTRA, *submission no. 50, attachment 1*, p. 3.

141 FOXTEL, *submission no. 55*, p. 10.

142 Broadcast Australia, *submission no. 41*, p. 12.

Committee comment

- 4.152 The Committee acknowledges the commitment made to the subscription television sector regarding the maintenance of multichannelling restrictions on commercial broadcasters until 2008. The Committee also considers that a variety of content and services, such as multichannelling can offer, is critical to driving DTV take-up.
- 4.153 Accordingly, it is essential that multichannelling is available prior to analogue switch-off in order to drive take-up and demonstrate the potential of DTV. The Committee concludes that all multichannelling restrictions should be lifted by 2008.
- 4.154 The Committee recommends lifting the multichannel programming restrictions on the ABC and SBS as soon as possible and no later than 1 January 2007. Currently a substantial investment has been made by these networks to establish digital channels, yet the programming restrictions severely hamper their viability. The restrictions also prevent utilisation of much of the archived ABC and SBS material.
- 4.155 The Committee's recommendation to lift multichannelling restrictions for commercial networks by 2008 honours the commitment made to the subscription television sector, and also will assist in driving DTV take-up prior to the 2010 analogue switch-off.

Recommendation 3

The Committee recommends that the Australian Government remove the programming restrictions on multichannelling for national free-to-air networks as soon as possible and no later than 1 January 2007.

Recommendation 4

The Committee recommends that the Australian Government remove all restrictions on multichannelling for commercial free-to-air networks on 1 January 2008.

- 4.156 Two of the free-to-air networks argued that they should be permitted to offer subscription multichannelling services.
- 4.157 The Committee considers that this is contrary to the framework on which Australian television is based. Licences and spectrum provided to free-to-air networks is for free-to-air television; networks must make their own multichannelling decisions within those commercial parameters.

Recommendation 5

The Committee recommends that the Australian Government maintain the prohibition on free-to-air networks offering subscription multichannelling.

High Definition television

- 4.158 A number of submissions to the inquiry claimed that enhanced image quality, through HDTV, is a primary driver for DTV take-up. This section of the chapter reviews current HD quotas, the arguments for and against maintaining or increasing the quotas, and the HD standards used in Australia. The section concludes with Committee comments and recommendations concerning HD quotas in the future.

HD requirements

- 4.159 DCITA explained that broadcasters are required to provide a simulcast of analogue services and digital SDTV, and a minimum amount of HDTV.¹⁴³
- 4.160 DCITA outlined the technical details concerning the use of spectrum loaned to each existing commercial and national broadcaster:
- 7 MHz of spectrum enables a broadcaster operating in digital mode to transmit data at a rate of up to around 23 megabits per second [Mbps]. An SDTV service typically requires 4 to 8 Mbps. An HDTV version of that service requires between about 8 and 19 Mbps depending on content, quality requirements and scanning parameters. Associated sound and service information data to operate the service requires around 1 to 2 Mbps. Broadcasters have

¹⁴³ DCITA, *submission no. 66*, p. 3.

considerable technical flexibility to manage data within their channel.¹⁴⁴

4.161 DCITA also outlined the details concerning the requirement to transmit HD services:

... a requirement that broadcasters fill an HDTV quota of 1 040 hours per calendar year (an average of around 20 hours per week), commencing July 2003 in state capitals. Commercial broadcasters are required to fill their quotas by transmitting 'true' HDTV programming whereas national broadcasters can fill their similar HDTV quota with 'upconverted' material.¹⁴⁵

4.162 DCITA explained the difference between 'true' and 'upconverted' HD material:

- 'true' material is produced using HDTV cameras, or derived from 35 mm film, and is referred to as HDTV-originated or 'native' material; and
- 'upconverted' material is produced in analogue or SDTV format and converted or enhanced using various techniques before it is transmitted as an HDTV product.¹⁴⁶

4.163 The ACMA explained that commercial broadcasters may count no more than 15 per cent of non-HD archival material in a program towards the quota.¹⁴⁷

4.164 Free TV Australia explained that commercial regional broadcasters commenced HD broadcasts for most of their audiences on 1 April 2005. Commercial regional broadcasters are mandated to start HD broadcasts two years after the simulcast date for their area. The remaining areas will commence HD broadcasts by the end of 2005, except in regional WA where no conversion scheme yet exists.¹⁴⁸

4.165 Free TV Australia claimed that the ABA announced in mid-2004 that all broadcasters had met and exceeded their quota requirements for their broadcasts of HD programming.¹⁴⁹

144 DCITA, *submission no. 66*, p. 3.

145 DCITA, *submission no. 66*, p. 3.

146 DCITA, *submission no. 66*, p. 3.

147 www.acma.gov.au/ACMAINTER.131258:STANDARD:1009599804:pc=PC_100034, accessed 28 November 2005.

148 Free TV Australia, *submission no. 31*, p. 8.

149 Free TV Australia, *submission no. 31*, p. 8.

- 4.166 Free TV Australia provided some data from the DBA's survey of the week ending 20 February 2005, which found that the three commercial networks combined transmitted the following HD programming in the metropolitan markets:
- Drama Series and Movies – 53.5 Hours;
 - Light Entertainment – 33.5 hours; and
 - News and Current Affairs – 27.5 Hours.¹⁵⁰
- 4.167 Free TV Australia explained that this total of 123 hours of HD transmitted by the networks was more than double the average of 60 hours per week (for three networks) required under the quota.¹⁵¹
- 4.168 The Nine Network provided details on the programs it transmitted in HD in 2004:
- Nine transmitted a wide range of programming in originated high definition with a number of movies, entire programs and portions of programs which also contained non high definition external footage (e.g. A Current Affair and Sunday). Other programs transmitted in HD include:
- Australia's Funniest Home Videos;
 - Mornings with Kerri-Anne;
 - Business Sunday;
 - Smallville;
 - CSI;
 - The Agency;
 - Diagnosis Murder;
 - ER;
 - The Footy Show (NRL);
 - Gilmore Girls;
 - The West Wing;
 - Today; and
 - McLeod's Daughters.¹⁵²

Arguments for HD broadcasting

- 4.169 The enhanced image quality available through HDTV was cited by some submissions as a key driver for DTV take-up. It was argued that HDTV

150 Free TV Australia, *submission no. 31*, p. 8.

151 Free TV Australia, *submission no. 31*, p. 8.

152 Nine Network, *submission no. 59*, pp. 3-4.

would continue to accelerate DTV take-up, as HDTV production increases and the cost of HDTV reception equipment decreases. It was suggested that HD quotas should remain or be increased.

HD as a driver for DTV take-up

- 4.170 Both Network Ten and the Nine Network support the growth of HD production and broadcasting, and are opposed to multichannelling as it may compete with the provision of HD services.
- 4.171 Network Ten believes that HDTV is critical to drive take-up of DTV, particularly as HD receiver and display devices become cheaper and more HD programming becomes available.¹⁵³
- 4.172 Network Ten stated that DBA figures show that one in four set-top boxes sold is an HD box, which is evidence that the envisaged market for higher quality pictures both exists and is growing.¹⁵⁴
- 4.173 Network Ten claimed that take-up of HD has been held back by the lack of programming and affordable HD receivers and displays:
- ... however we have now reached the tipping point: there is a much greater variety of HD programming being produced and consumer equipment is becoming affordable. In the near future, all major events will be available in HD. It has already been announced that the 2006 World Cup Soccer in Germany and the 2008 Olympics in China will be produced in HD - these events will showcase HD and drive the uptake of digital TV in Australia.
- 4.174 Network Ten noted the announcement that the 2006 World Cup Soccer in Germany and the 2008 Olympics in China will be produced in HD, and claimed that these events will showcase HD and drive the take-up of DTV in Australia.¹⁵⁵
- 4.175 The Nine Network believes the superior quality of HD is increasingly driving HD production, transmission and sales of equipment around the world and that the Australian experience is reflecting this trend.¹⁵⁶
- 4.176 The Nine Network stated that all free-to-air broadcasters are meeting or exceeding their HD quota, with the number of hours continuing to

153 Network Ten, *submission no. 60*, p. 2.

154 Network Ten, *submission no. 60*, p. 11.

155 Network Ten, *submission no. 60*, p. 11.

156 Nine Network, *submission no. 59*, p. 3.

increase as HD production increases and more programming from overseas is made in HD.¹⁵⁷

4.177 The Nine Network discussed a recent European survey which found that 24 per cent of the surveyed group ranked HDTV as the most important factor in deciding whether to switch to digital. Only 10 per cent of the surveyed group cited services such as video on demand and digital video recorders as the most important factors driving take up of DTV.¹⁵⁸

4.178 The Nine Network explained that HD production and consumer take-up have increased considerably in the US in recent years, with all networks transmitting a large number of programs in HD. Sixty per cent of the prime time line up of the US's NBC and ABC are now HD programs and it is estimated that, by 2006, 30 per cent of all programming on the networks will be HD.¹⁵⁹

4.179 When asked about the possibility of increasing the HD quota, the Nine Network stated that it will happen naturally anyway, and is naturally increasing now.¹⁶⁰

4.180 The Nine Network further discussed the increase in HD production and transmission:

I think we will see a snowballing effect as the world, particularly Europe, comes on board. A lot of our cultural programming comes from European based sources. They are very strong now in Europe about HD production. They are having troubles, as Nick alluded to earlier, about transmitting it in England terrestrially because they have locked up their spectrum so much with the multichannelling approach. But there is no doubt that the production there is all going high definition ... whenever the Nine Network puts in new studios or production facilities, they are high definition. There is no real economic reason not to go high definition in those new facilities.¹⁶¹

4.181 FOXTEL stated that HDTV has emerged as the principal driver of conversion to digital television in the US. FOXTEL's submission to DCITA's multichannelling review described the significance of HDTV to

157 Nine Network, *submission no. 59*, p. 3.

158 Nine Network, *submission no. 59*, p. 4.

159 Nine Network, *submission no. 59*, p. 4.

160 Nine Network, *transcript of evidence 28 June 2005*, p. 15.

161 Nine Network, *transcript of evidence 28 June 2005*, p. 15.

DTV take-up in the US and claimed that the example supports the logic that HDTV quota requirements in Australia should be maintained.¹⁶²

- 4.182 FOXTEL recommended that the Australian Government take note of the growth and increased significance of HDTV in the US and other DTV markets when considering any change to the HDTV requirement.¹⁶³
- 4.183 FOXTEL briefly discussed the increase in HDTV productions in Australia, and availability of other HDTV programs. FOXTEL explained that a number of Australian television drama series are currently produced in HDTV format (e.g. Home & Away, All Saints and McLeod's Daughters).¹⁶⁴
- 4.184 FOXTEL added that the increased availability and declining cost of HDTV programming, particularly from the US, will give the commercial broadcasters greater access to HDTV programming and greater opportunity to promote it as a driver of DTV take-up.¹⁶⁵

Maintaining or increasing HDTV quotas

- 4.185 ASTRA outlined its support for maintaining HD quotas, referring to the initial negotiations between broadcasters and the Australian Government and the conditions for the loan of spectrum:

When the issue was first considered in 1997 and 1998, Commercial TV broadcasters successfully argued that they should each be given a 7 MHz channel, to broadcast digital terrestrial television.¹⁶⁶

- 4.186 ASTRA stated that the broadcasters' argument was based on the notion that the spectrum should be used for HD broadcasts which would be the driver for the take-up of DTV.¹⁶⁷
- 4.187 ASTRA disagreed with this approach believing it to be:
- ... a defensive strategy to prevent the opportunity for others to access the spectrum for digital terrestrial broadcasting, on-line services and other emerging communications – and having the effect of sacrificing opportunities to promote diversity in the communications sector and provide substantial government revenue.¹⁶⁸

162 FOXTEL, *submission no. 55, attachment 1*, p. 34.

163 FOXTEL, *submission no. 55, attachment 1*, p. 74.

164 FOXTEL, *submission no. 55, attachment 1*, p. 34.

165 FOXTEL, *submission no. 55, attachment 1*, p. 34.

166 ASTRA, *submission no. 50*, p. 3.

167 ASTRA, *submission no. 50*, p. 3.

168 ASTRA, *submission no. 50*, p. 3.

4.188 ASTRA added:

The express and implied commitments regarding the provision of HDTV which the commercial television broadcasters made to Government were the basis on which the digital television framework agreed to and passed by Parliament and on which the valuable slab of 7MHz of spectrum was granted to incumbent broadcasters. The spectrum was not provided for the delivery of non-HDTV multi-channel services.¹⁶⁹

4.189 Sony claimed it has supported the Australian Government's policy to introduce DTV to Australia, and to mandate HDTV.¹⁷⁰

4.190 Sony stated that consumers have been moving towards larger screens and flat display technology, which provide higher picture quality. Sony added that the rapid take-up of DVD technology worldwide is a clear market indication of the demand for high quality sound and vision, with DTV and in particular HDTV being the consumer's logical next step.¹⁷¹

4.191 Sony believes mandating of HD is significant in light of its increasing success overseas:

We are now seeing the inevitable global move towards HD television broadcasting and an array of HD consumer products ... this move, globally and in Australia, is clearly driven by the consumer's demand for the highest quality of sound and vision, and replicates the success of DVD equipment.¹⁷²

4.192 Sony believes that an inhibitor to encouraging consumer acceptance of DTV is that there is insufficient HD content being broadcast in Australia.¹⁷³

4.193 However Sony claimed that, globally, production of HD content is increasing with many television programs and films already being shot in HD format, and this trend will only increase. Sony believes that Australian broadcasters can now source significant HDTV content.¹⁷⁴

169 ASTRA, *submission no. 50*, p. 3.

170 Sony, *submission no. 67*, p. 1.

171 Sony, *submission no. 67*, p. 1.

172 Sony, *submission no. 67*, p. 1.

173 Sony, *submission no. 67*, p. 8.

174 Sony, *submission no. 67*, p. 8.

4.194 Sony is of the opinion that more consumers will be attracted to purchase HD equipment if the networks broadcast increasing levels of HD programming.¹⁷⁵

4.195 Sony believes that the Australian Government must retain, and even strengthen, its commitment to HD programming in order to encourage DTV take-up:

Sony strongly supports the continuation of the HD content quota, and believes there is merit in increasing the HD broadcasting requirements. This will encourage the networks to provide consumers with more choice of HD programming and will further support the Government's policy of digital conversion.¹⁷⁶

4.196 Sony is also of the opinion that the HD quota should be revised to require the broadcast of a minimum percentage of locally produced HD programming, similar to the analogue local content requirement.¹⁷⁷

4.197 Sony further explained:

This initiative would help to boost the local HD production industry as currently there is little non-studio based local HD production broadcast. As a result, consumers are deprived of appealing, Australian HD content such as major sports events, which is demonstrably a driver of TV sales, and drama. Sony believes that this is another obstacle to driving take-up of DTV.

4.198 Sony stated that Australia must also build its local HD production expertise in order to continue to be competitive on the world market in television and film production. Sony believes an HD local content requirement and local HD production would help position Australia to be a regional HD production centre and exporter of content.¹⁷⁸

4.199 The ACT Government stated that more consumer choice would be achieved in the Australian DTV regime through expanded HD broadcasting. The ACT Government recommended that the annual quota for the broadcast of HD programs should be increased.¹⁷⁹

175 Sony, *submission no. 67*, p. 8.

176 Sony, *submission no. 67*, p. 8.

177 Sony, *submission no. 67*, p. 8.

178 Sony, *submission no. 67*, p. 8.

179 ACT Government, *submission no. 72*, pp. 2-3.

- 4.200 LG is also of the opinion that the HD content transmission quota of 1 040 hours per annum is too low and does not place a real requirement on content providers to develop further HD offerings for DTV.¹⁸⁰
- 4.201 Samsung supports the continuation of the HD content transmission quota and believes there is potential to increase it. Samsung suggested that increasing the quota will:
- ... act as a driver for increased production of HD local content and consumers uptake, given the enhanced broadcast experience it offers.¹⁸¹
- 4.202 Broadcast Australia commented that:
- ... the HD conversion model selected by Australia is ultimately going to prove the correct choice for consumers and also provide a unique differentiator for the FTA platform (i.e. compared to pay TV).¹⁸²
- 4.203 Broadcast Australia explained that:
- ... the success of DVD technology (including HD-DVD products) and its high uptake within Australia has set a de-facto standard in the minds of many consumers for quality in a digital television context.¹⁸³
- 4.204 Broadcast Australia strongly supports the current requirement for free-to-air broadcasters to provide a minimum of 20 hours of HD content per week. Broadcast Australia added:
- This requirement reflects the cornerstone position of HD in Australia's digital conversion process and provides the certainty within the industry and marketplace (broadcasters, consumers and manufacturers) necessary to facilitate investment.¹⁸⁴
- 4.205 UTSPS suggested that the HD quota be amended to include 100 hours of sport per year. UTSPS claimed that:
- HD sports are a large driver of HDTV in the USA. Sports provide compelling content for the casual observer who may be considering the uptake of digital TV ... a token quota, with a
-

180 LG, *submission no. 77*, p. 3.

181 Samsung, *submission no. 87*, p. 4.

182 Broadcast Australia, *submission no. 41*, p. 11.

183 Broadcast Australia, *submission no. 41*, p. 11.

184 Broadcast Australia, *submission no. 41*, p. 11.

generous lead-time, will kick-start the HD outside-broadcast industry in this country.¹⁸⁵

Arguments against HD broadcasting

4.206 Those opposed to mandated HD quotas argued that it restricts broadcasters', and hence consumers', choices. Several submissions disputed HDTV as a driver for DTV take-up.

4.207 ITRI discussed the digital policy framework and claimed that the policy's key drivers, such as HD, are seen as providing the least incentive for the take-up of DTV. ITRI explained that drivers inhibited by the policy, such as multichannelling, are believed by the industry to be the drivers that consumers will respond best to.¹⁸⁶

4.208 ITRI added:

This highlights the degree to which even those in the industry itself see a discrepancy between the services they provide and those they believe consumers are most interested in.¹⁸⁷

4.209 The ABC does not believe that HDTV is a major driver in the take-up of DTV in Australia. The ABC claimed that this is supported by evidence from Europe, the most mature digital television market in the world, which has little or no HDTV broadcasting.¹⁸⁸

4.210 The ABC stated that the requirement to simulcast HD and SD versions of programs for a certain number of hours each year significantly reduces the bandwidth available for broadcasters to use for additional content services, such as multichannels or interactive content.¹⁸⁹

4.211 The ABC claimed that simulcasting two versions also restricts the quality of the HD output itself:

The difficulty of mode switching and dynamically allocating bandwidth means that the bandwidth allocated to the ABC's HD channel (channel 20) is dedicated on a permanent basis and is therefore not available for other services at any time. Although the HDTV quota only applies for a fixed number of hours each year,

185 UTSPS, *submission no. 32*, p. 2.

186 ITRI, *submission no. 46*, p. 12.

187 ITRI, *submission no. 46*, p. 12.

188 ABC, *submission no. 45*, p. 2.

189 ABC, *submission no. 45*, p. 9.

its effect is a permanent one and out of proportion to the level of the community's interest in HDTV.¹⁹⁰

4.212 The ABC considers that transmitting in both HD and SD is a wasteful use of spectrum:

If the need to transmit both signals could be reduced to one, some of this wastage would be eliminated. Currently, HD receivers are able to decode both SD and HD signals and convert their output for display on both SD and HD television screens. By comparison, SD receivers need only have the ability to decode SD signals, with the result that there is an ongoing practical requirement for all HD programming to be simulcast in SD mode.¹⁹¹

4.213 The ABC recommended that the standards for digital receivers be revisited so that all boxes are required to decode both SD and HD signals, thus eliminating the need for simulcasting in the longer term.¹⁹²

4.214 The Seven Network stated that HD has a place in the DTV mix but should not be mandated. The Seven Network believes the existing HDTV quota requirements should be lifted.¹⁹³

4.215 The Seven Network added:

HDTV and multichannelling can co-exist. However mandated HDTV requirements will impact on the ability of broadcasters to provide commercially viable multichannel services. The amount of spectrum required to provide HD services will preclude simultaneous provision of multichannel services.¹⁹⁴

4.216 The CBAA maintains that:

... the imposition of HDTV quotas has consumed valuable spectrum which could otherwise have been made available for the important and well-recognised services provided community television.¹⁹⁵

190 ABC, *submission no. 45*, p. 9.

191 ABC, *submission no. 45*, p. 9.

192 ABC, *submission no. 45*, p. 10.

193 Seven Network, *submission no. 49*, p. 11.

194 Seven Network, *submission no. 49*, p. 11.

195 CBAA, *submission no. 84*, p. 6.

- 4.217 CBAA believes HDTV quotas should be abolished in order to free up digital spectrum for multichannelling by all existing digital providers.¹⁹⁶

High Definition standards

- 4.218 In addition to the issue of HD quotas, several submissions to the inquiry discussed the different HD transmission standards.
- 4.219 Mr Nigel Pearson, a private individual, stated that HD should look better than SD, and that consumers will not buy HDTV equipment if there is no improvement.¹⁹⁷
- 4.220 Mr Pearson added that:
- ... half of the networks implement the minimal 576p standard for HD, which results in an image that shows no improvement. In fact, there have been recent examples where the HD channel has looked *_worse_* than the same network's SD channel.¹⁹⁸
- 4.221 The ACMA website outlines the difference between SD and the different HD standards. The picture resolution for SD in Australia is 576 horizontal lines interlaced¹⁹⁹ (576i).²⁰⁰ The picture resolution for HD in Australia is any of the following:
- 576 horizontal lines progressive²⁰¹ (576p);
 - 720 horizontal lines progressive (720p); and
 - 1080 horizontal lines interlaced (1080i).²⁰²
- 4.222 DBA provided more information on the SDTV format in use in Australia, detailing that it is:

196 CBAA, *submission no. 84*, p. 6.

197 Mr Nigel Pearson, *submission no. 25*, p. 2.

198 Mr Nigel Pearson, *submission no. 25*, p. 2.

199 Interlaced: a method of displaying images on a raster-scanned display device, such as a cathode ray tube, in which the display alternates between drawing the even-numbered lines and the odd-numbered lines of each frame.
en.wikipedia.org/wiki/Interlaced, accessed 30 November 2005.

200 www.acma.gov.au/ACMAINTER.131258:STANDARD:1009599804:pc=PC_91870#hdtv, accessed 30 November 2005.

201 Progressive scan: a method for displaying, storing or transmitting moving images in which the lines of each frame are drawn in sequence. Advantages include: subjectively increased vertical resolution, no flickering of narrow horizontal patterns, simpler video processing equipment, easier compression.
en.wikipedia.org/wiki/Progressive_scan, accessed 30 November 2005.

202 www.acma.gov.au/ACMAINTER.131258:STANDARD:1009599804:pc=PC_91870#hdtv, accessed 30 November 2005.

- 576i;
- supported by all broadcasters;
- Data Rate: 5-7 Mbps;
- Active lines x pixels: 576 x 720; and
- Vertical frequency: 50Hz interlaced.²⁰³

4.223 In comparison, HDTV formats in use in Australia consist of:

- 576p;
 - ⇒ supported by ABC, SBS, Seven, Prime;
 - ⇒ data rate: 10-13 Mbps;
 - ⇒ active lines x pixels: 576 x 720; and
 - ⇒ vertical frequency 50Hz progressive.
- 1080i;
 - ⇒ supported by Nine, Ten, WIN, NBN, SCB, Tas Digital;
 - ⇒ data rate 13-15 Mbps;
 - ⇒ active lines x pixels: 1080 x 1440; and
 - ⇒ vertical frequency 50Hz interlaced.²⁰⁴

4.224 A broadcaster is able to transmit around 23 megabits per second (Mbps) in its seven MHz allocation.²⁰⁵ With a data rate of 10-13 Mbps for 576p HD, broadcasters may be able to transmit an HD signal and more than one SD signal. With a data rate of 13-15 Mbps for 1080i HD, broadcasters may only be able to transmit an HD signal and only one SD signal.

4.225 Mr Alastair Wylie, a private individual, claimed that the Seven Network and SBS HD broadcasts using 576p resulted in a poorer quality picture than the 576i SD broadcasts. Mr Wylie added:

To term 576p broadcasts as HD is really a misrepresentation since the picture quality is inferior to 576i SD. For those, who like me bought HD capable equipment based on a promise from the government there has been a let down. The general public are being denied the possibility of the high quality output of true HD broadcasts if 576p remains a "High Definition" standard in name only especially with prices of HD capable equipment continually falling.²⁰⁶

4.226 Mr Alex Mayo, a private individual, believes that HD should be mandated to be broadcasts of 720p and above:

203 www.dba.org.au/index.asp?sectionID=15, accessed 30 November 2005.

204 www.dba.org.au/index.asp?sectionID=15, accessed 30 November 2005.

205 DCITA, *submission no. 66*, p. 3.

206 Mr Alastair Wylie, *submission no. 38*, p. 1.

Currently the government classes 576p as HD. Australia is the only country to consider 576p to be HD. This should be changed to bring Australia into line with international practice.²⁰⁷

4.227 UTSPS claimed that:

... standards in Europe, Japan, China and Britain do not recognise 576p as “high definition” for the purposes of industrial classification and marketing. USA and Canada, which have an equivalent called 480p, also do not classify this as “high definition”. 576p and 480p are recognised as “enhanced definition” in every country other than Australia.²⁰⁸

4.228 UTSPS stated that 576p is far too similar to the maximum quality of 576i (SDTV).²⁰⁹ UTSPS recommended that the Australian minimum standard of HDTV be redefined to 720p:

720p offers all of the benefits of 576p, but with over twice the potential image quality. The current classification comes about as a pure function of the equipment capabilities: 576p is a format unsupported by SDTV hardware, and is therefore classified as HDTV.²¹⁰

4.229 UTSPS suggested that:

... because of the effects of multichannelling on compression quality, it may be wise to allow 576p for any broadcaster that has already received dispensation to use upconverted material under the HD quota – but only during times of upconversion. 576p is an ideal format for the purposes of upconversion from 576i.²¹¹

4.230 Mr Nigel Pearson stated that upconverted source material should not ever be counted as HD for the purposes of a network’s HD quota. Mr Pearson added:

Ideally, the network would change the watermark they transmit over the material to indicate to the consumer that what they are watching is not real HD material.²¹²

4.231 Mr Steve Mercer explained that the ABC and SBS are allowed to transmit SD ‘upconverted’ to 576p or 1080i to meet their mandated quotas.²¹³

207 Mr Alex Mayo, *submission no. 70*, p. 2.

208 UTSPS, *submission no. 32*, p. 5.

209 UTSPS, *submission no. 32*, p. 5.

210 UTSPS, *submission no. 32*, p. 5.

211 UTSPS, *submission no. 32*, p. 5.

212 Mr Nigel Pearson, *submission no. 25*, p. 2.

4.232 Mr Mercer recommended that the current definition of what constitutes HDTV should:

... be reviewed and tightened to ensure that only native 576p and 1080i transmissions qualify and that converted programming meets certain defined minimum standards. In particular, I think that HD programming must meet certain minimum 'bit rate' quantum to qualify. This is to ensure that networks do not destroy the quality benefits of HD programming by excessive compression in the signal or cheap and nasty conversions.²¹⁴

4.233 The Committee notes the confusion around the current standards and does not necessarily endorse the HD standard that has been determined. However, the Committee considers that the primary issue is consumer understanding at point of sale. This is discussed further in relation to product labelling in Chapter 5.

Services determined by market choice

4.234 Several submissions, while expressing an opinion on multichannelling or HDTV quotas, also advocated consumer choice as paramount to directing the particular make-up of Australian broadcasting. Market forces, it was suggested, will in time determine demand for HDTV and multichannelling services.

4.235 ITRI explained that the broadcasters' decision to multichannel or broadcast HD should be based on what consumers want:

Rather than engage in a debate about what the best driver might be, the best approach (given that spectrum has already been allocated for high definition) is to allow market forces to decide ... the best approach for consumers, it would appear, would be one maximising flexibility – so that broadcasters and datacasters were free to compete using a variety of drivers to test which ones consumers respond to best.²¹⁵

4.236 The Seven Network agreed:

The service mix should be dictated by market forces and consumer demand. This will deliver a diverse and sustainable service mix

213 Mr Steve Mercer, *submission no. 39*, p. 7.

214 Mr Steve Mercer, *submission no. 39*, p. 7.

215 ITRI, *submission no. 46*, p. 12.

that operates in the best interests of consumers ... HDTV quota obligations should be removed from the legislation. It should be left to the discretion of broadcasters to provide HDTV or multichannel programming in response to consumer demand.²¹⁶

4.237 The ACCC also discussed competition and the ability of consumers to choose:

... when we are talking multichannelling we are not talking about mandating it; we are talking about allowing it. Again, we come back to how people seek to compete. The people putting that point of view to you are equally putting a point of view to you that says, 'We want to compete in relation to high definition.' The commission's point of view would be that that is a legitimate commercial choice, of course, but that Australian consumers should have the ability to make the choice between those seeking to compete on bases other than the quality of the signal delivered to them.²¹⁷

4.238 The ACCC added:

Of course, we have one of the free-to-air's advocating multichannelling, so that immediately brings forward the obvious proposition that there is more than one business case being advanced here. I guess the commission's proposition, therefore, is that the market should be the ultimate determinant of which is the better commercial choice.²¹⁸

4.239 When asked if networks would consider providing particular services if consumers demanded them, the Seven Network stated:

The driver would be seeing what consumers chose to purchase at the retail level and therefore their ability to attract advertisers to a greater number of eyeballs. If people are saying, 'Okay, we are really interested in getting all the new channels' - and we will see that through what people buy and through their viewing habits - ultimately people will follow what consumers are telling them they want. Alternatively, if it turns out that people do not really watch these multichannel services and that really they are flocking to HD services in droves, presumably most broadcasters will read

216 Seven Network, *submission no. 49*, p. 11.

217 ACCC, *transcript of evidence 10 August 2005*, p. 5.

218 ACCC, *transcript of evidence 10 August 2005*, p. 5.

the writing on the wall and say, 'We're going to do what consumers demand that we do.'²¹⁹

- 4.240 The ACA believes consumers should be able to choose, and that networks should be given the opportunity to provide what consumers want:

We think it is for the consumer to decide whether they want high-definition television and for the market – businesses – to persuade people that they want high-definition television by producing the products consumers want to see. In that way, we would make space for multichannelling. Mainly for the purpose of attracting users but also to promote diversity in the media, the ABC and SBS should be permitted, and given the necessary funding, to explore opportunities in multichannelling and other ways of supporting innovation in television products.²²⁰

- 4.241 Broadcast Australia believes decisions on the amount of multichannelling and the HDTV standard to be transmitted should be left to the individual broadcaster, who is best-placed to determine the optimal programming line-up they wish to offer to viewers. Broadcast Australia added:

The possibilities that arise for consumer innovation are substantial and highly desirable – staggering/time shifting of key programming, simultaneous broadcasting of live events, 'channels' targeted for particular audience segments etc.²²¹

- 4.242 Sony also believes that:

... broadcasters should be able to determine their own use for the 7MHz of spectrum allocated for digital transmission purposes based on their commercial judgements.²²²

Committee comment

- 4.243 The Committee is aware of concerns raised regarding the definition of HD broadcasting. However the Committee is satisfied that the standards applied for DTV broadcasting in Australia are appropriate for broadcasters.

- 4.244 The Committee agrees that HD broadcasting, as well as multichannelling, will drive take-up amongst certain sectors of the population. Therefore,

219 Seven Network, *transcript of evidence 1 September 2005*, p. 10.

220 ACA, *transcript of evidence 7 September 2005*, pp. 17-18.

221 Broadcast Australia, *submission no. 41*, pp. 11-12.

222 Sony, *submission no. 67*, p. 7.

the Committee is of the opinion that the HD quota should remain in place, at least until analogue switch-off has taken place.

- 4.245 The Committee believes that maintaining HD quotas up to and until shortly after analogue switch-off will ensure that Australian consumers have access to both SD and HD broadcasting, and that choice exists in the marketplace.
- 4.246 The Committee is of the opinion that existing HD quotas should remain in place until 2011. This will be three years after restrictions on multichannelling are lifted, and 12 months after the Committee's recommended date for analogue switch-off.
- 4.247 A review before 1 January 2011 should determine if HD quotas are removed or reduced, and if a free market approach is appropriate at that time.
- 4.248 The Committee is also aware that emerging compression technologies may radically change the capacity of networks to broadcast more channels in HD through the more efficient use of their allocated seven MHz of spectrum. This should be taken into account in the 2011 review, so that networks make commercial decisions on the use of future compression technologies and transmissions in their allocated spectrum, rather than seek further spectrum allocations.

Recommendation 6

The Committee recommends that the Australian Government maintain the current minimum High Definition broadcasting quota for free-to-air networks until 1 January 2011.

Recommendation 7

The Committee recommends that, prior to 1 January 2011, the Australian Government undertake a review to determine whether current High Definition quotas for free-to-air networks should be removed, increased or decreased.

Datacasting

- 4.249 Datacasting is a further variation on the content able to be provided by digital services.
- 4.250 Datacasting is the broadcasting of data over a wide area via radio waves. It most often refers to supplemental information sent by television stations along with DTV. Datacasting often provides news, weather, traffic, stock market, and other information which may or may not relate to the programs it is carried with. It may also be interactive, such as gaming, shopping, or education applications.²²³
- 4.251 The NSW Government believes that datacasting has the potential to open a new stream of content and services for the public.²²⁴
- 4.252 The ACT Government stated that:
- Data casting offers the potential for new types of services to be provided to consumers; such new services could include a range of government based information and services, business information, lifestyle, etc.²²⁵
- 4.253 Broadcast Australia has established and funded a datacasting trial in Sydney called Digital Forty Four. The trial service provides a mixture of datacasting programming including:
- The first industry-based free-to-air video programme guide;
 - Federal Parliament – seven simultaneous live audio channels;
 - NSW Government – health information, water restrictions, traffic conditions, etcetera;
 - News, Weather and Sport headlines (provided by ABC);
 - Home shopping;
 - Sports betting odds (this section of the trial completed December 2004);
 - Financial markets round-up; and
 - Religious instruction/education channel.²²⁶

223 en.wikipedia.org/wiki/Datacasting, accessed 30 November 2005.

224 NSW Government, *submission no. 83*, p. 6.

225 ACT Government, *submission no. 72*, p. 6.

226 Broadcast Australia, *submission no. 41*, p. 8.

4.254 Broadcast Australia explained that Phase 1 of the trial provided information via traditional 'one-way' broadcasting. Broadcast Australia explained that Phase 2 of the trial will introduce interactive (iTV) content, which will:

... significantly improve the attractiveness of datacasting to the viewer by allowing for the viewer to "self select" information via an interactive process. iTV will allow the consumer to interface with the television set by using menus to select those topics of interest ... BA believes that the move to iTV in datacasting will substantially enhance the value of the datacasting service to the viewing public.²²⁷

4.255 Many submissions to the inquiry were concerned that regulations regarding datacasting are too limiting, lowering the value of the service it is able to provide.

4.256 ITRI believes that the single area where the Australian Government's digital policy has most visibly failed has been in the inability to effectively introduce datacasting in Australia's DTV landscape. ITRI added:

The failure of the datacasting auctions was a clear indictment, reflecting the market's rejection of the specific model of datacasting put forth by the Government.²²⁸

4.257 ITRI further explained its view on datacasting policy:

... we would assert that, taken in isolation (independent of the rest of Australia's digital policy), it is the single worst digital policy implemented in any national digital transition strategy globally. The idea that a legal standard could possibly be based on subjective differentiation between 'informative' and 'entertaining' content is nothing short of ridiculous.²²⁹

4.258 ITRI commented that a subjective standard which tries to differentiate between entertaining and informative content has:

... actually cast a negative shadow across what datacasting means to people in the Australian market, and that has chilled investment in that sector.²³⁰

4.259 ITRI suggested that if datacasting restrictions were relaxed the possibilities around datacasting then can be quite exciting.²³¹

227 Broadcast Australia, *submission no. 41*, p. 8.

228 ITRI, *submission no. 46*, p. 4.

229 ITRI, *submission no. 46*, p. 4.

230 ITRI, *transcript of evidence 2 September 2005*, pp. 3-4.

4.260 ACA clarified its view on datacasting:

We are not objecting to datacasting; we are objecting to the requirement that there be space allocated to it. Let people use the spectrum for what they can. Let market innovation decide whether it is something that consumers want.²³²

4.261 The ACA recommended that the notion of datacasting should be removed from the legislative framework.²³³

4.262 The ACA is concerned that:

... the impetus to control disruptive technologies will extend to broadband Internet as it matures and to mobile and other wireless data services as their capacity expands. If the dead hand of datacasting is applied to these, then we face a well-chilled technological future.²³⁴

4.263 The ABC believes that the drafting of datacasting regulations was primarily informed by a desire to prevent datacasting services from becoming de facto broadcasting services, rather than any study of audience needs and interests.²³⁵

4.264 The ABC added that the kinds of services envisaged in the legislation bear little resemblance to the types of interactive television services that audiences today are likely to want and use.²³⁶

4.265 The ABC stated that the datacasting provisions that apply to free-to-air services impose heavy restrictions on the kinds of general interactive services the ABC and other datacasters can provide.²³⁷

4.266 The ABC explained that:

In particular, datacasting services are essentially prohibited from carrying video content in most genres, and are severely restricted in the duration of video material that can be carried in the few, primarily news-related genres, that they are permitted to carry. As a result, datacasters will be forced to design its free-to-air interactive services to fit into the very tightly-defined framework

231 ITRI, *transcript of evidence 2 September 2005*, pp. 3-4.

232 ACA, *transcript of evidence 7 September 2005*, p. 18.

233 ACA, *submission no. 47*, p. 3.

234 ACA, *submission no. 47*, p. 3.

235 ABC, *submission no. 45*, p. 7.

236 ABC, *submission no. 45*, p. 7.

237 ABC, *submission no. 45*, p. 7.

set out in the legislation rather than to fit audience needs and interests.²³⁸

4.267 The ABC discussed research from overseas that shows that it is important for broadcasters to take a flexible approach to interactivity and to respond to changing audience consumption patterns:

... the BBC has found that, while some of its early interactive initiatives were effective, others were not; some applications worked only with particular genres or audience types.

Determining the types of application that will prove relevant to particular audiences is a matter of experimentation, which requires flexibility. The BBC has ultimately responded to audience needs by concentrating on developing those applications which seem to be most appealing in each case ...²³⁹

4.268 The ABC added that the Australian industry does not have this flexibility because of the artificial restrictions imposed by the datacasting provisions.²⁴⁰

4.269 The ABC believes that:

If the separate category of stand-alone datacasting services was eliminated, much of the rationale for the current restrictions on datacasting services would no longer apply. Such a relaxation of the datacasting restrictions would allow broadcasters to experiment fully with interactive services to determine the type of service that will appeal to the Australian viewing public and in the process contribute to digital uptake.²⁴¹

4.270 In its evidence to the Committee, the ABC stated:

To date, no commercial entity has shown any interest in taking out a datacasting licence and trying to operate a stand-alone datacasting service. We can only presume that there is a not a commercial case for that at this stage, that no-one has found a way to make it work. If the stand-alone category does not seem to work and no-one is prepared to take it up, then it makes sense to roll it back and reclaim the spectrum for something else.²⁴²

238 ABC, *submission no. 45*, p. 7.

239 ABC, *submission no. 45*, pp. 7-8.

240 ABC, *submission no. 45*, p. 8.

241 ABC, *submission no. 45*, p. 8.

242 ABC, *transcript of evidence 22 June 2005*, p. 20.

- 4.271 The ABC recommended that the category of stand-alone datacasting services that are not linked to a broadcasting service should be eliminated, and that datacasting restrictions should be lifted to allow the ABC and other broadcasters to provide interactive services related to broadcast content in a flexible and responsive way that best meets audience needs.²⁴³
- 4.272 The ACT Government believes that datacasting licences should be provided at nominal or no cost to state/territory governments for the operation of government and public information and services.²⁴⁴
- 4.273 The ACT Government stated that datacasting is currently constrained under the genre restrictions, and that the removal of existing datacasting restrictions on broadcasters could substantially increase the choice for consumers.²⁴⁵
- 4.274 The ACT Government added that removal of restrictions could:
- ... either be effected separately for the existing data casting provisions or in the context of removal of existing multi-channelling restrictions.²⁴⁶

Datacasting allocations

- 4.275 Broadcast Australia stated that there are two national channels that have been identified by the ACMA (in its Digital Channel Planning process) for digital datacasting services, which are currently almost totally unutilised.²⁴⁷
- 4.276 Broadcast Australia supports the permanent allocation, on a merit basis, of these two digital-only channels, for datacasting and, potentially, other innovative broadcasting-related services.²⁴⁸
- 4.277 The ACA believes that despite the current lack of interest in datacasting, the national digital channels allocated to datacasting should remain assigned to this purpose. The ACA added:

We think it would be close to criminal vandalism to break-up and auction-off portions of national network spectrum currently designated for datacasting. If the Government of the day deems it appropriate to maintain a prohibition on using this spectrum for

243 ABC, *submission no. 45*, p. 8.

244 ACT Government, *submission no. 72*, p. 5.

245 ACT Government, *submission no. 72*, p. 6.

246 ACT Government, *submission no. 72*, p. 6.

247 Broadcast Australia, *submission no. 41*, p. 9.

248 Broadcast Australia, *submission no. 41*, p. 9.

DTV broadcasting-proper, the opportunity for a successor Government to take a different path with a critical national resource must be preserved.²⁴⁹

4.278 The ACT Government recommended that digital spectrum reallocation and its availability for governments to use for core datacasting purposes be further considered.²⁵⁰

4.279 The Seven Network believes that the two 7MHz channels of spectrum previously reserved for the provision of datacasting services in each capital city should be allocated for the purpose of multichannelling to allow for future growth in the platform.²⁵¹

4.280 Network Ten provided the following opinion on datacasting:

I have always believed, from the moment datacasting was talked about, it was yesterday’s technology – if it ever was today’s. With the internet and everything else, most people around the world outside of discussions here do not even know what we mean when we talk about datacasting. It is something we somehow invented and I do not even understand. I am completely dismissive of datacasting.²⁵²

4.281 Network Ten suggested that the unused channels can be used for a DTV subscription platform:

The only way to bring about increased choice and diversity for consumers, and drive digital TV take-up while creating real competition in the broadcasting market, is to allocate the two spare spectrum blocks for the establishment of a new digital terrestrial subscription platform.²⁵³

4.282 Network Ten elaborated:

Allocation methods and an equitable payment scheme for the distribution and use of this spectrum for subscription multichannelling should be explored. However, in order to ensure diversity and competition, Ten considers that participation in a new terrestrial subscription platform should be restricted to new entrants in the subscription market.²⁵⁴

249 ACA, *submission no. 47*, p. 4.

250 ACT Government, *submission no. 72*, p. 6.

251 Seven Network, *submission no. 49*, p. 2.

252 Network Ten, *transcript of evidence 28 June 2005*, p. 5.

253 Network Ten, *submission no. 60*, p. 21.

254 Network Ten, *submission no. 60*, p. 22.

- 4.283 The ABC explained that the ACMA has allocated two channels for exclusive datacasting services throughout Australia, however:
- ... to date these channels in most areas have not been utilised. It would appear that the industry's lack of enthusiasm for datacasting is directly attributable to the restrictions on the scope of datacasting services imposed in Schedule 6 of the BSA.²⁵⁵
- 4.284 The ABC believes that the decision to retain two unused datacasting channels in all metropolitan and regional areas cannot be regarded as an efficient use of broadcasting services bands spectrum.²⁵⁶
- 4.285 The ABC argued that it would be more appropriate for these channels to be reallocated as additional DTV channels to eliminate or reduce spectrum congestion issues in particular markets.²⁵⁷
- 4.286 CBAA stated that the Australian Government had suggested that the community television sector might be carried free of charge by a datacaster.²⁵⁸ CBAA referred to a statement on the former ABA website:
- The Government will assist the migration of community television to the digital environment by requiring new datacasting players to ensure spectrum access, free of charge, of a standard definition community television service as a condition of their licence.²⁵⁹
- 4.287 CBAA claimed that the failure of a viable business model to be found for datacasting, and the resulting uncertainty of the future of datacasting, means that the Australian Government's prior commitment to providing a 'must carry' obligation on a datacaster needs to be revised.²⁶⁰
- 4.288 CBAA submitted that the 'must carry' obligation should be imposed on an existing digital carrier.²⁶¹
- 4.289 Free TV Australia stated that its broadcasters are opposed to the introduction of a new commercial television licence in the Australian market, and that it supports the existing datacasting rules as the most effective mechanism to ensure that a datacasting licence does not become a de facto or 'back door' broadcasting licence.²⁶²

255 ABC, *submission no. 45*, p. 8.

256 ABC, *submission no. 45*, p. 8.

257 ABC, *submission no. 45*, p. 8.

258 CBAA, *submission no. 84*, p. 4.

259 CBAA, *submission no. 84*, p. 4.

260 CBAA, *submission no. 84*, p. 4.

261 CBAA, *submission no. 84*, p. 4.

262 Free TV Australia, *submission no. 31*, p. 1.

- 4.290 Free TV Australia believes that the current datacasting rules are an effective means of clearly distinguishing datacasting services from broadcasting services, particularly in the absence of any alternative suggested approaches.²⁶³
- 4.291 Free TV's position on the datacasting rules is based on the current law that no new licences will be introduced before the end of 2006:
- If the Government maintains the policy that there should not be new licences then datacasting still has to be defined differently to broadcasting to achieve that policy objective. It follows that any relaxation of the datacasting genre provisions would be inconsistent with such an outcome.²⁶⁴
- 4.292 ASTRA is also of the opinion that the provision of additional services would equate to commercial television licence holders commencing 'back door' multichannelling, meaning that:
- ... the datacasting licence allocation was and is in fact a de facto allocation for new commercial television or subscription television licences.²⁶⁵
- 4.293 ASTRA strongly objects to the use of datacasting transmitter licences for anything other than that for which the licences were originally intended, that is:
- to provide the maximum opportunity for new and innovative services; and
 - to use datacasting as a means of driving digital penetration as an adjunct to the digital services being offered by commercial, national and subscription television broadcasters.²⁶⁶

Committee comment

- 4.294 The Committee notes the concerns raised in submissions regarding datacasting issues. It is the Committee's conclusion that a broadcaster's decision to use a portion of its spectrum allocation for datacasting or other purposes should be a commercial one based on market demand.
- 4.295 The Committee recognises that current datacasting restrictions are effective in preventing de facto broadcasting. However, the Committee

263 Free TV Australia, *submission no. 31*, p. 12.

264 Free TV Australia, *submission no. 31*, p. 12.

265 ASTRA, *submission no. 50, attachment 2*, p. 9.

266 ASTRA, *submission no. 50, attachment 2*, p. 9.

also appreciates that a consequence of these restrictions is a limitation on the services that can be provided.

- 4.296 The Committee is of the opinion that current datacasting restrictions should be reconsidered and lifted by at least 1 January 2008 when all multichannelling restrictions are lifted. The Committee notes that internet access through home computers and television screens is also superseding the role of datacasting.

Recommendation 8

The Committee recommends that the Australian Government reconsider current restrictions on datacasting with a view to lifting restrictions on 1 January 2008.

Selling digital

- 5.1 This chapter examines issues relating to standards and digital reception equipment in Australia. The chapter discusses the need for a testing and conformance centre that will be able to test digital reception products against Australian Standards.
- 5.2 The chapter also looks at marketing digital equipment, and the value of awareness campaigns. The chapter includes sections on the roles and responsibilities of the Australian Government, broadcasters, manufacturers and retailers.

Standards for digital equipment

- 5.3 A number of submissions to the inquiry referred to the need for regulated standards covering DTV transmission and reception equipment. This section summarises the relevant Australian standards and the scope of their coverage, the arguments surrounding the mandating of standards, and possible revisions to the standards to include requirements for particular features.
- 5.4 The technical specifications and requirements for DTV transmissions and DTV receivers are set by Australian Standards. These standards are based in part on the digital video broadcasting specifications contained in the European DVB-T Standards for DTV broadcasting

systems.¹ The Australian system also takes into account picture format standards used in the US.²

- 5.5 Standards Australia, the national standards body, defines a standard as being a published document which sets out specifications and procedures designed to ensure that a material, product, method or service meets its designed purpose and will perform in the way it was intended.³
- 5.6 Most Australian Standards are voluntary. However, between one-third and one-half of all standards are referenced under state or commonwealth legislation. A number of Australian Standards relating to the safety of consumer products or information about consumer products are referenced in Mandatory Standards under the commonwealth *Trade Practices Act 1974* (TPA).⁴

Broadcast and reception standards

- 5.7 Standards Australia has issued two standards regarding digital broadcasting in Australia:
- *AS 4599.1-2005: Digital television - Terrestrial broadcasting - Characteristics of digital terrestrial television transmissions*; and
 - *AS 4933.1-2005: Digital television - Requirements for receivers - VHF/UHF DVB-T television broadcasts*.⁵
- 5.8 These standards are based on European DVB-Terrestrial Standards for DTV broadcasting systems, but have been modified to meet the specific needs for broadcasting DTV in Australia:⁶

That standard is developed, if you like, like a toolbox, by taking the DVB standards which we have adopted in this country as our broadcasting standards and putting into the standard those things that are required in the Australian broadcasting environment.⁷

1 Standards Australia, *transcript of evidence 14 September 2005*, pp. 1-2.

2 DCITA, *submission no. 66*, p. 14.

3 www.standards.org.au/cat.asp?catid=2, accessed 9 November 2005.

4 committees.standards.org.au/policy/sg-020/standardizationguide-sg-020.pdf, p. 3, accessed 24 November 2005.

5 www.standards.org.au, accessed 9 November 2005; Standards Australia, *transcript of evidence 14 September 2005*, p. 1.

6 Standards Australia, *transcript of evidence 14 September 2005*, pp. 1-2.

7 Standards Australia, *transcript of evidence 14 September 2005*, pp. 1-2.

- 5.9 The Australian Standard *AS 4599.1-2005: Digital television – Terrestrial broadcasting – Characteristics of digital terrestrial television transmissions* (the transmission standard) was first released in 1999 with a revised edition published in April 2005. Broadcasters are required under the BSA to broadcast according to the transmission standard.⁸
- 5.10 The standard *AS 4933.1-2005: Digital television - Requirements for receivers - VHF/UHF DVB-T television broadcasts* (the receiver standard) was first published in 2000. This standard has since been revised with the latest edition published in May 2005.
- 5.11 The receiver standard is currently being reviewed by Standards Australia. From informal discussions with representatives from Standards Australia, the Committee understands that the review will be completed by the end of 2007.
- 5.12 The features that the receiver standard describes include display resolution settings, aspect ratios, user operation features such as Logical Channel Numbering (LCN) and the ability to select radio stations.⁹

Mandating Standards

- 5.13 The Seven Network claimed that the majority of manufacturers and suppliers to the Australian market have worked closely with broadcasters to ensure that their equipment is suitable for Australian DTV.¹⁰
- 5.14 Standards Australia discussed compliance with Australian Standards by the large manufacturers:
- You will find that most of the major brands will comply with the standard because their corporate policies are such that ... they will normally determine that they will, as far as they can, follow a standard whether it is mandatory or not.¹¹
- 5.15 However, the Committee was told that some suppliers may import equipment that is unsuitable for Australian DTV.¹²

8 Standards Australia, *transcript of evidence 14 September 2005*, p. 10.

9 Standards Australia, *AS4933.1-2005*, pp. 1-7.

10 Seven Network, *submission no. 49*, p. 10.

11 Standards Australia, *transcript of evidence 14 September 2005*, p. 10.

12 Panasonic, *transcript of evidence 28 June 2005*, p. 31; Seven Network, *submission no. 49*, p. 10; Standards Australia, *transcript of evidence 14 September 2005*, p. 11.

- 5.16 Panasonic told the Committee of an example where a receiver was brought into Australia that was unsuitable for Australian DTV. Panasonic stated that 'there was a box in the market that was designed for eight megahertz, and we use seven megahertz in this country'.¹³
- 5.17 The Committee notes that there is some support for mandating or regulating the Australian standard for DTV receivers.¹⁴
- 5.18 ITRI explained to the Committee that not having a mandatory receiver standard is leading to:
- ... a chaotic environment with a large range of devices sold in the market with no assurance that they meet minimum standards.¹⁵
- 5.19 Panasonic suggested that there is support for a mandatory standard:
- [Most companies] are supportive of mandating the standard, because a lot of this development work is a one-off. Once you have done it for one platform, that is transportable to other platforms, ... it will discourage bringing boxes into the country that are simply not suitable for our broadcast environment.¹⁶
- 5.20 DCITA explained that the standard provides a degree of flexibility for manufacturers:
- The concern arises where customer equipment, for example, is produced to operate within effectively a subset of that standard – in other words, they choose the variables within that standard in a way which does not necessarily mean there is a capacity to receive all the sorts of signals.¹⁷
- 5.21 The Committee understands that there is support for a mandatory standard, however the Committee recognises that standards in Australia are voluntary unless regulated through an Act or related to safety.

13 Panasonic, *transcript of evidence 28 June 2005*, p. 31.

14 Standards Australia, *transcript of evidence 14 September 2005*, p. 10; ITRI, *submission no. 46*, pp. 7-8, 13.

15 ITRI, *submission no. 46*, p 7.

16 Panasonic, *transcript of evidence 28 June 2005*, p. 11.

17 DCITA, *transcript of evidence 1 June 2005*, p. 23.

- 5.22 The Committee considers there are more appropriate means of raising consumer awareness of conformance to standards, such as through testing and labelling. These options are discussed later in this chapter.

Mandate digital tuners in reception equipment

- 5.23 A number of submissions suggested that the inclusion of digital tuners should be mandatory in reception equipment – that is, all televisions sold should include a digital tuner. This section of the Chapter summarises the arguments put forward for and against mandating the inclusion of digital tuners in televisions sold in Australia.

Arguments for mandating tuners

- 5.24 Several submissions to the inquiry suggested that mandating the inclusion of digital tuners in television sets as a way of driving DTV take-up should be investigated further.¹⁸

- 5.25 The Nine Network is of the view that the Australian Government should mandate digital tuners in new television receivers sold in Australia:

Mandating digital tuners in new receivers would stimulate the take-up of digital technology in the market and contribute to establishing an automatic digital replacement cycle.¹⁹

- 5.26 Panasonic explained that mandating digital tuners would ensure that replacement televisions purchased by consumers are automatically capable of receiving DTV, and that the analogue switch-off date will not be delayed due to the continuing sale of analogue equipment.²⁰

- 5.27 SCB discussed support for mandating digital tuners:

It seems from the submissions made to the committee as part of its review that there is widespread support amongst the broadcasting industry, equipment suppliers and other submitters for the mandating of digital tuners in new television receivers to help stimulate the take-up of digital technology in the free-to-air market. The increasing adoption of digital technology world wide has reduced the cost of

18 Panasonic, *submission no. 30*, p. 2; UTSPS, *submission no. 32*, p. 3; Network Ten, *submission no. 60*, pp. 17-18; Sony, *submission no. 67*, p. 11; SBS, *submission no. 62*, p. 9.

19 Nine Network, *submission no. 59*, p. 9.

20 Panasonic, *submission no. 42*, p. 5.

digital tuners. In light of the fact that televisions have an average life of about seven years, mandating digital tuners would create a natural replacement cycle ensuring steady digital uptake.²¹

- 5.28 Broadcast Australia also recommended that the Australian Government consider mandating integrated DTV receivers.²²
- 5.29 Broadcast Australia stated that, in the US, the FCC has taken this approach and introduced a requirement that equipment manufacturers progressively incorporate a digital receiver in new television sets above certain sizes beyond certain dates (i.e. starting with the largest set sizes and working down).²³
- 5.30 Broadcast Australia explained that the FCC has ordered all television sets 13 inches [33 cm] and larger, and other products that normally carry television tuners, to include DTV tuners, by 1 July 2007. The mandate outlines a phased-in approach over five years starting with larger screen sets.²⁴
- 5.31 Broadcast explained that the US mandate calls for 100 per cent of other devices that include television receivers – such as VCRs and PVRs – to include digital tuners by 1 July 2007.²⁵
- 5.32 Broadcast Australia also explained:
- ... the FCC order says that combinations of DTV monitors and set-top DTV tuners, if marketed together at one price, qualify as integrated sets.²⁶
- 5.33 The Nine Network explained that by having a phased-in approach starting with the larger equipment, consumers will still be able to make full choices regarding their purchases. The Nine Network added that analogue equipment choices will remain for a considerable period of time.²⁷

21 SCB, *transcript of evidence 1 September 2005*, p. 15.

22 Broadcast Australia, *submission no. 41*, p. 12.

23 Broadcast Australia, *submission no. 41*, p. 12.

24 Broadcast Australia, *submission no. 41*, p. 12.

25 Broadcast Australia, *submission no. 41*, p. 13.

26 Broadcast Australia, *submission no. 41*, p. 13.

27 Nine Network, *submission no. 59*, p. 9.

- 5.34 Network Ten stated that by phasing in the mandate in the US, the FCC has ameliorated possible adverse consumer reaction and lessened the impact at the lower end of the market.²⁸
- 5.35 WIN also believes that digital tuners should be mandated. WIN stated:
- Last year the Australian retail market sold in the order of 1.5 million television sets. It is our view, that had these television sets contained digital tuners, a natural replacement cycle would have automatically been established.²⁹
- 5.36 The Nine Network claimed that the large quantity of new analogue equipment continuing to come into the market is delaying digital take-up and the ultimate switch-off of the analogue service.³⁰
- 5.37 WIN explained that whilst the UK has decided against mandating digital tuners, the US has decided to do so to help stimulate take-up of DTV technology.³¹
- 5.38 WIN stated that:
- A move to digital technology worldwide should create economies of scale for manufacturers in relation to the production of digital tuners lowering the price difference that exists between analogue and digital sets.³²
- 5.39 Sony believes that the US approach, which requires a progressive and scaled move to in-built digital tuners, provides a useful model for Australia to consider.³³
- 5.40 Sony has had some experience of the requirement to offer televisions with in-built digital tuners:
- Sony, and other suppliers, are now introducing [in-built digital television] models into the US market in compliance with the FCC's requirement that all newly manufactured TV sets will have to progressively (over a five year period) include digital terrestrial tuners.³⁴

28 Network Ten, *submission no. 60*, p. 16.

29 WIN, *submission no. 56*, p. 1.

30 Nine Network, *submission no. 59*, p. 9.

31 WIN, *submission no. 56*, p. 1.

32 WIN, *submission no. 56*, p. 1.

33 Sony, *submission no. 67*, p. 11.

34 Sony, *submission no. 67*, p. 11.

- 5.41 Panasonic also believes that the move to in-built tuners could start in a staged manner in Australia at the upper end of the market with large, new technology screens and panels.³⁵
- 5.42 LG provided a basic plan for phasing in digital tuners in Australia:
- All large screen televisions (76 cm and above) should have in-built digital tuners by January 2007.
 - All televisions should have in-built digital tuners by January 2008.³⁶

Mandating HD tuners

- 5.43 Sony stated that, in addition to setting a schedule for mandating the integration of digital tuners, there should be a mandated requirement for all integrated DTVs and set-top boxes to decode both HD and SD signals.³⁷
- 5.44 The ABC also discussed rapidly changing set-top box technology, and the possibility of eliminating the need for HD-SD simulcast by requiring all set top boxes to receive HD signals that can be converted down to SD:
- ... at the moment we have boxes out there that can receive SD only. If we want to remove the simulcast then we have to basically make the transition away from those boxes over time. If [SD tuners] start to become built into integrated TV sets then you have people who have bought a new set that they expect to last seven or eight years and if suddenly you are telling them that the tuner in it is not going to work and they are going to need a set-top box, there is bound to be a consumer backlash.³⁸
- 5.45 The Nine Network also believes that there should be an HD mandate, in addition to the phased-in mandating of digital tuners. The Nine Network believes this is especially so given the increased number of HD programs in Australia and the increasing take-up of digital world wide.³⁹

35 Panasonic, *submission no. 42*, p. 5.

36 LG, *submission no. 44*, p. 2.

37 Sony, *submission no. 67*, p. 11.

38 ABC, *transcript of evidence 22 June 2005*, p. 21.

39 Nine Network, *submission no. 59*, p. 9.

5.46 The Nine Network explained that:

It is not logical that a high end integrated set with a high resolution high definition capable display should not be capable of receiving and displaying a high definition signal.⁴⁰

5.47 The Nine Network claimed that the price imposition of an HD tuner would not be great at the moment particularly when factored into the cost of an integrated high end display:

I would also like to point out that the difference in the cost today of production of an SD or an HD capable tuner is very small. It is probably only a matter of materials cost of \$20 to \$50. It is not big.⁴¹

5.48 The Nine Network explained the availability and cost issues:

We understand that currently some manufacturers are limited in their ability to access high definition integrated receivers due to availability from overseas markets. However, with the increasing shift towards high definition throughout the world more high definition tuners will become available and the price differential will fall even further.⁴²

Arguments against mandating tuners

5.49 The Seven Network does not support proposals to mandate digital tuners for consumer equipment in Australia.⁴³

5.50 The Seven Network stated that:

... the UK, which is the most successful DTT market in the world in terms of consumer uptake, has considered this issue and decided that it is not advisable at this stage of the consumer cycle (although could possibly be appropriate at a later stage).⁴⁴

5.51 The Seven Network claimed that mandating digital tuners has had no effect on consumer take-up in the US. The Seven Network explained

40 Nine Network, *submission no. 59*, p. 9.

41 Nine Network, *transcript of evidence 28 June 2005*, p. 23.

42 Nine Network, *submission no. 59*, p. 10.

43 Seven Network, *submission no. 49*, p. 12.

44 Seven Network, *submission no. 49*, p. 12.

that strategies to drive take-up should focus first on encouraging consumer response rather than mandating technologies.⁴⁵

- 5.52 The Seven Network claimed that digital tuners add to the cost of consumer equipment and could work to disadvantage low cost equipment suppliers currently in the Australian market who work on high volume low margin sales, with the end result being higher equipment prices.⁴⁶
- 5.53 The ACA claimed that an attempt to speed the DTV conversion by requiring new television sets to have a digital tuner would raise a number of problems.⁴⁷
- 5.54 The ACA raised the following questions:
- What sort of receiver would be mandated?
 - How capable would the mandated receiver have to be in terms such as interactivity, electronic program guide functionality?
 - Would the requirement apply to integrated TVs only, TV receivers with a designated screen size or over a specified value or any TV receiver (such as that incorporated in a VCR or on a [personal computer] add-in card)?
 - How would such a requirement affect the availability of products for import to Australia - would it end the availability of cheap analogue sets? This would be a poor outcome if there were not similarly priced digital capable sets to take their place.
 - Would such an intervention increase the price of sets on offer to consumers, and if so by how much? We would argue that it is inappropriate for such an intervention to produce price increases for consumers.
 - What would happen with regard to currently existing but narrow market segments such as very cheap B&W sets and hand held units - if these could not incorporate a digital tuner, would they be banned from Australia?
 - What would the enforcement method be?⁴⁸
- 5.55 The ACA believes that it should be left to the market to determine the demand for television equipment.⁴⁹
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45 Seven Network, *submission no. 49*, p. 12.

46 Seven Network, *submission no. 49*, p. 12.

47 ACA, *submission no. 47*, p. 7.

48 ACA, *submission no. 47*, pp. 7-8.

49 ACA, *submission no. 47*, p. 8.

5.56 The ACA is of the opinion that there is no need for the Australian Government to intervene with a requirement for television sets to be configured in a specific way. The ACA added that any intervention is likely to affect the average price of sets bought, and to impact the range of sets available.⁵⁰

5.57 The ACA further explained its views on mandating digital tuners and DTV take-up:

Obviously, if it is worth having, and you let the market decide, we will get there eventually. If it is not worth having, the market will decide not to go there. We obviously have an eye on the 16 million or 17 million consumers who have not yet transferred. A large number of those people are facing cost barriers and they have decided that it is not worth it. They have not yet decided – and they may not want to – to spend the money required for the upgrade. We have to ask ourselves whether there is a downside to hastening slowly and being open to new possibilities.⁵¹

5.58 The ACA added that nobody had to mandate colour television.⁵²

5.59 The ABC gave its view on mandating digital tuners and legacy issues:

On the surface of it, I think it looks attractive, but what it is going to do, particularly at this stage, is potentially make televisions more expensive and create the perception for consumers that TV digital receivers will last longer than a set-top box. At the moment, the purchase of a television set is still a significant purchase for a consumer and there is an expectation that it will have a relatively long life. With set-top boxes, as it stands at the moment, they are readily available for under \$100. So, as technology improves and capability evolves, it is not such a big deal to change that set-top box ... however, if you have integrated a digital receiver into your television, where the technology evolves or the ability to perhaps deliver interactivity opens up – whatever it might be – that television set is then not capable of doing that. So the redundancy issue is much more profound if you mandate

50 ACA, *submission no. 47*, p. 8.

51 ACA, *transcript of evidence 7 September 2005*, p. 22.

52 ACA, *transcript of evidence 7 September 2005*, p. 23.

digital receivers in televisions, particularly at this stage in market development.⁵³

5.60 SBS stated that consumers will drive market change:

I think the market will drive the best outcome for receivers. The more that people buy receivers, the more that they are turning over new receivers and there is demand, the more the consumer electronics manufacturers in Australia can refine their product for the domestic market. If you look at the European experience in satellite set-top boxes, and even the terrestrial market, they are several generations into evolution caused by demand. So there are continual refinements and continual change. I think that anything we can do to stimulate that market change, that market economy, to make better devices, the better it will be.⁵⁴

Compression technologies and legacy issues

5.61 While mandating tuners in televisions may address some immediate legacy issues relating to analogue sets, it will also introduce further legacy issues given new technologies which are being developed.

5.62 The DVB standard adopted in Australia includes MPEG-2 as the basic method of delivery for the video and audio.⁵⁵ However, future compression technologies, such as MPEG-4, may quickly supersede the current delivery technology.

5.63 Standards Australia discussed MPEG-4:

the DVB standards basically cover MPEG2 video streaming, but there is a lot of talk and a lot of movement in looking at incorporating into the DVB standards MPEG4 or H264, which is probably more the appropriate terminology. H264 is a variant of MPEG4 which allows much higher compression rates, which would then allow particularly high-definition broadcasts to be broadcast with a much lower bit rate than they currently require.⁵⁶

53 ABC, *transcript of evidence 22 June 2005*, pp. 20-21.

54 SBS, *transcript of evidence 22 June 2005*, p. 30.

55 Standards Australia, *transcript of evidence 14 September*, pp. 1-2.

56 Standards Australia, *transcript of evidence 14 September*, p. 2.

5.64 Standards Australia explained further:

As yet, there is no MPEG4 environment that I am aware of around the world, but there are a number of organisations and companies internationally that are considering broadcasting using that newer standard with the much higher compression ratios. I believe that DVB will almost certainly incorporate that into their broadcasting toolbox, if you like, at some time, probably in the not too far distant future ... [possibly] under five years.⁵⁷

5.65 Broadcast Australia explained that since MPEG-2 was first introduced, there have been substantial improvements in compression technology, with the advent of MPEG-4 technology effectively doubling the content capacity of a DTV channel.⁵⁸

5.66 Broadcast Australia discussed the advantages of MPEG-4:

MPEG-4 is an advanced open compression technology which allows for the provision of SD and HD television services utilising less bandwidth (i.e. more services per digital channel or 'multiplex'). The additional capacity could also be used for the introduction of interactive services. Its encoding is typically 50% or more efficient than MPEG-2. The development of MPEG-4, Windows Media 9 (a competing proprietary technology) and other applications allows for the running of more simultaneous program streams within a standard 7 MHz channel.⁵⁹

5.67 Broadcast Australia claimed that MPEG-4-based DTV receivers were expected to become available in significant numbers in the second half of 2005, with early versions of MPEG-4-based DTV receivers already available in small numbers.⁶⁰

5.68 Network Ten claimed that, although MPEG-2 DTV receivers are expected to dominate the market for another two years, industry transition to MPEG-4 is expected within two to five years.⁶¹

57 Standards Australia, *transcript of evidence 14 September*, p. 2.

58 Broadcast Australia, *submission no. 41*, p. 5.

59 Broadcast Australia, *submission no. 41*, pp. 15-16.

60 Broadcast Australia, *submission no. 41*, p. 16.

61 Network Ten, *submission no. 60*, p. 22.

- 5.69 Broadcast Australia acknowledges that the introduction of MPEG-4 in Australia would result in legacy issues with current reception devices.⁶²
- 5.70 Broadcast Australia claimed that in the near future an important decision will need to be made on whether or not to adopt an advanced compression technology standard and, if so, which standard to implement. This decision point will be driven by the increased adoption of these advanced compression technologies in the world's leading DTV jurisdictions and the mass availability of (affordable) consumer reception devices.⁶³
- 5.71 Broadcast Australia pointed out that the later that consideration and selection of an advanced compression technology standard is left, the more difficult the size of the receiver legacy issue will be to manage.
- 5.72 Broadcast Australia added:
- If we are going to deal with that issue, it is better to deal with that earlier rather than later. So there is a population of MPEG-2 ... receivers that have been sold. If you move to MPEG-4, what is the cost to the consumer associated with that upgrade? Given that the MPEG-2 receivers are now \$200 or less ... it is not all that significant a cost impost on the consumer ... if there were a transition plan whereby the MPEG-2 standard definition signal was carried in addition to any MPEG-4 signals for a period of time, it would enable a reasonably smooth transition.⁶⁴
- 5.73 The Seven Network discussed options for using MPEG-2 and MPEG-4:
- While legacy boxes currently in the market could not receive channels delivered using [MPEG-4] technology one option to address this would be to allow new multichannels to adopt new compression techniques but to continue to operate the primary analog simulcast service using current MPEG 2 technology.⁶⁵

62 Broadcast Australia, *submission no. 41*, p. 16.

63 Broadcast Australia, *submission no. 41*, pp. 16-17.

64 Broadcast Australia, *transcript of evidence 15 June 2005*, p. 2.

65 Seven Network, *submission no. 49*, p. 9.

- 5.74 When asked whether mandating MPEG-4 DTV receivers would be an option, the Seven Network stated:

What we would say is that technology should be allowed to be introduced in accordance with its availability and the business case for that technology. Most governments around the world have not had a spectacular record of success in mandating technologies and Australia had its own spectacular disaster with digital satellite in that regard. MPEG4 is an emerging technology and one of great interest but it is not there yet. It is starting to appear in things like DVDs. Some broadcasters are starting to indicate that they are moving down that path. But it is not a fully fledged, commercial, free-to-air technology.⁶⁶

- 5.75 Sony admitted that some set-top boxes in the market may end up being legacy products. Sony also admitted that consumers that have purchased expensive integrated sets will need to purchase a new set-top box if MPEG-4 compression technology becomes the broadcast standard.⁶⁷

- 5.76 Mr Alex Mayo suggested that it may be too late to switch to MPEG-4 for both SD and HD, however Australia could still follow Europe's lead and use MPEG-4 for HD broadcasting.⁶⁸

- 5.77 Mr Mayo added:

At the end of 2004, it was estimated that 658 000 digital receivers had been sold in Australia. Of these, 192 000 were HD units. If Australia were to switch to MPEG-4 for HD, these units could still receive SD broadcasts but would not be able to decode the new HD MPEG-4 encoded streams. Existing boxes would be relegated to SD status because they do not contain the required hardware to decode MPEG-4. Should Australia switch HD to MPEG-4 encoding, the government should consider a buy back or subsidised replacement scheme for the owners of outmoded MPEG-2 HD set top boxes.

- 5.78 UTSPS suggested that Australia monitor the progress of HDTV in Europe, with a view to implementing MPEG-4 HD broadcasting in Australia.⁶⁹

66 Seven Network, *transcript of evidence 1 September 2005*, p. 5.

67 Sony, *transcript of evidence 7 September 2005*, pp. 9-10.

68 Mr Alex Mayo, *submission no. 70*, p. 2.

- 5.79 UTSPS stated that networks would maintain a base-level MPEG-2 SD broadcast, allowing the continued use of low-price DTV receivers. UTSPS claimed that networks could feasibly provide a broadcast of one or two SD channels compatible with today's receivers, and an HD service at quality approaching the future HD-DVD standard.⁷⁰
- 5.80 Interactive TV stated that the vast majority of set-top boxes available in Australia today are based on legacy satellite receiver technology.⁷¹
- 5.81 Interactive TV claimed that it has designed a true digital set-top box as a completely flexible platform for future development. Interactive TV explained:
- Using the latest SoC (system on a chip) technology, we can quickly reprogram the chipset and add different communication platforms such as Bluetooth, wireless LAN and 3G, according to each network operator's specifications. The chipset facilitates MPEG-2 and MPEG-4 AVC/H.264 compression decoding and the products' extremely low energy consumption offers another significant advantage over existing technologies.⁷²
- 5.82 Interactive TV stated that its set-top box range will be available at prices starting from \$149 for the entry level unit, through to the fully featured model with 400 GB of hard drive storage for less than \$1 000.⁷³
- 5.83 Interactive TV remarked:
- Instead of running behind in the technology race, the availability of this technology on our doorstep could enable us to lead the world. It is future proofed and cost-competitive.⁷⁴
- 5.84 Interactive TV stated that it has responded to many requests for its technology from countries such as Italy, the UK, Spain, and Belgium:
- The technology is attractive because it enables free to air, satellite and cable broadcasters and internet service providers

69 UTSPS, *submission no. 32*, p. 9.

70 UTSPS, *submission no. 32*, p. 9.

71 Interactive TV, *submission no. 85*, p. 2.

72 Interactive TV, *submission no. 85*, p. 2.

73 Interactive TV, *submission no. 85*, p. 2.

74 Interactive TV, *submission no. 85*, p. 2.

to deliver interactive, on-demand, triple-play services (voice, video, data), to an ordinary TV set.⁷⁵

- 5.85 Interactive TV claimed that it has established commercial relationships with the leaders in DTV in the UK and Italy.⁷⁶

Committee comment

- 5.86 The Committee is of the opinion that mandating standards or mandating the inclusion of digital tuners in television sets is not a practical solution, particularly given legacy issues that may arise due to changes in compression technologies.
- 5.87 Digital set-top boxes are relatively affordable at the moment, with prices dropping quickly. The Committee is of the view that a set-top box is regarded as an inexpensive item that can be updated readily if or when a change in compression technologies comes about. Similar to mobile phones which are readily updated as new features and technologies become available, set-top boxes are likely to be regularly upgraded to match technology developments.
- 5.88 The Committee is of the view that consumers will drive the market for DTV equipment.
- 5.89 The Committee recognises the advantages of MPEG-4 technology and notes that new compression technology may allow for networks to broadcast both HD and multichannel services. New advances in technology can be considered in the review on HD quotas, already recommended by the Committee.

Revision of standards relating to reception equipment

- 5.90 While broadcasters are required under the BSA to broadcast according to the transmission standard, the receiver standard is not mandatory or regulated.⁷⁷ Some of the specifications for receivers in the standard are classified as essential, while others are recommended or optional at the manufacturer's choice.⁷⁸
- 5.91 Standards Australia explained that as competitive pressures build, it is more likely the smaller suppliers will circulate digital equipment

75 Interactive TV, *submission no. 85*, p. 3.

76 Interactive TV, *submission no. 85*, p. 3.

77 Standards Australia, *transcript of evidence 14 September 2005*, p. 11.

78 Australian Standard 4599.1-2005: *Digital television - Terrestrial broadcasting - Characteristics of digital terrestrial television transmissions*.

which may not be compliant with some features set out in the receiver standard.⁷⁹

- 5.92 Submissions to the inquiry identified requirements under the receiver standard which could be reviewed and changed from being recommended to mandatory for all compliant receivers. The requirements discussed included LCN, and standby power. Several submissions also discussed over-the-air downloads and standards for antennas, in particular their capacity to receive digital channels in Australia. These issues are discussed below.

Logical channel numbering

- 5.93 The LCN system simplifies channel selection for consumers. Each broadcaster has been allocated a range of channel numbers, most of which are familiar to consumers:

As an example of how the LCN system works: the ABC has been allocated the numbers 2 (one single-digit number to be used for its main service), 20-29 (ten double-digit numbers to be used for multichannel, HD and other services) and 200-299 (one hundred triple-digit numbers to be used where necessary, eg, for radio services and in areas where there is an overlap of services).⁸⁰

- 5.94 Not all DTV receivers have the LCN feature and those that do not will essentially rely on consumers 'tuning' the box by assigning channel numbers. DBA highly recommends that consumers choose a digital receiver that uses LCN services to simplify channel selection.⁸¹

- 5.95 Standards Australia is concerned that functions that provide ease-of-use features for consumers, such as LCNs, may be overlooked in some set-top boxes:

Ultimately, something like logical channel numbers, which is one of the ease-of-use features which exist within a digital set-top box, may be the first that gets missed out. Maybe it is the difference between spending \$50,000 on writing the software to do it and just taking the box as it is, where it will tune

79 Standards Australia, *transcript of evidence 14 September 2005*, p. 9.

80 www.dba.org.au/uploads/documents/Shopping_DTV_ReceiverFeb04.pdf, accessed 22 November 2005, p. 5.

81 www.dba.org.au/uploads/documents/Shopping_DTV_ReceiverFeb04.pdf, accessed 22 November 2005, p. 7.

channels 1, 2, 3, 4, 5 and 6 and you have to sort out which ones they are in terms of the channel that you are watching.⁸²

- 5.96 The Committee notes that there are different levels of applicability for certain items or functions listed in the receiver standard. An item or function may be required for all receivers, highly recommended, recommended or optional. The Committee understands that, according to the receiver standard, LCNs are *highly recommended* for all receivers.
- 5.97 The Committee is of the view that the LCN system should be required for all receivers, and urges Standards Australia to consider this in its revision of the receiver standard.

Over-the-air downloads

- 5.98 Over-the-air downloads allow for manufacturers and broadcasters to install software modifications in digital receiver equipment in consumers' homes.⁸³
- 5.99 DBA explained that DTV receivers which have an over-the-air software download capability could be upgraded in the home through broadcasting transmissions. Over-the-air download of software could minimise consumer inconvenience and reduce the number of 'legacy' boxes as digital services provided by broadcasters become more sophisticated and varied.⁸⁴
- 5.100 Standards Australia discussed the need for over-the-air downloads:
- The only practical and cost-effective way of ensuring that receivers are maintained in the marketplace to a level that is going to satisfy consumers is by being able to update the software. The software may have to be updated because of problems that a company may find with their set-top boxes.⁸⁵
- 5.101 Standards Australia added:
- It may well be that on some occasions it is more cost effective for an over-the-air download to be performed so that a box can cope with what is happening with the broadcast than for the broadcasters to change their broadcast to be compliant.⁸⁶

82 Standards Australia, *transcript of evidence 14 September 2005*, p. 10.

83 Free TV Australia, *transcript of evidence 25 May 2005*, pp. 9-10.

84 DBA, *submission no. 34*, p. 8.

85 Standards Australia, *transcript of evidence 14 September 2005*, p. 19.

86 Standards Australia, *transcript of evidence 14 September 2005*, p. 19.

5.102 Panasonic further discussed the need for over-the-air downloads:

We were able to download and change the software in the box and make it do some things that it could not do before. To modify the behaviour of the box or to allow broadcasters to move forward with enhanced features it is necessary to have this over-the-air download facility.⁸⁷

5.103 Free TV Australia explained that there are a number of difficulties with over-the-air downloads, including how to manage them and what sort of system to use.⁸⁸

5.104 Standards Australia explained that an over-the-air download for a particular set-top box should not interfere with other products. Manufacturers need to ensure that over-the-air downloads:

... will not cause third party boxes to go black, will not cause even the boxes they are intended [for] to go black and will achieve the over-the-air download without any damage to their business.⁸⁹

5.105 Free TV Australia described a model for Australia where one or two national broadcasters could carry over-the-air downloads on behalf of a manufacturer.⁹⁰

5.106 The UK testing and conformance centre, DTG Testing, manages the BBC's Engineering Channel which is used by manufacturers to download software updates to receivers. DTG Testing informs consumers by publishing a schedule for over-the-air downloads.⁹¹

5.107 All major receiver manufacturers supplying the UK market have service agreements with DTG Testing for access to the Engineering Channel. In addition, the pre-transmission testing of submitted downloads carried out by DTG Testing ensures that no problems are likely to occur during live transmissions. DTG Testing also tests and analyses each new download file to monitor the effects on digital receivers.⁹²

87 Panasonic, *transcript of evidence 28 June 2005*, p. 28.

88 Free TV Australia, *transcript of evidence 25 May 2005*, p. 10.

89 Standards Australia, *transcript of evidence 14 September 2005*, p. 20.

90 Free TV Australia, *transcript of evidence 25 May 2005*, p. 10.

91 DCITA, *exhibit no. 5, attachment A*, p. 3; www.dtg.org.uk/retailer/download_schedule.pl, accessed 15 December 2005.

92 www.dtg.org.uk/testing/engchan.html, accessed 15 December 2005.

- 5.108 Over-the-air downloads in Australia are expected to be coordinated by broadcasters in cooperation with manufacturers. Receiving an over-the-air download usually does not require the consumer to do anything apart from leaving the set-top box on in standby mode.⁹³
- 5.109 Standards outlining guidelines for over-the-air downloads are currently being examined by a supply industry group.⁹⁴
- 5.110 Standards Australia discussed the need for conformance testing of over-the-air downloads, to ensure that they carry out their function correctly and have minimum interference with other products:
- To do over-the-air downloads there are commercial, legal and technical considerations. There are issues of indemnity, which the broadcasters hold very firm. To ensure and, in particular, encourage broadcasters to offer over-the-air download services, we need testing and conformance of those over-the-air downloads from an independent body which can be provided to the broadcaster, along with the software that needs to be updated, and they can have the security that it has been tested ...⁹⁵
- 5.111 The Committee considers over-the-air downloads to be an efficient way of updating set-top-boxes. The Committee is of the opinion that conformance testing of over-the-air downloads is necessary and will be part of the business of a testing and conformance centre (TCC). Further discussion on a TCC can be found later in this chapter.
- 5.112 A further issue relating to over-the-air downloads concerns the need for set-top boxes to remain in standby mode and the consequent power usage. Power consumption issues are discussed below.

Power consumption

- 5.113 Another issue brought to the attention of the Committee regarding standards for DTV receivers was standby power usage. With the introduction of DTV in Australia, concerns have been raised about the increased energy use of DTV receivers.
- 5.114 In 2003-04 the National Appliance and Equipment Energy Efficiency Committee (NAEEEC) conducted a survey of set-top box energy consumption. The NAEEEC is part of the National Greenhouse

93 Free TV Australia, *transcript of evidence 25 May 2005*, p. 16.

94 Standards Australia, *transcript of evidence 14 September 2005*, p. 11.

95 Standards Australia, *transcript of evidence 14 September 2005*, p. 19.

Strategy, and coordinates the mandating of energy efficiency labelling and standards as well as voluntary measures including endorsement labelling, training and support to promote the best available product.⁹⁶

- 5.115 The NAEEEEC tested 29 set-top box models and found that the average energy consumption when in use was 15.4W (Watts). The NAEEEEC tested 26 units in passive standby mode and found an average passive standby energy consumption of 7.9W. Only eight set-top boxes had an off mode. Table 5.1 summarises the results.⁹⁷

Table 5.1 Results from NAEEEEC 2003/04 survey for digital set top boxes

Mode	Number of measurements	Average power (W)	Power max (W)	Power min (W)
In Use/Active	28	15.4	35.3	6.9
Passive	26	7.9	20.1	1.9
Off	8	0.0	0.2	0.0
Total	29			

Source *National Appliance and Equipment Energy Efficiency Program, Minimum Energy Performance Standards, Digital Set Top Boxes, October 2004, p. 4.*

- 5.116 Department of the Environment and Heritage (DEH) noted that the less efficient models can consume as much energy over a year as a clothes dryer or dishwasher.⁹⁸
- 5.117 The Committee notes that power efficiencies can be gained by combining components such as digital tuners, DVD recorders and PVRs into single units, with one power supply.
- 5.118 Network Ten explained that most people do not turn their set-top boxes to standby when they turn off their televisions. This has major implications for a household's energy consumption and has associated environmental effects:

... if everyone bought a [set-top box] for each of their 2.3 TV sets the average household power would increase by around 2.5%. With 7.6m homes in Australia, this translates to 1378 million kilograms of carbon dioxide per year.⁹⁹

96 National Appliance and Equipment Energy Efficiency Program, *Minimum Energy Performance Standards – Digital Set Top Boxes*, Report No. 2004/08, p. 1.

97 National Appliance and Equipment Energy Efficiency Program, *Minimum Energy Performance Standards, Digital Set Top Boxes*, October 2004, pp. 3-4.

98 DEH, *submission no. 91*, p. 1.

99 Network Ten, *submission no. 60*, p. 18.

5.119 There are also power concerns associated with over-the-air downloads. Free TV Australia explained that to be able receive over-the-air-downloads, the set-top box:

... has to be in standby mode ... If you turn [the set-top box] off, you are not going to get anything. We certainly never turn our set-top box off. We just turn the TV set off, so the set-top box would stay in standby mode.¹⁰⁰

5.120 Evidence to the Committee indicated that integrated DTVs are considered to be more energy efficient than a set-top box and television combination. LG explained that an integrated set is a more efficient user of energy than a television and a set-top box together.¹⁰¹

5.121 Standards Australia also commented that power consumption efficiency is gained by having an integrated DTV rather than a set-top box and monitor:

Most TVs sold in the Australian market at the moment already comply with the standby power of less than one watt. Most digital set-top boxes that are being sold in the Australian market are at the moment averaging around five watts standby power. If you do the same calculation, assuming that everything is sold as an integrated digital TV set, that figure drops by a factor of 10.¹⁰²

5.122 Panasonic indicated that:

There are about 1.5 million TV sets sold in Australia each year. In the last year, probably around 5,000 were integrated digital.¹⁰³

5.123 Figure 5.1 illustrates the difference in energy consumption between integrated DTVs in standby mode, set-top boxes in standby mode, and 50 per cent of set-top boxes with monitors in active mode.¹⁰⁴

100 Free TV Australia, *transcript of evidence 25 May 2005*, p. 16.

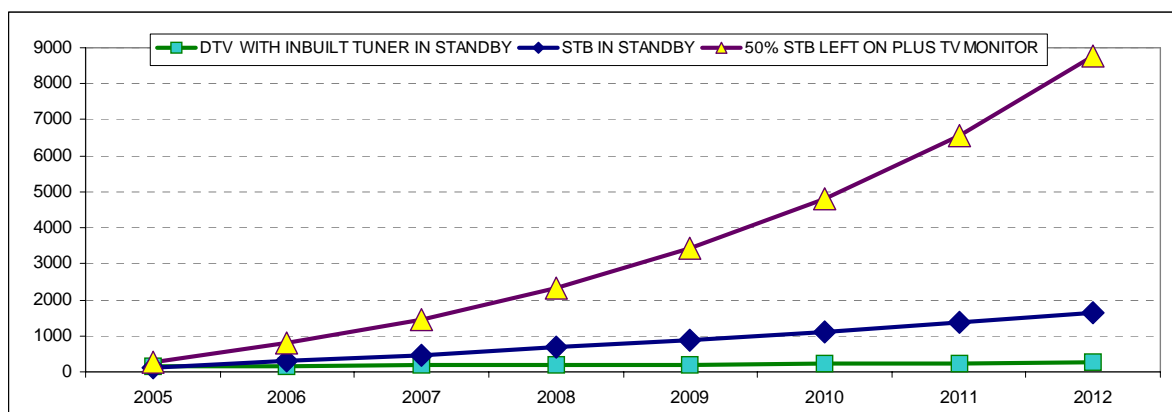
101 LG, *transcript of evidence 28 June 2005*, p. 41.

102 Standards Australia, *transcript of evidence 14 September 2005*, p. 17.

103 Panasonic, *transcript of evidence 28 June 2005*, p. 29.

104 Standards Australia, *transcript of evidence 14 September 2005*, p. 17.

Figure 5.1 Integrated DTVs and set-top boxes - comparison of energy consumption



Source Standards Australia, exhibit no. 4, p. 3.

- 5.124 The Committee notes that Australian consumers are currently purchasing set-top boxes at a far greater rate than integrated DTVs. The Committee understands that set-top boxes are continually dropping in price and are often bundled with other audiovisual products.
- 5.125 The requirements for standby power within the receiver standard state that manufacturers should refer to the National Standby Power Strategy. This strategy is discussed in the following section.
- 5.126 The Committee understands that the standby power clause is listed as *recommended* for all receivers in the Australian Standard relating to digital receivers.

The One Watt initiative

- 5.127 Standby power waste may account for one per cent of the world's energy related CO₂ (carbon dioxide) emission. In OECD (Organisation for Economic Co-operation and Development) countries, standby power wastage accounts at least for 2.2 per cent of total electricity consumption.¹⁰⁵
- 5.128 In 1999, the International Energy Agency (IEA) proposed that all countries should synthesize their energy policies to reduce standby power usage to be no more than one watt per device. The proposal, known as the One Watt initiative contained the following three elements:
- participating countries would seek to lower standby power usage to be less than one watt in all products by 2010;

105 www.iea.org/textbase/papers/2002/globe02.pdf, p. 6, accessed 20 December 2005.

- each country would use measures and policies appropriate to its own circumstances; and
 - all countries would adopt the same definition and test procedure.¹⁰⁶
- 5.129 The IEA predicts that, when properly and widely applied, the total savings generated in OECD countries from the One Watt initiative will be 50 million tons of CO₂ by 2010. This is equivalent to removing 18 million cars from OECD roads.¹⁰⁷
- 5.130 The Australian Government has endorsed the IEA's One Watt program which seeks to raise awareness about excessive standby power usage amongst suppliers and consumers.¹⁰⁸
- 5.131 In 2002, the Australian Ministerial Council on Energy (MCE) released *Money isn't all you're saving*, the National Standby Power Strategy. The strategy sets out long-term objectives to address excessive standby energy used by consumer appliances and equipment.¹⁰⁹
- 5.132 Australia's commitment to reduce excessive standby energy will be achieved by introducing product-specific plans addressing excessive standby energy use over ten years, from 2002 to 2012.¹¹⁰
- 5.133 Set-top boxes were among a group of products identified for immediate action in the National Standby Power Strategy, and in October 2004 *Minimum Energy Performance Standards (MEPS) for Digital Set Top Boxes* was published by the NAEEEC.¹¹¹
- 5.134 The regulatory standards associated with MEPS are currently being drafted by Standards Australia:

The Greenhouse Office is mandating on all set-top boxes and TV receivers minimum energy performance standards. Those standards are being written into a different group of standards within Standards Australia. They are being written into the electrical safety standards governed by a committee

106 www.iea.org/dbtw-wpd/journalists/docs/standby.pdf, accessed 20 December 2005.

107 www.iea.org/textbase/papers/2002/globe02.pdf, p. 6, accessed 20 December 2005.

108 www.energyrating.gov.au/standby-background.html, accessed 20 December 2005.

109 www.energyrating.gov.au/2003-10sbforum.html, accessed 20 December 2005.

110 www.energyrating.gov.au/standby.html, accessed 24 November 2005.

111 National Appliance and Equipment Energy Efficiency Program, *Minimum Energy Performance Standards – Digital Set Top Boxes*, Report No. 2004/08, p. 1.

called TE-001. Those standards will be calling out the requirements for MEPS ...¹¹²

- 5.135 The standard suggested by the NAEEEC is to include the following power specifications:
- 8W maximum power for in use/active mode for simple set-top boxes;
 - 15W maximum power for active standby mode for all other set-top boxes, including pay television services and integrated recording devices; and
 - 1W maximum power for passive standby mode.¹¹³
- 5.136 PVRs will also be covered by the new set-top box standard.¹¹⁴ However, integrated DTVs, including those with an integrated receiver and decoder, will be addressed in a separate MEPS standard.¹¹⁵
- 5.137 DEH stated that implementation of the new set-top box standard is currently scheduled for October 2007.¹¹⁶
- 5.138 DEH stated that Australian energy efficiency experts are working closely with the European Union, the US and China to ensure an internationally consistent approach for power consumption testing methods and regulation of set-top boxes. DEH explained that:
- Given Australia does not manufacture these products, this approach will maximise the prospect of successful domestic implementation.¹¹⁷
- 5.139 The Committee supports the work currently undertaken by the Australian Government and international bodies. The Committee anticipates that at analogue switch-off the One Watt initiative and MEPS standard will be fully operational and so address many of the power consumption concerns relating to set-top boxes.

112 Standards Australia, *transcript of evidence 14 September 2005*, p. 17.

113 National Appliance and Equipment Energy Efficiency Program, *Minimum Energy Performance Standards – Digital Set Top Boxes*, Report No. 2004/08, p. 19.

114 Standards Australia, *transcript of evidence 14 September 2005*, p. 19.

115 National Appliance and Equipment Energy Efficiency Program, *Minimum Energy Performance Standards – Digital Set Top Boxes*, Report No. 2004/08, p. 2.

116 DEH, *submission no. 91*, p. 1.

117 DEH, *submission no. 91*, p. 1.

Recommendation 9

The Committee recommends that the Australian Government ensure that the One Watt initiative and the MEPS standard are fully operational by analogue switch-off at 1 January 2010.

Antennas

- 5.140 Another issue that has negatively impacted on consumers' experience of DTV is the quality of reception. Antenna systems are a critical piece of hardware, and old or outdated antenna systems may not have the ability to receive DTV broadcasts.¹¹⁸
- 5.141 Panasonic explained:
- There are, unfortunately, some products in the marketplace that have been installed which work quite well for an analog environment but are not necessarily acceptable for a digital environment.¹¹⁹
- 5.142 Antenna standards are being revised to ensure that antennas in the marketplace will all be able to receive DTV transmissions. Standards Australia is currently reviewing the following antenna standards:
- *AS 1417.1: Receiving antennas for radio and television in the frequency range 30 MHz TO 1 GHz, Part 1: Construction and installation;*¹²⁰ and
 - *AS 1417.2: Receiving antennas for radio and television in the frequency range 30 MHz to 1 GHz, Part 2: Performance.*¹²¹
- 5.143 It is expected that the reviews will be completed by April 2006.¹²²
- 5.144 The Committee anticipates that the revisions made to these standards will ensure that antennas available in the market place will be able to receive digital transmissions and operate within Australia's broadcasting environment.

118 Panasonic, *submission no. 42*, p. 4; Samsung, *submission no. 87*, p. 8.

119 Panasonic, *transcript of evidence 28 June 2005*, p. 27.

120 committees.standards.org.au/committees/ct-002/projects/7031, accessed 20 December 2005.

121 committees.standards.org.au/committees/ct-002/projects/7032, accessed 20 December 2005.

122 committees.standards.org.au/committees/ct-002/projects/7032, accessed 20 December 2005.

Testing and conformance

- 5.145 Several submissions to the inquiry raised the issue of conformance testing of DTV reception products in Australia.
- 5.146 SBS believes that the establishment of an independent TCC is essential to enable manufacturers and broadcasters to have confidence in DTV reception equipment. SBS believes that such a centre will deliver to consumers reliability and durability in the products they purchase.¹²³
- 5.147 SBS noted that Australian Government policy supports the notion of an independent TCC and welcomes further action to assist in realising its establishment.¹²⁴
- 5.148 The Committee notes that the Coalition made a commitment during the 2004 election to work with industry to establish a TCC for DTV transmissions and receivers.¹²⁵ The TCC would test products against specifications set out in Australian Standards.

Demand for a Testing and Conformance Centre

- 5.149 Several submissions suggested that a national TCC be established.
- 5.150 Samsung supported the establishment of a national TCC, and claimed that it will enable the testing of broadcast transmissions and digital receivers against a set of national standards for DTV transmission and reception.¹²⁶
- 5.151 Panasonic stated that the Australian Government, in partnership with industry, should fund the establishment of an independent TCC to test the compatibility between broadcast streams and DTV receivers, and to establish a mechanism for over-the-air downloads.¹²⁷
- 5.152 Sony also believes that there is value in industry and government cooperating to establish a TCC. Sony claimed that conformance testing will ensure that consumers have a greater degree of confidence in the operation of digital products against agreed standards.¹²⁸

123 SBS, *submission no. 62*, p. 7.

124 SBS, *submission no. 62*, p. 7.

125 Liberal Party of Australia, *The Howard Government Election 2004 Policy*.

126 Samsung, *submission no. 87*, p. 8.

127 Panasonic, *submission no. 42*, p. 1.

128 Sony, *submission no. 67*, p. 3.

- 5.153 Samsung claimed that the issue of compatibility between DTV broadcasts and digital receivers is a significant problem plaguing the industry and directly impacts upon the consumer experience.¹²⁹
- 5.154 The ABC also suggested that there is a need for digital receivers and broadcasting streams to meet a set of consistent and standard requirements in order for all digital services to be readily accessed by all viewers using a DTV receiver.¹³⁰
- 5.155 The ABC explained:
- A Test and Conformance Centre would allow for the introduction of an Australian digital television compliance tick which would assist in supporting consumer confidence and encourage broadcasters to expand their creative thinking about the potential that digital only services offer.¹³¹
- 5.156 The ABC also added that a TCC would allow broadcasters to test new digital broadcast streams before commencing transmission to the public.¹³²

Functions of a TCC

- 5.157 Conformance testing will allow manufacturers to test digital reception equipment against Australian DTV standards.
- 5.158 DCITA explained that it is working with the ACMA and the industry to develop a TCC framework. DCITA added:

That testing and conformance framework, whether it be a separate institution or just an agreed set of procedures, will allow manufacturers, if they are bringing in new equipment, to test their new boxes against the various broadcast streams which are currently being offered in Australia. It will allow broadcasters who might want to introduce new innovative services to be able to test their broadcast streams against the boxes that are in Australia and it will also allow a movement towards a greater level of understanding of what the appropriate variables are.¹³³

129 Samsung, *submission no. 87*, p. 7.

130 ABC, *submission no. 45*, p. 9.

131 ABC, *submission no. 45*, p. 9.

132 ABC, *submission no. 45*, p. 10.

133 DCITA, *transcript of evidence 1 June 2005*, p. 24.

- 5.159 Broadcast Australia stated that the TCC would play an important coordination role, acting as a central point for the testing of broadcaster transport streams and DTV receivers.¹³⁴
- 5.160 Broadcast Australia believes that a TCC should have the capability to undertake:
- DTV transport stream testing;
 - DTV receiver testing (i.e. to provide assurance to consumers that the equipment [they] will buy operates in accordance with their current and future expectations);
 - DTV over-the-air software download testing (recognising that, in the future, many or all DTV receivers will be upgradeable via software that is delivered 'over-the-air'); and
 - Other DTV technical investigations.¹³⁵
- 5.161 Broadcast Australia added that the functions listed above will ensure that current and future technical issues experienced in the DTV market are effectively resolved in order to limit the impact on consumers and viewers.¹³⁶
- 5.162 Broadcast Australia added:
- This will become even more essential upon the introduction of interactive services (to ensure stability of product and to maximise consumer confidence) and the introduction of digital radio where similar issues will need to be resolved.¹³⁷

Establishment of a TCC

- 5.163 Standards Australia suggested that private or independent organisations could conduct testing and conformance including universities or other organisations.¹³⁸
- 5.164 Meridian Connections Pty Ltd recommended that the Australian Government could set up a department within a university for digital electronic engineering in telecommunications, television and multi media carriageway and transport systems:

This engineering department will be responsible to government for conformance testing of digital television,

134 Broadcast Australia, *submission no. 41*, p. 14.

135 Broadcast Australia, *submission no. 41*, p. 14.

136 Broadcast Australia, *submission no. 41*, pp. 14-15.

137 Broadcast Australia, *submission no. 41*, p. 14.

138 Standards Australia, *transcript of evidence 14 September 2005*, pp. 18-20.

telecommunications and interactive multi media components, products and processes for conformance to international standards.¹³⁹

- 5.165 ITRI suggested that a university research environment might be the most practical location for a new TCC:

Doing this in cooperation with the university sector would make a huge amount of sense, particularly in terms of the human resource side of that equation and particularly if you had a view of that being not just at the minimal level but doing things like trying to cook up bugs to see what happens when particular types of applications are downloaded, and looking at the future possibilities around potential problems in the mix as well as just the certifications of boxes that are rolling out into the market place.¹⁴⁰

- 5.166 In carrying out the Australian Government's commitment to work with industry to establish a TCC, DCITA has convened meetings with industry stakeholders including metropolitan and regional commercial broadcasters, national broadcasters, equipment manufacturers, Broadcast Australia and the ACMA.¹⁴¹

- 5.167 The meetings discussed the mechanisms and possible models for conducting testing and conformance in relation to DTV transmissions and receiver equipment. Discussions have also included the development of testing and conformance for over-the-air software downloads for upgrading receivers.¹⁴²

- 5.168 While a model for a TCC has yet to be determined in Australia, a TCC has been successfully established in the UK for the purpose of testing DTV broadcasts and receivers, and testing and managing over-the-air software downloads to standards.¹⁴³

- 5.169 The UK company DTG Testing was set up by the Digital Television Group in 2000 to carry out conformance testing for DTV receivers in the UK. The company comprises retailers, manufacturers and

139 Meridian Connections Pty Ltd, *submission no. 52*, p. 24.

140 ITRI, *transcript of evidence 2 September 2005*, p. 8.

141 DCITA, *exhibit no. 5*, p. 2.

142 DCITA, *exhibit no. 5*, p. 2.

143 DCITA, *exhibit no. 5*, p. 2.

broadcasters. Currently, over 50 different types of DTV receivers are tested.¹⁴⁴

5.170 The objectives of the test centre are:

- to enable broadcasters to broadcast to a well-characterised set of receivers that meet the requirements for interoperability and do not inhibit service development;
- to assist receiver manufacturers develop products against better-qualified specifications;
- to provide receiver developers with the tools that they require to test prototypes;
- to assist in identifying areas of specification that are ambiguous or not adequately covered by the specifying documentation; and
- to share the risks and costs associated with this work.¹⁴⁵

5.171 In the UK, DTV testing was fundamentally paid for by the UK Government and the four major manufacturers of consumer electronic digital receivers. DBA explained the funding arrangements:

The initial grant from the UK Government was for £750,000 and they received an equal non-recourse loan from DTG. The four major manufacturers paid £50,000 per annum for the first two years to give it its initial seed capital and initial working capital when it was in a negative cash flow situation.¹⁴⁶

5.172 The Committee notes that a TCC with similar objectives could operate successfully in Australia. However, an Australian TCC, unlike the UK DTG Testing centre, should be independently operated and funded mainly through industry.

TCC funding

5.173 Standards Australia explained that the Australian Standard for digital receivers states that conformance testing for receiver equipment is the responsibility of the manufacturer.¹⁴⁷

5.174 LG explained that manufacturers spend excessive time and money conducting their own conformance and field testing.¹⁴⁸

144 Free TV Australia, *transcript of evidence 25 May 2005*, p. 10; www.dtg.org.uk/testing, accessed 24 November 2005.

145 www.dtg.org.uk/testing/about.html, accessed 24 November 2005.

146 DBA, *transcript of evidence 25 May 2005*, p. 13.

147 Standards Australia, *transcript of evidence 14 September 2005*, p. 18.

148 LG, *submission no. 44*, p. 2.

- 5.175 Samsung also explained that manufacturers spend a considerable amount of time conducting their own conformance testing. Samsung believes a TCC would no doubt be a simpler and more cost effective solution for industry.¹⁴⁹
- 5.176 Samsung suggested that the Australian Government play a significant role by setting the appropriate Australian Standards, and should provide funding for the establishment of a TCC. Samsung also suggested the costs of a TCC could be offset by charging the industry for use of the centre.¹⁵⁰
- 5.177 Broadcast Australia is also of the view that a TCC is an important proposal that should be jointly supported and encouraged by the industry and government.¹⁵¹
- 5.178 Sony suggested that the Australian Government provide initial start-up funding for a TCC.¹⁵²
- 5.179 Panasonic suggested that the Australian Government co-fund the establishment of a TCC on a fifty-fifty basis with industry.¹⁵³
- 5.180 When asked what amount of seed funding the Australian Government should provide for the establishment of a TCC, both ITRI and Panasonic suggested that \$1.5 million would probably be needed.¹⁵⁴
- 5.181 Standards Australia suggested that a TCC should be in the private sector for it to be considered independent. Standards Australia added that the Australian Government could put out a tender for interested organisations to start up a privately run national TCC.¹⁵⁵
- 5.182 Standards Australia suggested another alternative:
- It may well be that the industry as a whole, that is, broadcasters, suppliers and others, get together and form some sort of company to do this testing, with representatives from all the stakeholders.¹⁵⁶

149 Samsung, *submission no. 87*, p. 8.

150 Samsung, *submission no. 87*, p. 8.

151 Broadcast Australia, *submission no. 41*, p. 15.

152 Sony, *transcript of evidence 7 September 2005*, p. 16.

153 Panasonic, *transcript of evidence 28 June 2005*, p. 33.

154 ITRI, *transcript of evidence 2 September 2005*, p. 8; Panasonic, *transcript of evidence 28 June 2005*, p. 33.

155 Standards Australia, *transcript of evidence 14 September 2005*, p. 19.

156 Standards Australia, *transcript of evidence 14 September 2005*, p. 19.

5.183 ITRI explained that once a TCC was established it would become financially self-sufficient through the life of its operation.¹⁵⁷

Committee comment

5.184 The Committee recognises the need for a TCC and recommends that such a centre be established as soon as possible.

5.185 The Committee suggests that, as a priority, DCITA continue to work with industry stakeholders to develop a model and set of objectives on which a new TCC will be based.

5.186 The Committee notes that a TCC must adapt to any changes in the Australian Standards for digital reception equipment. It must also have the capacity to adapt, within its own financial resources, to changing technologies and the demands this may place on the testing of reception equipment.

5.187 The Committee recommends that the Australian Government provide seed funding for the establishment of a TCC in the first year, with industry to fund the centre thereafter. The Committee suggests that a tender process is used as the most transparent and independent means of establishing a TCC.

Recommendation 10

The Committee recommends that the Australian Government

- **work with industry stakeholders to establish a testing and conformance centre for digital television equipment; and**
- **provide A\$1 million as seed funding in the first year for the establishment of a testing and conformance centre.**

¹⁵⁷ ITRI, *transcript of evidence 2 September 2005*, p. 8.

Marketing digital equipment

- 5.188 This section examines consumer awareness issues, including current and future marketing campaigns. The respective responsibilities of the Australian Government and industry to drive market readiness and the conversion to DTV are discussed in the following section.

Raising consumer awareness

- 5.189 Broadcast Australia claimed that there is a general lack of consumer awareness that DTV will one day replace the existing analogue service.¹⁵⁸
- 5.190 As discussed in Chapter 3, the ACMA's recent research found that 38 per cent of 1 148 households surveyed were unaware that analogue television broadcasting will be replaced by DTV broadcasting in the future, and that special equipment will be required to receive those broadcasts.¹⁵⁹
- 5.191 Broadcast Australia believes that ongoing, substantial consumer marketing of DTV is clearly essential to increase take-up. Broadcast Australia added:
- It is a simple common sense proposition that consumers will not invest in something that they do not understand or where they cannot see adequate benefit. While acknowledging that commercial [free-to-air] broadcasters have undertaken some ad hoc consumer marketing campaigns over the last four years and that there is increasing promotion at the retailer level, BA does not believe that the efforts to date have been sufficient.¹⁶⁰
- 5.192 Broadcast Australia noted the very substantial consumer marketing initiative that has accompanied the commencement of digital subscription television services, particularly in terms of the sophistication and regularity of the marketing campaign. Broadcast Australia stated that AUSTAR now has 75 per cent digital subscribers among its customer base¹⁶¹

158 Broadcast Australia, *submission no. 41*, p. 12.

159 ACMA (2005) *Digital Media in Australian Homes*. ACMA Monograph 1, p. 62.

160 Broadcast Australia, *submission no. 41*, p. 12.

161 Broadcast Australia, *submission no. 41*, p. 12.

5.193 FOXTEL discussed the subscription television sector's digital campaign:

FOXTEL Digital and AUSTAR launched their new digital services to the market in March 2004. The services were launched with a series of publicity and advertising campaigns designed to educate and inform the public about the benefits of digital television and attracted significant media attention.¹⁶²

5.194 FOXTEL claimed that, since March 2004, more than one million Australian homes have subscribed to FOXTEL and AUSTAR digital services out of a total 1.66 million subscription television homes. This equates to approximately 63 per cent of subscription television homes becoming digital in little more than a year.¹⁶³

5.195 FOXTEL's submission provided the following figures:

- FOXTEL: 63 per cent of its 998 000 subscribers were digital customers as at 31 March 2005; and
- AUSTAR: 74 per cent of 500 000 subscribers were digital customers as at 27 April 2005.¹⁶⁴

Current campaigns

5.196 Free TV Australia members launched a digital free-to-air marketing campaign in 2003 aimed directly at encouraging consumers to make the switch to digital.¹⁶⁵

5.197 The details of the campaign and its perceived outcomes were discussed in Chapter 3.

5.198 Network Ten claimed that an increase in customer awareness of the benefits of DTV reported by DBA can be at least partly attributed to the promotional campaign that the commercial broadcasters have run on television and in retail outlets for the past two years.¹⁶⁶

5.199 SCB explained promotion work being conducted, and the need for assistance from other DTV stakeholders:

162 FOXTEL, *submission no. 55*, p. 15.

163 FOXTEL, *submission no. 55*, p. 15.

164 FOXTEL, *submission no. 55*, p. 15.

165 Free TV Australia, *submission no. 31*, p. 8.

166 Network Ten, *submission no. 60*, p. 9.

Digital Broadcasting Australia is in the process of finalising a new advertising campaign to run in regional markets to promote the benefits of digital and widescreen TVs. This follows previous promotional efforts undertaken by the industry through Free TV. However, the broadcasters cannot be expected to be wholly responsible for keeping the community informed of the developments in digital TV and its benefits, particularly when digital TV does not generate incremental revenue for the industry.¹⁶⁷

5.200 WIN discussed what regional broadcasters have done to promote DTV and what it needs to do in the future:

We have recognised that we now need to push, and tell our viewers what they need to get; we need to educate and do an awareness campaign as to what equipment they will need to get our digital services. We have participated in industry campaigns – ‘Better colours, better pictures’ – but we are in the process of putting together our awareness campaign, in consultation with DBA, which tells the viewer what they are going to need. They have been taught that all you need is a set-top box and you will be right, but – and you touched on this earlier – some of the televisions are 45 or 50 years old now, and some of those antenna systems have never been changed.¹⁶⁸

Future marketing needs

5.201 Sony believes that to date there has been relatively little marketing of DTV amongst all stakeholders (government, broadcasters, manufacturers and retailers). Sony added that while there has been some advertising by the networks, there have been no high-profile, extensive and co-coordinated promotional campaigns.¹⁶⁹

5.202 Sony admitted that effective marketing has been hindered by the limited digital programming and services being offered and the uncertainty around the analogue switch-off date. Sony believes that there must be a much greater commitment from stakeholders to marketing and promotion of DTV.¹⁷⁰

167 SCB, *transcript of evidence 1 September 2005*, pp. 15-16.

168 WIN, *transcript of evidence 1 September 2005*, pp. 34-35.

169 Sony, *submission no. 67*, p. 9.

170 Sony, *submission no. 67*, pp. 9-10.

- 5.203 WIN is also of the view that more needs to be done by all stakeholders:

With digital services having now been available in metropolitan markets for five years and the regional roll-out now in full swing, it is in our view appropriate that all stakeholders play their part in informing consumers of the technology.¹⁷¹

- 5.204 SCB discussed the lack of knowledge concerning DTV amongst consumers:

The other thing is that I do not think the consumer market really understands. They do not understand that they are missing part of the picture. They think four by three is still a sensible purchase for them. They do not understand this whole digital experience that they can have. I do not think the retail market is helping that situation, because they are picking up cheaper sets and they are selling them at lower prices. There needs to be an education program just to advise the consumer on what is happening in the market.¹⁷²

- 5.205 NT Government suggested that public understanding of DTV will be improved through advertising:

A proactive advertising campaign would dispel misconceptions and highlight the advantages and value of digital TV. Differences in picture quality can be graphically highlighted, especially in the print media.¹⁷³

- 5.206 Samsung believes that greater impetus is needed for consumers to covert to DTV, and admits that it is possible that limited awareness and confusion by consumers is contributing to the slow penetration rates.¹⁷⁴

171 WIN, *transcript of evidence 1 September 2005*, p. 26.

172 SCB, *transcript of evidence 1 September 2005*, p. 18.

173 NT Government, *submission no. 27*, p. 2.

174 Samsung, *submission no. 87*, p. 6.

Government responsibilities

- 5.207 This section examines the ways in which the Australian Government can contribute to the conversion to DTV. This includes providing an appropriate lead time for manufacturers and broadcasters, facilitating informed consumer choices in the marketplace and addressing reception issues.

Lead times

- 5.208 Chapter 2 discussed the need for certainty concerning any analogue switch-off date. Manufacturers have asked for certainty of analogue switch-off to allow them to plan production for the coming few years.

- 5.209 Retravision reiterated the need for analogue switch-off certainty, and its impact on manufacturers and retailers:

I think no-one is terribly clear about what is happening in 2008. Certainly the public are not. I suspect some of the manufacturers or suppliers are not either. I think it is important to bring some clarity around that point. Whether it is 2008 or a later date, we do need clarity. It is really important to be able to communicate to consumers the 'what is in it for them' of whatever happens. It is also important to communicate to suppliers, because they are setting their product road maps years out and unless they are very clear about what is happening they have to take a stab at it. I think that makes it very difficult for their product planning. I think it is important that we do need some clarity about what date it is and what is actually going to happen at that date.¹⁷⁵

- 5.210 LG also discussed the need for analogue switch-off certainty:

We have suggested that the date for that might be 2010. We are certainly not basing that on a particular set of evidence that is overwhelming but, rather, we think we need to provide a certainty to manufacturers, retailers and consumers so that we are not living in continuous uncertainty as to when that occurs.¹⁷⁶

175 Retravision, *transcript of evidence 10 August 2005*, p. 11.

176 LG, *transcript of evidence 28 June 2005*, p. 37.

5.211 In relation to manufacturing lead times, LG added:

We would like to start to develop with the government some certainty in terms of what is required and by what date. Then we can discuss, from a manufacturing point of view, what is actually achievable.¹⁷⁷

5.212 LG discussed the cost of DTV products and the impact a firm switch-off timetable will have:

Additionally, there is scope for further price stabilisation when we achieve certainty of the analogue phase out timetable. Whilst we have focused our initial digital offerings on large screen formats, our plans are to expand the range to offer smaller digital screen televisions. If we can be certain that by 2008 the market will have moved to the sale of digital television only, we can assure price parity. By this, we foresee consumers as being able to purchase a digital television within the same pricing framework as standard analogue televisions can be purchased today.¹⁷⁸

5.213 LG claimed that cost of analogue and digital receivers from a manufacturing point of view:

... makes no impact on the final ticket price, and it would be wrong to say digital equipment is always more costly than an analogue alternative.¹⁷⁹

5.214 The Committee acknowledges that manufacturers and retailers will require a lead time in order to ensure a supply of digital products prior to analogue switch-off. The current uncertainty regarding the scheduled switch-off commencing in 2008 and occurring in different regions over a number of years has understandably not encouraged manufacturers and retailers to invest in a product switch-over. The nationwide analogue switch-off date of 2010, recommended by the Committee, will provide the certainty and lead time required by manufacturers and retailers.

177 LG, *transcript of evidence 28 June 2005*, p. 37.

178 LG, *submission no. 77*, p. 3.

179 LG, *submission no. 77*, p. 3.

Campaign

- 5.215 Samsung believes that as the regulator of the industry, the Australian Government has a significant role in terms of informing consumers about choice and availability.¹⁸⁰
- 5.216 Samsung believes that the Australian Government needs to lead a co-ordinated approach to increase awareness and understanding of the new and changing television environment, through an ongoing community awareness campaign.¹⁸¹
- 5.217 Broadcast Australia recommended that government and non-government stakeholders consider funding an ongoing joint government-industry DTV marketing initiative.¹⁸²
- 5.218 Ms Eleanor Hillard, a communications student with an interest in television particularly from a regional perspective, advocated a coordinated campaign managed by the Australian Government, primarily through the ACMA. She stated that it is vital that the Australian public are made fully aware of what the conversion from analogue broadcast services to digital broadcast services will involve.¹⁸³
- 5.219 Ms Hillard analysed a selection of DTV awareness campaigns that have been implemented. Ms Hillard's analysis focused on the effects these campaigns have on those living in regional areas. In summary, Ms Hillard's research found that:
- Digital television awareness campaigns are failing to reach many audiences, especially those in regional areas because it is primarily being promoted through only 2 mass media forms, the Internet and television ... there needs to be urgent campaigning provided in all mass-media ... like radio, print, billboards and mail (in the form of pamphlets) to maximise future viewer awareness.
 - Campaign and promotional material is too heavily focused on the perceived enhancements that digital television will bring. Although it should do this to an extent, viewers must be reassured that their viewing services such as programming, will not be extensively disrupted, and digital free-to-air television will provide much the same service that free-to-air services do currently.

180 Samsung, *submission no. 87*, pp. 6-7.

181 Samsung, *submission no. 87*, p. 7.

182 Broadcast Australia, *submission no. 41*, p. 12.

183 Ms Eleanor Hillard, *submission no. 48*, p. 3.

- Current television campaigns have utilised a 'blanket approach', in that they are using the one television advertisement to reach every demographic grouping in Australia. [It is] recommended that a range of advertisement campaigns be screened, to ensure that all demographic groupings (including those in regional areas) will be aware of the future conversion to digital services and what it involves.¹⁸⁴
- 5.220 Ms Hillard's submission made several recommendations, based on the arguments and discussion in her research. She recommended that extensive print, radio, television, billboard and mail campaigns should be implemented by the DBA and the Australian Government, in particular by the ACMA.¹⁸⁵
- 5.221 Ms Hillard also recommended that the organisations mentioned above should produce an uncomplicated, straightforward pamphlet explaining what DTV is, when it is being implemented, the costs involved and the features that can be provided:
- The pamphlet as well as containing text, should include easy to follow diagrams and pictures explaining the changes in transmission, the equipment required, and use the opportunity to show the incentives for converting to the new medium by outlining that digital television can offer:
- Higher quality pictures (explain the new 16:9 picture format);
 - Improved reception ... ;
 - Benefits such as program guides, multi-view and interactive services; and
 - Free-to-air services, which will contain much of the same content as what it does now.¹⁸⁶
- 5.222 Ms Hillard recommended that the ACMA provide a 'Digital Television for Dummies' section on its website. She remarked that consumers need access to an extremely simplified explanation of DTV, without being overwhelmed with technical jargon.¹⁸⁷
- 5.223 Ms Hillard recommended that Free TV Australia implement practical follow-up campaigns to encourage and remind the public to convert to DTV. She claimed that FOXTEL Digital's campaign featuring Hugh

184 Ms Eleanor Hillard, *submission no. 48*, pp. 3-4.

185 Ms Eleanor Hillard, *submission no. 48*, p. 11.

186 Ms Eleanor Hillard, *submission no. 48*, pp. 11-12.

187 Ms Eleanor Hillard, *submission no. 48*, p. 15.

Jackman had been successful in encouraging take-up and that Free TV Australia could take a similar approach.¹⁸⁸

- 5.224 Ms Hillard suggested that the ACMA ensure that all free-to-air television networks broadcast community service announcements informing viewers of the conversion to DTV.¹⁸⁹ She also recommended that personalities from all the free-to-air television networks should participate in advertising campaigns.¹⁹⁰
- 5.225 Ms Hillard recommended that a different approach be taken to promoting DTV in regional areas and to varying demographic groups. She suggested that regional campaigns should feature local personalities that regional consumers know and trust. She recognised that DTV awareness campaigns need to address specific demographic groupings, and suggested that different age groups might respond to different personalities.¹⁹¹
- 5.226 Samsung, Broadcast Australia and Ms Hillard have all called for an Australian Government driven campaign to inform viewers of analogue switch-off and the benefits of DTV. The Committee is not of the view that this is a government responsibility. The Committee is of the view that the networks are responsible for their audience capture.
- 5.227 The Committee is of the opinion that the Australian Government is responsible for setting the framework for the rollout of DTV. The Committee is of the view that DTV take-up should primarily be driven by the broadcasters, manufacturers and retailers, with coordination from industry bodies such as DBA.
- 5.228 The Committee suggests that a toll-free information service could be established during the analogue switch-off period to inform consumers. However, with a firm switch-off date, and production set in train, manufacturers and retailers should be the ones to carry the education of consumers in purchasing DTV products that suit their needs.
- 5.229 The Committee agrees that there is a role for the Australian Government in the development of a digital marketing code and appropriate product labelling to increase consumer awareness, and the establishment of a Digital Black Spots program to address reception problems. These are discussed below.
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188 Ms Eleanor Hillard, *submission no. 48*, p. 15.

189 Ms Eleanor Hillard, *submission no. 48*, p. 16.

190 Ms Eleanor Hillard, *submission no. 48*, p. 18.

191 Ms Eleanor Hillard, *submission no. 48*, pp. 18-19.

Digital Television Marketing Code

- 5.230 DCITA stated that equipment suppliers have developed an industry code of practice for describing and marketing digital receivers.¹⁹²
- 5.231 DBA stated that the Digital Television Marketing Code was first published by the Australian Electrical & Electronic Manufacturers' Association and the Consumer Electronics Suppliers Association in August 2002.
- 5.232 The Code was produced to provide information on the performance characteristics of DTV broadcast receivers and display devices. The primary role of the document is to educate through providing accurate descriptors of analogue and DTV receivers and display devices.
- 5.233 The Code was developed in consultation with the ACCC.¹⁹³ In line with the education function of the Code, the compliance and sanction provisions are limited but subject to review depending on need.¹⁹⁴
- 5.234 The scope of this Code addresses:
- ... the marketing claims and labelling that may be made in connection with various types of consumer TV broadcast reception devices that are capable of decoding and displaying digital television broadcast signals. The Code will assist suppliers and retailers to accurately describe and label the capabilities of TV receivers to decode and broadcast digital television broadcast signals. It also includes within its scope analogue TV broadcast receivers because these devices can also deliver digital TV services when connected to digital TV set top box decoder.¹⁹⁵
- 5.235 The Code's main objective is:
- ... to provide a set of minimum standard descriptors for identifying the attributes and capabilities of various types of broadcast receivers that are capable of receiving, decoding

192 DCITA, *submission no. 66*, p. 9.

193 www.dba.org.au/index.asp?sectionID=80, accessed 9 December 2005.

194 Australian Electrical & Electronic Manufacturers' Association & Consumer Electronics Suppliers Association (2002) *Digital Television Marketing Code*, AEEMA, p. 2.

195 Australian Electrical & Electronic Manufacturers' Association & Consumer Electronics Suppliers Association (2002) *Digital Television Marketing Code*, AEEMA, p. 6.

and displaying analogue & digital television broadcast signals.¹⁹⁶

5.236 The Code explains that the use of standard descriptors is intended to ensure that:

- suppliers and retailers are able to support marketing claims for product performance according to verifiable performance measures; and
- consumers are able to apply the descriptors at point of sale and so reasonably distinguish between:
 - ⇒ Analogue TV receivers capable of displaying input from a digital TV Set Top Box decoder;
 - ⇒ Standard Definition and High Definition Digital Television broadcast receivers also known as iDTV's; and
 - ⇒ Standard Definition and High Definition Set Top Box decoders.¹⁹⁷

5.237 The general requirements section of the Code outlines the use of particular terms when promoting digital products, including:

- hybrid descriptive terms such as 'digital-ready', 'digital compatible', 'digital enabled' or similar terms have no valid technical meaning and should be avoided because of their potential to mislead about the performance capabilities of analogue broadcast receivers;
- the words 'digital' and 'television' should not be used together in connection with analogue TVs without qualification; and
- the phrase "Digital Television" and acronyms 'DTV', 'SD', 'SDTV', 'HD', 'HDTV' should not be used unless they conform to the classifications as described in [the Code].¹⁹⁸

5.238 The Code is applied in the following way:

- Companies that wish to be listed as subscribers to this Code may do so by making their intention to apply the descriptors used in this Code known to the Code administrator.

196 Australian Electrical & Electronic Manufacturers' Association & Consumer Electronics Suppliers Association (2002) *Digital Television Marketing Code*, AEEMA, p. 6.

197 Australian Electrical & Electronic Manufacturers' Association & Consumer Electronics Suppliers Association (2002) *Digital Television Marketing Code*, AEEMA, pp. 6-7.

198 Australian Electrical & Electronic Manufacturers' Association & Consumer Electronics Suppliers Association (2002) *Digital Television Marketing Code*, AEEMA, p. 10.

- Subscribers undertake to apply the descriptors used in this Code in any representations made about the performance of analogue and digital TV broadcast receivers.
- Subscribers to this Code may state that they adhere to the principles set out in this Code:
 - ⇒ in any promotional material for TV Broadcast receivers and/or
 - ⇒ in general company information
 - ⇒ in an internet Home Page
- The Code Administrator undertakes no verification of claims or audit of Subscribers. It is the responsibility of each Subscriber to ensure that claims of compliance with descriptors in this Code are verifiable.¹⁹⁹

Labelling

- 5.239 The issue of labelling of television products was raised in several submissions. Applying labels to all televisions may serve to warn consumers that analogue sets may be rendered obsolete without appropriate digital reception products.
- 5.240 Broadcast Australia reported that the UK, in its efforts to encourage consumers to upgrade to digital equipment, is considering regulations that will ensure that all new television sets have a 'sell by' label. This label effectively warns consumers that the set will become obsolete within a given period of time.²⁰⁰
- 5.241 Mr Nigel Pearson stated that:
- If the TVs in supermarkets and retail showrooms had labelling indicating the 2008 cutoff (e.g. "Useless after 2008!" stickers), consumers might actually learn about, and take up, the technology.

Committee comment

- 5.242 The Committee considers that the Digital Television Marketing Code is an excellent development. However, the Committee is concerned that the Code is voluntary and may not assist consumers in purchasing decisions.

199 Australian Electrical & Electronic Manufacturers' Association & Consumer Electronics Suppliers Association (2002) *Digital Television Marketing Code*, AEEMA, p. 11.

200 Broadcast Australia, *submission no. 41*, p. 13.

- 5.243 The Committee is of the opinion that the labelling of digital reception equipment, based on the Code, should be mandatory. This would force manufacturers and retailers to properly identify the products they sell.
- 5.244 The Committee noted that energy rating and water rating label schemes are very useful guides for consumers for assessing and analysing different products in the market.
- 5.245 The Committee recommends that a labelling scheme based on the Digital Television Marketing Code be established. The scheme should apply to all televisions and digital reception equipment.

Recommendation 11

The Committee recommends that the Australian Government coordinate the establishment of a mandatory labelling scheme that will accurately identify television and digital reception products. The scheme should be based on the industry's Digital Television Marketing Code.

Transmission strength issues

- 5.246 Image quality of DTV, whether HD or SD, can be adversely affected by transmission factors. Several submissions to the inquiry raised transmission signal strength as a significant DTV rollout issue.
- 5.247 The ACMA discussed DTV rollout and signal strength, and commented that in some cases the strength of the digital transmission will increase once analogue is switched off. ACMA added:
- ... but in general we are trying to do it so that it is at maximum strength already. There are a few cases where that is inevitable but, because of the way signals propagate, even at half strength you cover about 90 per cent or 95 per cent of the same area.²⁰¹
- 5.248 The ACMA further explained signal strength issues:
- ... in fact we are planning at very high power. This is a big difference between the Australian and, say, the British roll-out. Because we have so much spectrum here, we have been

²⁰¹ ACMA, *transcript of evidence 1 June 2005*, p. 21.

able to plan for the same coverage, in general, while the analog is still on. But there will be some exceptions. There will be exceptions in the bush, say, where you have a very wide coverage VHF signal. It might not always in every case be possible with one transmitter to get exactly the same coverage. Also, I think we have already mentioned the cliff effect. There will always be people on the margins who regard their very grey, fuzzy picture as adequate and wonder where their digital signal is. Those are problems for analog switch-off. They await us down the track and they are very real, but at the moment we are inviting TV networks to operate at extremely high power, with very few exceptions.²⁰²

Black spot programs

- 5.249 The Australian Government's Television Black Spots Program aims to improve reception in areas where television reception is poor. This section discusses the television black spots issue and the provision of services to those areas.
- 5.250 Television Black Spot programs were developed in response to concerns about inadequate analogue television reception in regional and rural locations.
- 5.251 DCITA explained that the Television Black Spots Program was:
- ... designed to improve access to analogue television services in areas of poor television reception. The program sought to fix at least 200 black spots prior to its closure on 30 June 2005. By that date, new services had commenced in 238 black spots. Facilities were awaiting construction in 2005-06 at a further five locations.²⁰³
- 5.252 DCITA stated that the Television Black Spots - Alternative Technical Solutions Program has been developed to further improve television reception in regional areas.²⁰⁴
- 5.253 This new program supports the development of alternative technical solutions to assist eligible applicants who could not be assisted under the Television Black Spots Program. This is either because frequencies

202 ACMA, *transcript of evidence 1 June 2005*, pp. 21-22.

203 www.dcita.gov.au/broad/television_and_radio_blackspots_program/television_black_spots_program, accessed 1 December 2005.

204 www.dcita.gov.au/broad/television_and_radio_blackspots_program/television_blackspots_-_alternative_technical_solutions_program, accessed 1 December 2005.

are unavailable or an analogue retransmission solution is not viable.²⁰⁵

5.254 Where there is an analogue broadcast black spot, DCITA explained that the following options have been identified as possible alternative technical solutions:

- digital retransmission facilities;
- direct-to-home satellite reception equipment; or
- cabling (in the event other solutions are not viable).²⁰⁶

5.255 Free TV Australia welcomed the introduction of the Alternative Technical Solutions Scheme, which provides a model for digital black spot solutions.²⁰⁷

5.256 Due to its mountainous and heavily vegetated terrain, the Shire of Yarra Ranges (SYR) experiences poor television reception. Reception in several areas within the shire has been improved through the Television Black Spot program, with new analogue transmission facilities being established at two locations commencing operation in December 2003.²⁰⁸

5.257 SYR explained that analogue solutions were not available for other problem areas due to spectrum limitations. Therefore, they were considered for the Television Black Spots Alternate Technical Solutions Program.²⁰⁹

5.258 SYR discussed the ABA's assessment of the problem areas:

- Tecoma/Belgrave was field tested by the ABA in May 2004, who concluded the new digital TV coverage from the existing translator sites was adequate; and
- Kalorama North (and South) is still being considered under the ATS program.²¹⁰

5.259 SYR has for a long time pursued DTV as the appropriate solution to its analogue television reception problems, yet has been restricted by

205 www.dcita.gov.au/broad/television_and_radio_blackspots_program/television_blackspots_-_alternative_technical_solutions_program, accessed 1 December 2005.

206 www.dcita.gov.au/broad/television_and_radio_blackspots_program/television_blackspots_-_alternative_technical_solutions_program, accessed 1 December 2005.

207 Free TV Australia, *submission no. 31*, p. 5.

208 SYR, *submission no. 61*, p. 2.

209 SYR, *submission no. 61*, p. 2.

210 SYR, *submission no. 61*, p. 1.

guidelines of the Television Black Spots Program which only funds analogue solutions.²¹¹

5.260 SYR explained that finding a transmission solution in some areas was particularly difficult:

Unfortunately the terrain difficulties were too great, even for the superior technical characteristics of digital, with the best results in Kalorama South relying solely on reflected signals.²¹²

5.261 SYR relies on Self Help transmitters for particular areas in the shire.²¹³

5.262 DCITA briefly described Self Help transmission:

Communities with poor television reception may be interested in establishing self-help national and/or commercial television services. Under the self-help arrangements, community groups or local councils purchase and install the equipment necessary to receive and locally retransmit a service from a nearby terrestrial transmitter or satellite. The community group or local council would then be responsible for meeting any ongoing licensing, operations and maintenance costs.²¹⁴

5.263 The ABC's website provides the following information regarding Self Help transmission:

- Self-help gives communities the opportunity to provide their own equipment to rebroadcast ABC TV and radio programs. With Self-help, communities may apply for a licence to operate their own rebroadcasting transmitter or community cable system to improve reception of ABC TV and Radio services.
- Self-help is for communities which do not receive adequate TV or radio broadcasts. Reception difficulties can occur when a community is situated too far from a transmitter, or is shielded from broadcast signals by obstacles such as hills or mountains. Residents in highly populated areas may also experience reception problems due to signals being blocked by tall buildings or electrical interference.

211 SYR, *submission no. 61*, p. 2.

212 SYR, *submission no. 61*, p. 2.

213 SYR, *submission no. 61*, p. 3.

214 www.dcita.gov.au/broad/television_and_radio_blackspots_program/television_black_spots_program, accessed 1 December 2005.

- It is not always possible for the ABC to provide rebroadcasting facilities for remote areas or reception black spots. By providing their own low power rebroadcasting transmitter or cable system, communities reduce the need for individual households to install large expensive antenna systems.
- By funding the establishment of their own rebroadcasting facilities, communities can obtain improved reception at a reasonable cost. There are now over 430 Self-help facilities throughout Australia rebroadcasting ABC TV and Radio programs.²¹⁵

5.264 DCITA also explained that:

There are currently no government programs that would offer communities or local Councils financial assistance to establish ABC or commercial self-help television services. SBS does, however, administer the SBS Self-help Retransmission Subsidy Scheme which makes up to \$25,000 available to local councils and community groups to establish an SBS television self-help service.²¹⁶

5.265 SYR indicated that it does not have the capacity to fund digital conversion of its two Self Help facilities, nor additional ongoing costs, and would therefore seek Federal assistance.²¹⁷

5.266 SYR estimated transmission equipment prices as follows:

- stand alone digital transmitters - \$150 000 - \$200 000 for 5 services;
- single frequency network digital transmitter - \$300 000 - \$500 000 for 5 services; and
- operating costs of up to \$50 000 per year for a single frequency network transmitter.²¹⁸

5.267 SYR also pointed out that, unlike requirements for metropolitan and regional network licensees, a simulcast period for Self Help facilities in general has not been considered in any legislation.²¹⁹

5.268 SYR explained that simulcast transmissions from many Self Help sites would require significant spectrum planning by the ACMA to

215 www.abc.net.au/reception/services/selfhelp.htm, accessed 1 December 2005.

216 www.dcita.gov.au/broad/television_and_radio_blackspots_program/television_black_spots_program, accessed 1 December 2005.

217 SYR, *submission no. 61*, p. 2.

218 SYR, *submission no. 61*, p. 3.

219 SYR, *submission no. 61*, p. 3.

confirm availability of duplicate channel sets that do not cause interference with other nearby sites.²²⁰

- 5.269 SYR indicated that the only practical and cost effective way for many Self Help television facilities to be converted to digital is to:
- ... advise residents 6-12 months in advance that analogue transmission will cease, and that they must obtain a digital receiver for use after that date. Equipment changeover at the Shire's sites could require these facilities to be off air for about a day.²²¹
- 5.270 SYR recommended that an Australian Government funding program is required for the digital conversion of existing Self Help transmitters that have been installed throughout Australia.²²²
- 5.271 Lithgow City Council (LCC) stated that it received funding under the Television Black Spots program for five locations.²²³
- 5.272 LCC indicated that it considered the most effective remedy in the long term was to install digital transmission equipment. However, the Black Spot program funding was not able to fund digital transmission equipment.²²⁴
- 5.273 LCC faces a similar situation, in that it will have to fully fund the digital conversion of a number of facilities in the shire. LCC stated that it must also meet significant ongoing costs.²²⁵
- 5.274 LCC explained that it:
- ... would appreciate any further financial assistance available from the Federal Government which will provide support for Council in the digital conversion of these facilities, as well as any possible subsidy available to contribute toward annual maintenance costs.²²⁶

220 SYR, *submission no. 61*, p. 3.

221 SYR, *submission no. 61*, p. 3.

222 SYR, *submission no. 61*, p. 2.

223 LCC, *submission no. 95*, pp. 1-2.

224 LCC, *submission no. 95*, p. 1.

225 LCC, *submission no. 95*, p. 3.

226 LCC, *submission no. 95*, p. 3.

- 5.275 Mr Peter Andren MP recognised that the Television Black Spot program was developed in response to concerns about inadequate analogue television reception in regional and rural locations. However, Mr Andren stated:
- ... with analogue television transmissions scheduled to end in 2008, it is clear that those locations will then be facing the same problem of little or no (digital) television reception.²²⁷
- 5.276 Mr Andren stated that the Television Black Spot Program has funded the installation of five analogue retransmission towers in the rural federal electorate of Calare, and another two communities are accessing television under the Alternative Technical Solutions program.²²⁸
- 5.277 Mr Andren claimed that the conversion of analogue transmitters to digital is too costly for local councils or community groups.²²⁹
- 5.278 Mr Andren added:
- If we are to be serious about consumer uptake of digital television we must ensure that all Australians have access to free-to-air digital television broadcasts. This should necessarily include the government funding the conversion of Black Spot analogue retransmission facilities to digital.²³⁰
- 5.279 Mr Andren also suggested that the Australian Government should fund the ongoing maintenance of those facilities.²³¹
- 5.280 Mr Andren stated:
- This will not only ensure those living in rural and regional areas continue to have access to free-to-air digital television in the future, but will protect government's original expenditure, as well as the substantial investment by broadcasters converting to digital broadcast.²³²
- 5.281 Free TV Australia claimed that the Australian Government's Television Black Spots Program has served the community well.

227 Mr Peter Andren MP, *submission no. 75*, p. 1.

228 Mr Peter Andren MP, *submission no. 75*, p. 1.

229 Mr Peter Andren MP, *submission no. 75*, p. 1.

230 Mr Peter Andren MP, *submission no. 75*, p. 1.

231 Mr Peter Andren MP, *submission no. 75*, p. 2.

232 Mr Peter Andren MP, *submission no. 75*, p. 2.

However, as the program largely provides funding for analogue solutions, these services will have a limited lifetime.²³³

- 5.282 Free TV Australia strongly recommended that the Australian Government investigate the implementation of a digital black spots program.²³⁴

Committee comment

- 5.283 The Committee is of the view that the analogue Black Spots program be terminated and replaced with a Digital Black Spots Program.

Recommendation 12

The Committee recommends that the Australian Government terminate the analogue Television Black Spot program as a priority, and implement a Digital Television Black Spots Program.

Responsibilities of broadcasters, manufacturers and retailers

- 5.284 The Committee considers that broadcasters, manufacturers and retailers have a number of responsibilities in regard to DTV conversion. This section examines the ways in which broadcasters, manufacturers and retailers can contribute to marketing and promoting the conversion to DTV.

Promoting television recycling

- 5.285 When asked about the substantial number of television sets that will be discarded by consumers over the coming years, and the possibility of recycling them, LG stated:

LG, together with other manufacturers, is involved in a voluntary industry scheme to arrange for the recycling of

233 Free TV Australia, *submission no. 31*, pp. 4-5.

234 Free TV Australia, *submission no. 31*, p. 5.

televisions. This is a COAG process that has been in place for two or three years. We are supportive of that.²³⁵

5.286 LG further explained the recycling of televisions:

Electronics is easily recycled. The componentry can be broken down. The challenge in recycling is motivating the consumer to participate in a take-back program, and that is what governments are struggling with at the moment. The New South Wales government has recently been vocal about the need for the computer industry to take responsibility for its own product, and the same applies here. We are part of that initiative to arrange for product stewardship programs, and obviously a switch-off date would be an incentive to motivate consumers to participate in them. I do not pretend that it is an easy process, by any means, but the infrastructure is there.²³⁶

5.287 LG also stated that the recycling program is still in its early stages:

The industry scheme is not yet fully operational. I cannot project where we are heading. It is certainly scheduled to be in place before the current framework for analog phase-out.²³⁷

5.288 The Committee strongly urges manufacturers and retailers to ensure that the television recycling scheme is fully operational and promoted to consumers well before the analogue switch-off date.

Awareness campaigns

5.289 Several manufacturers made valuable submissions to the inquiry. The Committee is concerned that despite approaches being made, only one retailer made a submission.

5.290 Sony discussed its education and training activities:

We spend a lot of time with our retailers and we do a lot of work in store. Our biggest activity is educating retailers. We have a large training group that spends a lot of time covering a broad range of topics, including DTV and how to move forward every time we launch a new product.²³⁸

235 LG, *transcript of evidence 28 June 2005*, p. 40.

236 LG, *transcript of evidence 28 June 2005*, p. 40.

237 LG, *transcript of evidence 28 June 2005*, p. 40.

238 Sony, *transcript of evidence 7 September 2005*, p. 15.

5.291 Sony also discussed retailer involvement:

Every retail partner we have – Harvey Norman, Retravision, the Good Guys – is participating in the education process. That happens at shopfront and then that is communicated through to the consumers.²³⁹

5.292 Sony explained that a broader approach is needed to raise awareness of DTV:

I think, though, that what we are missing out on from both a manufacturing and industry standpoint – and also from a government standpoint – is that we have not taken a big picture approach to this matter. The reality is that people watch television because they are watching television and that is how they want to receive information. If we are going to talk to them about moving the market and about things that need to change – analog stopping and DTV growing – then we need to be communicating to them in a much broader range of space than just in a shopfront. We would be suggesting that we need to take a much bigger approach on air to communicating to consumers how this works, what it is and what the benefits are.²⁴⁰

5.293 Sony believes that it is important to drive the entire marketplace:

... and that would involve a lot of promotion and certainly education – there is a lot of confusion with consumers in particular – and marketing of all of those answers to the consumer. We would need to explain how all that is going to work moving forward. We believe that there is a big need for the industry and government to help drive that education process and the promotion of DTV in the market.²⁴¹

5.294 Free TV Australia explained that DBA puts significant effort into educating consumers through retailers. DBA has a policy of holding retailer education nights in areas where at least the ABC and two of the relevant local commercial television stations have begun transmitting digital free-to-air television.²⁴²

239 Sony, *transcript of evidence 7 September 2005*, p. 15.

240 Sony, *transcript of evidence 7 September 2005*, p. 15.

241 Sony, *transcript of evidence 7 September 2005*, p. 2.

242 Free TV Australia, *submission no. 31*, pp. 9-10.

- 5.295 OPAC Pty Ltd recommended that a more informative advertising campaign should be launched to properly demonstrate the advantages of owning a digital set-top box.²⁴³
- 5.296 Retravision stated that a firm analogue switch-off date coupled with a clear and compelling information campaign, should ensure the public reap the full benefits of DTV in Australia.²⁴⁴
- 5.297 Retravision explained the value of promoting DTV through retailers:
- I would argue that the messages on digital television have not been well communicated. DBA have done a very good job with the web site and with some of the material they have produced – they are certainly running information nights for retailers around the place – but unless it goes via the retailer it is not actually hitting the consumer. There is no other place for the consumer to get the information.²⁴⁵
- 5.298 During discussions concerning promoting DTV, Retravision explained its advertising strategies:
- When we do these national catalogues, we are printing five million catalogues. They are going out into five million homes around Australia, so it is a very effective way to get information out to consumers and particularly to prequalified eyes, because if they are looking at the catalogue they are interested in the technology anyway. So to put something in there is a very good way to communicate the message.²⁴⁶
- 5.299 When discussing promoting DTV in-store, Retravision explained:
- I think that the individual salesperson, when they have somebody on the floor, does that and demonstrates it. We have run the digital loop and we have also done some work producing some training material, which is essentially produced for the stores but we recut it and show it on the screens, almost like an infomercial, if you like. We are moving to pilot that process through satellite so that we can download it into all the stores. Certainly there is an

243 OPAC Pty Ltd, *submission no. 73*, p. 4.

244 Retravision, *submission no. 76*, p. 3.

245 Retravision, *transcript of evidence 10 August 2005*, p. 15.

246 Retravision, *transcript of evidence 10 August 2005*, p. 15.

opportunity, using that mechanism, to demonstrate some information to the consumer about digital television.²⁴⁷

5.300 GfK discussed options for raising awareness of DTV:

If retailers were using leafleting campaigns, I think it would be of limited value. I think there are probably two key channels for the education to take place. The most important one would be through the medium of TV itself. It is the one medium that everybody uses, more or less. If they are not using it, why are you trying to sell them the concept of a set-top box anyway? The message has to be reinforced through the television somehow. The second most effective medium, I suggest, would be at the point of sale. The market for televisions is very big in Australia. We sell about 1½ million units through retail. Remembering that there are only 7½ million households, that means every household is coming in on average – given the limitations of these averages – every five years. Theoretically, if the education takes place in the shop, you will have educated everybody in five years ...²⁴⁸

5.301 When asked what it is doing to help consumers understand DTV, LG stated:

Obviously one of the major concerns in the uptake of digital television has been awareness, whether that has been awareness of the actual benefits of digital TV or awareness that the 2008 date is coming. We are working quite extensively with our retail partners and, to a lesser extent, directly with the consumer to get those two messages across. Part of our 2005 and beyond plan is to reinforce and continue to increase awareness levels and our communication about digital TV.²⁴⁹

5.302 LG raised some practical issues concerning education and awareness:

Common terminology needs to be agreed among manufacturers and retailers to reduce the confusion and misunderstanding amongst consumers. An example, HD Ready, HD compatible, HDTV, Integrated HD TV or Digital TV.²⁵⁰

247 Retravision, *transcript of evidence 10 August 2005*, p. 16.

248 GfK, *transcript of evidence 17 August 2005*, p. 24.

249 LG, *transcript of evidence 28 June 2005*, pp. 39-40.

250 LG, *submission no. 44*, p. 2.

- 5.303 WIN discussed the significant issue of the continuing sale of analogue televisions, and the fact that consumers are largely unaware that DTV receiving equipment will be necessary in the future:

To clarify our view, it is of concern to us that a large range of analog television sets is being sold in Australia today at very cheap prices which do not have the capability to receive digital broadcasts. The consumer is not told that the sets will be obsolete when the analog service turns off; nor are they told that the addition of a digital set-top box will enable them to receive digital broadcasts. Recently a retail catalogue delivered in the Newcastle area advertised a package of three small analog sets for \$499. In seeking to have the mandating of digital-ready equipment, we are seeking to have regulation to ensure that consumers are aware that analog television equipment purchased will be incapable of receiving a digital service unless a digital set-top box is fitted to it. This, in our view, ensures consumer awareness of the new technology so that they can make an informed decision about their purchases.²⁵¹

- 5.304 Mr Shane Kerr, a private individual, claimed that retailers are deliberately focussing on selling analogue products, maximising their sales now before selling a whole new suite of digital products closer to analogue switch-off.

When 90 [per cent] of the advertising space in electronics catalogues from Harvey Norman, Good Guys etc. are taken up with analogue focussed products, where is the consumer to get his/her information about the benefits of Digital? It is all about what is being promoted at the retail level as any quick look at a Harvey Norman catalogue will tell you.²⁵²

- 5.305 Beautiful Analogue Not Digital (BAND) claimed that, in recent years, many potential buyers have been apprehensive about the purchasing of a new DTV:

It is quite common in the retail shops to hear potential customers asking (nervously) basic questions about the digital technology. The answers they receive are often most unsatisfactory. The salespersons would rave about the high-end functions of digital television that might become

251 WIN, *transcript of evidence 1 September 2005*, p. 26.

252 Mr Shane Kerr, *submission no. 23*, p. 1.

available. They ignore the basic answers that the potential buyer craves. Indeed, when in a branch of a nation-wide retail store I asked about digital television, I was told by the frustrated sales manager (frustrated by the many questions being asked) to take a brochure and go away and read all about digital television. This was not what I wanted.²⁵³

- 5.306 The Committee is very concerned that retailers are not doing enough to promote the take-up of DTV.
- 5.307 The Committee strongly urges manufacturers, broadcasters and retailers to undertake a coordinated marketing campaign. Given the success of the subscription television sector in encouraging take-up of digital services, the significant lead time, and certainty of analogue switch-off now provided, the Committee considers these groups possess the resources to achieve nationwide take-up prior to 2010.
- 5.308 The Committee has not recommended government intervention to drive take-up and reiterates that the role of government is to provide the framework for switch-off and rollout.
- 5.309 If manufacturers, retailers and broadcasters wish to retain a market share then they have the lead time to ensure product availability, a range of digital broadcast services and nationwide consumer awareness.

Installation issues

- 5.310 Panasonic stated that a significant contributing factor to the less than compelling DTV experience for many consumers is poor reception caused by the use of antenna systems that are inappropriate for receiving DTV broadcasts.²⁵⁴
- 5.311 Panasonic added that, at present, it is entirely possible that many millions of Australian televisions will experience unreliable or poor quality reception should they convert to DTV utilising their existing antenna installation. Problems of this type are already adding significant cost to the support of DTV product in the Australian market.²⁵⁵
- 5.312 Samsung stated that antenna systems are a critical piece of hardware that has, to some degree, been overlooked in the DTV debate. There is
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253 BAND, *submission no. 53*, p. 1.

254 Panasonic, *submission no. 42*, p. 4.

255 Panasonic, *submission no. 42*, p. 4.

the potential for the incompatibility of existing antenna systems to be a significant problem.²⁵⁶

5.313 Panasonic explained that DTV may present particular reception problems for consumers:

[Television] is an end-to-end business. It goes from broadcast through the antenna that sits on the roof, the cabling and the connectors through to a receiving device. The system itself is only as good as the weakest component. There are, unfortunately, some products in the marketplace that have been installed which work quite well for an analog environment but are not necessarily acceptable for a digital environment.²⁵⁷

5.314 Panasonic remarked that broadcasters are responsible for the performance and behaviour of their DTV broadcasts and consumer electronics suppliers and manufacturers are responsible for the behaviour of their DTVs and receivers. However, responsibility for the antenna system, the other key element of DTV reception, lies with the consumer. Consumers' current expectations are that DTV will work with their existing antenna system.²⁵⁸

5.315 Panasonic stated:

... broadcasters are required to deliver a level of signal across the earth. We as manufacturers make product to take the signal from the wall plate. What you have to look at, and what we believe is a crucial factor right now, is that part in between ... antennas and cable connectors.²⁵⁹

5.316 Panasonic discussed an example:

Antennas that were designed maybe 15 or 20 years ago for analog actually roll off at Channel 11. The typical installation of up to five years ago has an antenna that rolls off at Channel 11. What we mean by that is that ABC digital is on Channel 12 and ... if you use a typical installation of, say, five years ago, you cannot receive the ABC. In fact, it causes problems

256 Samsung, *submission no. 87*, p. 8.

257 Panasonic, *transcript of evidence 28 June 2005*, p. 27.

258 Panasonic, *submission no. 42*, p. 4.

259 Panasonic, *transcript of evidence 28 June 2005*, p. 27.

on Channel 10. But, when we change that to a digital antenna, and that is the only change we make, it works fine.²⁶⁰

- 5.317 Panasonic also discussed the high return of DTV products, of which a small proportion is due to product failure:

We believe the majority of people have a good experience from digital but there are a number of people who are having a bad experience with digital. The inquiries we get about product at our call centres show us that more than an acceptable level of people are having difficulties with the total system.²⁶¹

- 5.318 Panasonic also discussed negative experiences and DTV products:

The point about all of this is that we cannot quantify how big the problem is. From our point of view, while there are some very good things happening in digital there are also some very negative comments being made in terms of the performance of digital and the performance of set-top boxes. We have quite a deal of product returned to us. Of the product that is returned there is less than a two per cent failure rate. When we get the product back and test it there is nothing wrong with our receiving product, yet it is not working in the market.²⁶²

- 5.319 Panasonic claimed that reception problems are further compounded by the inability of many television distribution systems currently installed in multi-unit dwellings to deliver DTV.²⁶³

- 5.320 Panasonic believes that industry and government must act to quantify the size of this problem. Panasonic recommended that industry and government conduct:

... research into the ability of residential and multi-unit dwelling antenna systems to receive a full range of digital terrestrial television services at high quality. The goal of the research should be to identify and develop workable solutions for the consumer in partnership with the [Master

260 Panasonic, *transcript of evidence 28 June 2005*, p. 27.

261 Panasonic, *transcript of evidence 28 June 2005*, p. 27.

262 Panasonic, *transcript of evidence 28 June 2005*, p. 28.

263 Panasonic, *submission no. 42*, p. 4.

Antenna Television], home antenna and television installer industry.²⁶⁴

- 5.321 The Seven Network also recognised the problem of the availability of DTV signals in townhouses and apartment blocks where the cable reticulation system has unintentionally blocked some or all of the new digital channels. The network suggested that regulations be developed to ensure that, where cabling is installed in new and existing multi-unit dwellings, this allows for the reception of DTV.²⁶⁵
- 5.322 Samsung is also of the opinion that reception problems are exacerbated when growth of large apartment buildings in metropolitan areas is considered. Samsung believes the issue of reception and antenna systems needs greater attention, and it would be sensible to engage the home antenna and television installation industry to use their knowledge and expertise to address this issue.²⁶⁶
- 5.323 Samsung recommended that this issue be addressed as part of any consumer education campaign.²⁶⁷
- 5.324 DBA suggested conducting a wide ranging survey of multi-unit dwellings that considered their current state of DTV 'readiness' together with what might be required to make them DTV ready.²⁶⁸
- 5.325 DBA claimed that multi-unit dwelling home formation is the fastest growing sector of overall Australian home formation. DBA stated that individual households within multi-unit dwellings generally do not have the ability on their own to convert to digital. DBA suggested that, in most cases, occupants must go through bodies corporate or managing agents until a consensus regarding digital conversion occurs.²⁶⁹
- 5.326 The Committee notes the concerns raised. Many of these issues are considered on the DBA's website which features comprehensive information on DTV reception for house and multi-unit dwellings. Antenna issues are also covered in the DBA website's 'troubleshooting' section.

264 Panasonic, *submission no. 42*, p. 4.

265 Seven Network, *submission no. 49*, p. 10.

266 Samsung, *submission no. 87*, p. 8.

267 Samsung, *submission no. 87*, p. 8.

268 DBA, *submission no. 34*, p. 8.

269 DBA, *submission no. 34*, p. 8.

- 5.327 Further work to assist consumers installing DTV who may have outdated antennas should be addressed in the DTV marketing campaign driven by manufacturers, broadcasters and retailers.
- 5.328 The Committee notes that a significant number of antenna installers are members of DBA.²⁷⁰ The Committee also notes that the revised standards relating to antenna systems should ensure that all new antennas are suitable for DTV reception, as discussed earlier in the chapter.

In conclusion

- 5.329 While Australians have been quick to embrace many technologies, this has not been the case with DTV. There are a multitude of reasons for this poor take-up. However the introduction of DTV offers many viewing benefits as well as ensuring that Australia's production industry remains internationally competitive. There is also the important issue of the efficient management of spectrum allocation in Australia.
- 5.330 The Committee considers that there are two key failures in the drive to DTV take-up; the first is lack of certainty regarding analogue switch-off, and this has contributed to the second which is a lack of consumer awareness.
- 5.331 It is the Committee's conclusion that certainty is the most fundamental issue to address, and it has done so by recommending a nationwide analogue switch-off date of 2010. Evidence suggests this date is achievable for all broadcasters.
- 5.332 A nationwide approach has many advantages for regional viewers and broadcasters as it will reduce the financial impost of a continued simulcast period.
- 5.333 A nationwide switch-off will also assist manufacturers and retailers to initiate awareness raising campaigns. It will ensure that the most competitive prices for digital equipment are offered to consumers, with the potential for retailers and manufacturers to provide additional services such as installation assistance.

270 www.dba.org.au, accessed 6 December 2005.

- 5.334 Following the switch-off of analogue, there is a unique opportunity for the Australian Government to consider future spectrum needs and allocation. The Committee has recommended an independent study into the efficient future use and allocation of spectrum, taking into account the desire to provide a diversity of television broadcasting including community, free-to-air and subscription television.
- 5.335 The additional content and enhanced quality of DTV are strong benefits to the viewer. To provide broadcasters with the opportunity to offer a wider range of DTV services, the Committee has recommended that restrictions on multichannelling for national free-to-air broadcasters be lifted as soon as possible and no later than 1 January 2007. The Committee has also recommended that commercial free-to-air networks be permitted to multichannel if they choose from 1 January 2008.
- 5.336 Broadcasters may then make commercial decisions as to the diversity of services they wish to provide. It is anticipated that these extra channels and services will also assist in driving DTV take-up prior to the 2010 analogue switch-off.
- 5.337 In relation to HD quotas, the Committee has recommended to retain the existing quotas with a review in 2011 to determine if it is appropriate at that time to remove the quotas and introduce a more free market approach.
- 5.338 To ensure the smooth transition to DTV, there must be both a product and market readiness. The Committee notes that the review of the Australian Standard relating to digital reception equipment may address some of the concerns relating to LCN, power consumption and antenna capabilities.
- 5.339 The Committee also notes that most DTV reception equipment sold in Australia does comply with the relevant Australian Standards, despite the lack of any nationally approved testing or conformance process. However, with new technologies and a greater range of DTV equipment expected in the market, a testing and conformance process is necessary.
- 5.340 The Committee recommends that the Australian Government provide seed funding for the establishment of an independent TCC for digital reception equipment. As an addition to this, the Committee recommends that an easily understood labelling system be introduced to clarify for consumers the features of each product; for example whether products include digital tuners, are HD or SD, and if they

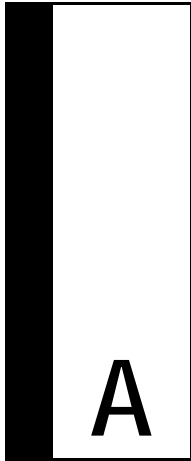
can receive over-the-air downloads. This labelling system should be based on the descriptors set out in the Digital Television Marketing Code.

- 5.341 The Committee considers that a further Australian Government responsibility is to address reception difficulties through a Digital Television Black Spots Program.
- 5.342 It is also the view of the Committee that manufacturers, retailers and broadcasters have a number of responsibilities in relation to the successful rollout of DTV. This includes promoting television recycling and initiating a strong marketing campaign to raise consumer awareness of analogue switch-off and the range of benefits available through DTV.
- 5.343 This inquiry has asked the question 'Digital TV - Who's buying it?' The Committee's response is that only through the coordinated planning of the Australian Government, manufacturers, retailers and broadcasters can we 'sell' to Australian viewers the extraordinary benefits of DTV.
- 5.344 Internationally the DTV revolution is already happening. If as a nation Australia is to access the enhancements, television quality and production opportunities that are available elsewhere in the world, then as a nation now is the time to buy into DTV and the digital revolution.

Jackie Kelly MP

Committee Chair

13 February 2006



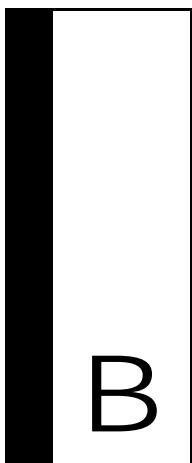
Appendix A – List of submissions

- 1 David Crowley
- 2 John White
- 3 Steve Ulrich
- 4 Paul Macknamara
- 5 J C McKenzie
- 6 Erik Fenna
- 7 Derek Louey-Gung
- 8 Paul Swift
- 9 Ian Thomson
- 10 Richard French
- 11 Peter Gillespie
- 12 Troy Kucks
- 13 Brian Sanders
- 14 Stephen Crisdale
- 15 Paul Spear
- 16 Hubert Krenske
- 17 Victor Riley
- 18 Tony Portman

-
- 19 Cameron Cudahy
 - 20 Ian Williams
 - 21 Keith Collier
 - 22 Grant Burton
 - 23 Shane Kerr
 - 24 Mark Creighton
 - 25 Nigel Pearson
 - 26 Michael Grant
 - 27 Department of Corporate and Information Services
 - 28 Fred McCullough
 - 29 Warren Muirhead
 - 30 Panasonic Australia Pty Limited
 - 31 Free TV Australia
 - 32 Christian Kent
 - 33 Optus
 - 34 Digital Broadcasting Australia Limited
 - 35 James D Cladingboel
 - 36 School of Design, Communication and IT - The University of Newcastle
 - 37 David Porter
 - 38 Alistair Wylie
 - 39 Steve Mercer
 - 40 International Dynamics Australasia
 - 41 Broadcast Australia Pty Limited
 - 42 Panasonic AVC Networks Australia Pty Ltd
 - 43 Movies Online Limited
 - 44 LG Electronics Australia Pty Ltd
 - 45 The Australian Broadcasting Corporation
 - 46 The Interactive Television Research Institute

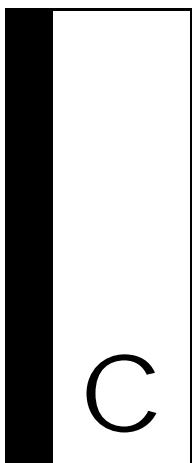
47	Australian Consumers' Association
48	Eleanor Hillard
49	Seven Network Limited
50	Australian Subscription Television & Radio Association
51	Matthew Sharp
52	Meridian Connections Pty Limited
53	Beautiful Analogue Not Digital (B.A.N.D)
54	Australian Film Commission
55	FOXTEL
56	WIN Corporation Pty Limited
57	Glen Hosking
58	Media, Entertainment & Arts Alliance
59	Nine Network Australia Limited
60	Network Ten Pty Limited
61	Shire of Yarra Ranges
62	SBS Corporation
63	Geoff Shang
64	Southern Cross Broadcasting Australia Limited
65	Australian Competition & Consumer Commission
66	Department of Communications, IT and the Arts
67	Sony Australia
68	International Dynamics Australasia (Supplementary)
69	Glen Marshall
70	Alex Mayo
71	Harry Wood
72	ACT Government
73	OPAC Pty Limited
74	AUSTAR

- 75 Mr Peter Andren MP
- 76 Retravision Pty Limited
- 77 LG Electronics Australia Pty Ltd (Supplementary)
- 78 Alex Brown
- 79 Neil Keele
- 80 Geoff Wynn
- 81 Neil Muller
- 82 David Green
- 83 NSW Office of the Government CIO
- 84 Community Broadcasting Association of Australia
- 85 Interactive TV Pty Limited
- 86 Australian Communications and Media Authority
- 87 Samsung Electronics Australia
- 88 Brad Sheargold
- 89 Department of Industry & Resources - WA
- 90 Alex Encel (Supplementary)
- 91 Department of Environment and Heritage
- 92 Digital Broadcasting Australia Limited
- 93 Alex Encel (Supplementary)
- 94 Anthony Gallagher
- 95 City of Lithgow Council
- 96 Alex Encel (Supplementary)
- 97 Alex Encel (Supplementary)



Appendix B – List of exhibits

- 1 GFK Marketing Services Pty Limited
The Digital Lifestyle: have we bought it?
- 2 WIN Corporation Pty Limited
Take up of Digital Television Services within Australia
(Related to Submission No. 69)
- 3 SONY Australia Limited
High Definition (HD) TV
(Related to Submission No. 81)
- 4 Standards Australia, Saving Energy in STB, presentation by Keith Jones,
Panasonic AVC Networks Australia Pty Ltd, San Francisco June 2005
- 5 Department of Communications, Information Technology and the Arts,
correspondence relating to testing and conformance issues



Appendix C – List of hearings and witnesses

Wednesday, 25 May 2005 - CANBERRA

Digital Broadcasting Australia Limited

Mr Ian McGarrity, Chair

Tim O'Keefe, Secretary

Free TV Australia

Julie Flynn, Chief Executive Officer

Wednesday, 1 June 2005 - CANBERRA

Australian Broadcasting Authority

Mr Fred Gengaroli, A/g Director

Mr Giles Tanner, Manager

Department of Communications, IT and the Arts

Mr James Cameron, Chief General Manager Broadcasting

Dr Simon Pelling, General Manager

Wednesday, 15 June 2005 - CANBERRA

Broadcast Australia Pty Limited

Graeme Barclay, Managing Director

Wednesday, 22 June 2005 - CANBERRA

Australian Broadcasting Corporation

Ms Margaret Cassidy, Manager New Services Projects

Mrs Lynley Marshall, Director New Media & Digital Services

Australian Subscription Television & Radio Association

Debra Richards, Executive Director

SBS Corporation

Julie Eisenberg, Head of Policy

Special Broadcasting Service

Mr William Berryman, Chief Technology Officer

Mr Nigel Milan, Managing Director

The Australian Broadcasting Corporation

Dr David Sutton, Industry Analyst

Tuesday, 28 June 2005 - SYDNEY

LG Electronics Australia Pty Ltd

Mr Paul Jenkins, General Manager - Marketing

Mr Martin Laverty, Government Counsel

Network Ten Pty Limited

Mr Nicholas Falloon, Executive Chairman

Annabelle Herd, Network Manager

Ms Marie Wines, New Media Development Manager

Nine Network Australia Limited

Creina Chapman, Director, Digital Services & Regulatory Affairs

Mr Charles Sevier, Technology Development Manager

Panasonic AVC Networks Australia Pty Ltd

Ross Henderson, Director

Mr Rick Naylor, Digital Media Support Manager

Wednesday, 10 August 2005 - CANBERRA**Australian Competition & Consumer Commission**

Mr Michael Cosgrave, General Manager - Telecommunications

Retravision Pty Limited

Mr Keith Perkin

Wednesday, 17 August 2005 - CANBERRA**Australian Broadcasting Authority**

Mr Giles Tanner, Manager

Australian Communications and Media Authority

Mr Tomislav Loncar, Research Consultant

Ms Margaret Cupitt, Research & Policy Officer, Policy & Research Section

Mr Peter Fairbrother, Research Consultant

Mr Alistair Gellatly, Acting Manager, Broadcasting Engineering

Ms Lesley Osborne, Manager, Policy & Research Section

GFK Marketing Services Pty Limited

Mr Gary Lamb, Managing Director

Thursday, 1 September 2005 - MELBOURNE**NBN Limited**

Mr Jeffery Eather, Chief Executive Officer

Seven Network Limited

Mr Trevor Bird, General Manager, Technical Services

Ms Bridget Godwin, Manager Regulatory & Business Affairs

Southern Cross Broadcasting Australia Limited

Mr Anthony Bell, Managing Director

WIN Corporation Pty Limited

Shirley Brown, Manager Regulatory & Network Affairs

Mr John Smithers, Director Networks Broadcasting Engineering

Friday, 2 September 2005 - PERTH

Movies Online Limited

Kevin Campbell, Chairman

The Interactive Television Research Institute

Professor Duane Varan, Director

Wednesday, 7 September 2005 - CANBERRA

Australian Consumers Association

Mr Gordon Renouf, Manager Policy & Campaigns

SONY Australia Limited

Mr Ian Lowe, Group Marketing Manager, Home Network Product

Wednesday, 14 September 2005 - CANBERRA

Australian Subscription Television & Radio Association

Debra Richards, Executive Director

Standards Australia

Mr Keith Jones, Chair of Committee CT2 - Broadcast & Related Services

Mr Alistair Tegart, Group Manager - Communications Information
Technology & e-Commerce Standards