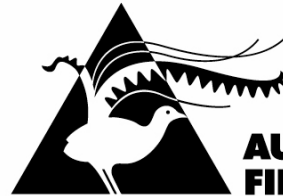




Australian Government



**AUSTRALIAN
FILM
COMMISSION**

**Submission to the Department of
Communications Information Technology and
the Arts Review into High Definition Television
Quota Arrangements**

July 2005

1. The Australian Film Commission

The Australian Film Commission (AFC) is an Australian Government agency, operating as part of the Commonwealth Film Program to ensure the creation, availability and preservation of Australian screen content. The AFC enriches Australia's national identity by fostering an internationally competitive audiovisual production industry, making Australia's audiovisual content and culture available to all, and developing and preserving a national collection of sound and moving image.

The AFC has a key role to play in the development of a vibrant audiovisual industry in Australia capable of producing a diverse range of quality products for Australian and international audiences.

2. The significance of Australian content

The AFC's main interest in relation to digital television is accordingly in relation to the creation and availability of Australian content. The AFC is therefore concerned that the arrangements for digital conversion do not undermine the underlying cultural objectives of content regulation and that Australian programming is not disadvantaged in relation to foreign programming.

To achieve this, the AFC argues, that it is essential that Australian programs are well represented in HDTV programming.

Access to minimum levels of Australian content by Australian audiences is a fundamental tenet of our television system. Whatever the government ultimately determines in relation to new television services, the new system as a whole, and its component parts, must deliver to Australian audiences adequate levels of choice, quantity and diversity of Australian content. At minimum, these levels must be at least equivalent and in proportion to those which audiences currently enjoy on free-to-air television.

3. The transition to Digital Television

There are two reasons why the transition to digital terrestrial television is a public policy issue.¹ The first reason is that the spectrum used by terrestrial broadcasters is a public resource and ultimately the responsibility for its management lies with the government. Apart from the issue of deciding on

¹ See Adda J and Ottaviani M 2004, "The transition to digital television", Paper presented at the 39th Panel Meeting of Economic Policy in Ireland 16-17 April 2004. At www.faculty.london.edu/mottaviani/TDTV.pdf Accessed 16 June 2005

the use to which the spectrum is put governments also have an interest in coordinating the efficient adoption of new technologies, including planning the division of the spectrum and the establishment of minimum technical standards. The reasons for doing this include ensuring the maximum benefits to the consumers of television and ensuring that benefits of new technology to the economy are captured.

The second reason for public policy significance derives from the social role of television in the provision of information and entertainment. Television is a primary source of news and information for Australians and, on average, Australians are watching more than three hours of television a day. It clearly plays a significant role in everyday life and its future is of interest to all Australians. Since the introduction of the domestic satellite to facilitate national television program distribution and the aggregation of regional television markets it has been a policy fundamental that most Australians should have access to at least five channels of terrestrial television. While this is not a mandated universal service obligation in the same way as access to basic telephony, the universality of access to television can be regarded as having a similar power.

Australian governments have in the past taken a cautious approach to the technological development of the terrestrial television system. In part, this has been because historically Australia has had a peripheral role in the development of television technology, something which has been largely undertaken in the US, Europe and Japan. This has meant that while the decisions of Australia about which competing television system to adopt in the first place and then which competing colour system to adopt, were not inconsequential, Australia was not in the vanguard of determining the nature of those systems. As a result, Australia has tended to be a taker of standards, rather than a maker of standards and come to those decisions some time after the technology has been successfully deployed in other markets.

In introducing television, Australia had the choice between the US and European systems, making its final decision on standards nearly a decade after television broadcasting had begun in those countries. It meant that Australia could choose the technically superior European system after the problems of NTSC² became manifest in the late forties and early fifties. In the case of colour, Australia also waited until the European nations decided on a colour standard.

What is different with the transition to digital terrestrial television is that Australia has embarked upon the transition almost as soon as the technology became available and is rolling it out simultaneously with developments in

² National Television Systems Committee standard – the analogue television system in use in the US.

other countries. As Free TV Australia has pointed out this early adoption and roll out of the European DVB³ digital television platform has put Australia in the forefront of digital terrestrial television platform development. Australia has had to adapt the DVB technology to the Australian geographical conditions and has achieved a roll out of DVB that has been one of the fastest in the world.⁴

What is also different with the transition to digital television is the conflict between the scarcity of spectrum and the basic commitment to universality of service. It is unlike the introduction of television itself, where the government simply made available the capability of television reception and left the decision to adopt to the individual household. Nor is it like the conversion to colour where it was still possible to watch a colour signal on a monochrome set years after all transmission was in colour.

The commitment to universality means that the coverage and number of analogue channels needs to remain constant until a point is reached when digital adoption is such that it is feasible politically to turn off the analogue signal. The consequence of this is that the full potential of digital terrestrial television may not necessarily be used until after the analogue switch off. Thus a choice has to be made in the interim period whether to use the available spectrum allocated to digital terrestrial television mainly for HDTV or mainly for multi-channelling. Australia has chosen the former, whereas many other countries have chosen the latter.

It now seems clear that the original objective of switching off the analogue signal in 2008 will not be met and a fundamental question lies at the base of this review of HDTV quotas – whether the quotas should continue to be mandated, with the alternative likely being the introduction of some form of multi-channelling. If multi-channelling is the preferred choice, AFC refers to its submission of November 2004 on this issue. The AFC remains strongly of the views expressed there and in particular that:

Australian content must have a significant presence from the very beginning of any new services. This will involve extending the Australian content regulations to multi-channelled services up to the maximum level permissible under the terms of the AUSFTA.

Regardless of their stance on multi-channelling, it is clear that the networks will not devote their healthy profits to new Australian programs on their additional channels, unless obliged to via regulation.

³ Digital Video Broadcasting – a suite of open standards for digital television.

⁴ Free TV Australia, “Submission by Free TV Australia Limited House of Representatives Inquiry into the take-up of digital television in Australia”, May 2005, p.3

The national broadcasters must be strong players in a multi-channel environment with the resources to offer a high proportion of Australian content on any subsidiary channels.

The AFC believes that key to the successful promotion of digital television uptake is prioritising the needs and interests of the Australian audience. Television is society's most important provider of information on matters of public interest. It contributes to community cohesion and plays a direct role in the development of a vibrant sense of national identity, providing an outlet to reflect the diversity of cultural expression within Australia.

The broadcasting of Australian content is essential to this process.

4. The current and expected future audience demand for High Definition Television

It is not easy to predict what the future demand for High Definition Television might be in Australia. This is not only because there are a range of specific economic and cultural factors that could affect future demand but also there is only partial evidence from other countries of how HDTV is being taken up by consumers.

Some recent economic literature has looked at this issue in relation to the 'take off' time of consumer durables. The AFC understands 'take off' to be that period in the life of a new consumer product when it moves from the stage of introduction to the stage of growth.

Golder and Tellis⁵ looked at a range of post World War II consumer durables in the USA and found that the average time to take off was six years, that on average the price of the good was about 60 per cent of the introductory price and that on average market penetration at the time of take off was 1.7 per cent.

More recently Tellis, Stremersch and Yin⁶ undertook a similar exercise across ten European countries looking at 137 new product categories. They again found that the average time to take off was six years, but there were significant differences between countries and product categories. It took a quarter as long for entertainment products to reach take off as it did for kitchen and laundry products and half as long in the Scandinavian countries as for the Mediterranean. Thus cultural differences between countries affect

⁵ Golder PN and Tellis JT 1997, "Will it ever fly? Modelling takeoff of really new consumer durables", *Marketing Science*, Vol. 6 No.3

⁶ Tellis JT, Stremersch S and Yin E 2003, "The international takeoff of new products: The role of Economics, Culture and country innovativeness", *Marketing Science* Vol. 22 No. 2

attitudes to certain goods. The data also supports the idea that take off in one country can increase the uptake in another country and put pressure on the marketing process in countries where penetration is slow.

Both Free TV Australia and Foxtel in their submissions to the House of Representatives Standing Committee on Communications, Information Technology and the Arts inquiry into the take up of digital television, argue that digital television has reached the point of take off. Foxtel states:

Based on the publicly available data, the total number of homes in the Australian market receiving digital television services, either via subscription services or via terrestrial "free-to-air", is up to approximately 1.8 million. This equates to approximately 26% of all 7 million homes in Australia, and penetration is accelerating quickly.⁷

Even disaggregating digital terrestrial television, the rate of penetration stands at about 11 per cent of Australian television households, which would also indicate that the point of take off has been reached. Although it is also worth noting that almost two thirds of television households have more than one television set and these second and third sets would also need to be converted to digital. It is also the case that people acquiring new television sets are also acquiring them in analogue mode so that the population of analogue sets would be growing at the same time as digital and possibly at a faster rate.

Nevertheless Free TV Australia claims that:

... to date the take-up achieved by free-to-view digital television has been consistent with the traditional take-up rate for comparable consumer electronic devices such as DVDs, VCRs, colour TV and radio at the same time after initial launch.⁸

This is an important claim because the issue is not just whether digital television has reached the point of take off, but whether demand will continue to grow to a point where the Government considers it feasible to switch off the analogue signal and complete the transition to digital. All consumer durables have a life cycle and again there is economic literature on this issue.⁹ The difference between television and many other consumer durables is that it has achieved almost 100 per cent penetration of the Australian market with 67 per

⁷, Foxtel, op. cit., p.6

⁸ Free TV Australia, "Submission by Free TV Australia Limited House of Representatives Inquiry into the take-up of digital television in Australia", May 2006, p.6

⁹ See For Example: Golder PN and Tellis JT 2004, "Growing, Growing, Gone: Cascades, Diffusion, and Turning Points in the Product Life Cycle", *Marketing Science*, Vol. 23 No. 2

cent of households having two or more sets and 28 per cent of households having three or more.

To get a sense of what future demand might look like it may be useful to look back at the introduction of television itself and the subsequent innovations of colour, the VCR, the DVD and pay television: see Appendix A.

4.1 Current take up of digital television

According to Digital Broadcast Australia, the number of free-to-air digital TV receivers in Australia has risen to 777,000 receivers sold (wholesale) including 400,000 sold in 2004. Of these about 20,000 were integrated into television sets¹⁰. Foxtel¹¹ has suggested this increase in the sale of equipment in 2004 may be related to its promotion of digital subscription television, but it is not known how many of the installed terrestrial receivers are HDTV capable. In subscription television, a little over one million households had subscribed to the digital offerings of Foxtel and Austar by the end of March 2005. As yet there have been no plans announced to provide HDTV channels on the subscription platforms.

These numbers do suggest that there is a growing interest in digital television and that it has reached the point of take off, but compare this to the USA. According to *Screen Digest*, based on data collected by the US Consumer Electronics Association, by the end of 2004 there were 12.6 million digital television receivers installed (equivalent to about 12 per cent of television households) and it predicted this would rise to 48 million by 2008.¹² However it also found that number only 4.6 million received a HD signal by terrestrial or cable/satellite television which suggests that most American consumers at present are using their large format television sets to watch DVD.

This is borne out by recent work by Forrester Research on the reasons for the purchase of an HDTV set in America. It found that the two most significant reasons for purchasing an HDTV set were the larger screen (48 per cent) and to watch DVD (43 per cent). However there seems to be considerable confusion over what constitutes HDTV in the US market. Forrester found that only 19 per cent of those surveyed signed up for an HDTV service at the time of sale and a third of subscribers to analogue cable believed they were watching HDTV.¹³

¹⁰Digital Broadcasting Australia, 2005, June July newsletter, At: <http://www.dba.org.au/newsletter/IB-JunJul05-full.asp#PRODUCT1> Accessed 20 June 2005

¹¹ Foxtel, Submission to the Standing Committee on Communications, Information Technology and the Arts Inquiry into the uptake of Digital Television, May 2006

¹² "HDTV coming of age in the USA: High definition in parallel with digital television", *Screen Digest*, 1 December 2004

¹³ Sweeting P, "DVD's High-Def Future", *Video Business*, Marc 28 2005-06-20

The AFC is not aware of any similar research in Australia and so it is not clear whether the same confusion may exist in the minds of consumers. According to Digital Broadcasting Australia at the end of 2004 there were about 800,000 widescreen television sets in Australian households¹⁴. This is far less than the 62 per cent of households with a DVD player and suggests that so far Australians have been less motivated to acquire a television set that matches the quality of output of their DVD player.

The AFC believes that the government, and more particularly the Australian Communications and Media Authority (ACMA), needs to play a significant role in facilitating take-up by educating consumers.

4.2 The possible impact of HD DVD

As referred to in the Issues Paper, the advent of HD DVD may have an impact on the demand for other HD platforms, but there are some serious issues to be resolved with HD DVD. The first is the determination of a standard and the second is the availability of product.

There are at present two non-compatible formats, one developed by a consortium led by Sony called Blu Ray Disc and the other by a consortium led by Toshiba called High Density DVD. Both use blue laser technology, have much larger storage capacity than the conventional DVD, and will offer HD in 1920x1080p. Both are also claiming to be backwards compatible with the addition of layer that can play in a conventional DVD player. However, neither format can play on the other.¹⁵

The Hollywood studios seem to be evenly divided in their support for the two formats. Sony and Toshiba are saying contradictory things. On the one hand that they are talking to each other about developing a joint format to avoid the VHS/Betamax format war and on the other that they are pressing ahead with their own plans to market the formats¹⁶. Sony is planning to put their Blu Ray technology into next version of Playstation 3 and both are looking to put out the first products by the end of this year or early next year. It is not clear yet whether and when this will be resolved.

Nor is it clear what the impact might be in the market place and whether the release of highest level HD DVD will drive demand for a similar level of definition on terrestrial and subscription platforms. As noted elsewhere, there is a significant segment of the current customer base for HDTV sets that

¹⁴ House of Representatives Standing Committee on Communications, Information Technology and the Arts Digital Television Inquiry, Submission by the Digital Broadcasting Australia, p.6

¹⁵ "DVD awaits the next generation: high definition video disc formats vie for future attention", *Screen Digest* 1 February 2005

¹⁶ "Compromise elusive in debate over Blu-ray, HD DVD form factors", *Warren's Consumer Electronics Daily*, 18 May 2005

appear satisfied with an image quality below what their sets could optimally deliver.

With more US households acquiring HDTV sets and increased HDTV transmissions on European subscription platforms, it may be that the Hollywood studios will push hard for the next generation of DVD to be rolled out sooner rather than later. The reason for this being that packaged home video now represents half their revenue, with DVD being the largest and growing part of that. In 2004 the studio's home video revenue worldwide was \$US21 billion or more than three times the revenue from theatrical box office¹⁷. On average, home video earns \$US1.21 for every dollar of theatrical revenue.

More importantly, even though sales to television and theatrical are still vital, they are not growing at the same rate as home video. Hollywood would also understand that as terrestrial and other television platforms go HD, they can't extract a premium on the prices paid for their product by these platforms but they can on the packaged entertainment distributed on DVD. This is likely to persuade them it is better to have HD DVD in the market before the HD experience becomes too firmly entrenched in consumers' minds as being associated exclusively with the broadcast experience.

Another factor is piracy protection. As Peter Chernin, the Chief Operating Officer of News Corp. said earlier this year: "The single most important thing in the next generation of DVDs is copyright protection, and it is certainly what drives our decision making," Chernin also said that the current DVD format offered "one of the leakiest copyright protection schemes known to man and we're idiots to have built a business that we can't protect... Shame on us if we do it a second time."¹⁸

4.3 Some conclusions on likely demand

Looking at the history of previous introductions and the current take up of digital television the AFC sees a number of factors that will impact on demand and the transition to digital television.

The first is that despite a reputation of Australians as early adopters of new technology the optimal performance was the introduction of colour television which took nine years to reach 95 per cent of households. It took television itself ten years to reach this level of penetration in Sydney and Melbourne. The DVD player may make this level of penetration after a decade, but the VCR did not and neither has subscription television. This strongly suggests

¹⁷ Hollinger H, "DVD rocking studio's world", *The Hollywood Reporter*, 5 may 2005

¹⁸ "Fox Leaning Slightly Toward Blu-ray, News Corp. COO Says", *Warren's Consumer Electronics Daily*, 18 January 2005

that despite the confidence of Free TV Australia, looking at the past performance of these technologies and the current rate of take up of digital television, one would predict a period of between ten and twenty years from today before the level of penetration approached

Second is that Australians are prepared to pay for television content as both the success of DVD sell through, DVD and VCR rental and subscription television demonstrates. However the relative success of these formats may depend upon the price point at which they are placed. It could be that the advantage DVD has over subscription is that there is a relatively low up front and continuing cost. This might make multi-channelling attractive, as it appears to have done in the UK with the Freeview service.

Third is that the timing of introduction can be affected by competing technologies. It is at least arguable that the introduction of the DVD has had an effect on the growth of both digital and subscription television.

Fourth, is that while price is important it is not necessarily an obstacle if the technology is attractive enough to consumers. Many people were prepared to go into debt to acquire television in the first place and then to upgrade to colour.

Fifth, appropriate co-ordination and communication by the government may be an important factor in facilitating transition to a new technology. This was the case with both the introduction of television and with the transition to colour. It may be that in the case of digital television the reason for the conversion has not been communicated effectively enough and there is not enough understanding about the technology and its uses. The work of Adda and Ottaviani¹⁹ and the experience of those platforms that have turned off analogue²⁰ suggest that a firmly communicated and realistic commitment to switch off assists transition. If the Government is to take a larger role in this transition, it may also need to be prepared to provide assistance in switch over for the economically disadvantaged.

4.4 The HDTV Quota

The HDTV quota has been in place for metropolitan broadcasters since 1 July 2003. Information about compliance with the quota has been published by the ABA for the period 1 July to 31 December 2003 and for the period 1 January 2004 to 31 December 2004. The compliance results indicate that all broadcasters have complied with the quota, but there are variations between them as to the amount being shown. The national broadcasters are

¹⁹ See note 1.

²⁰ B-Sky-B and the City of Berlin/Brandenburg

transmitting more than the commercial broadcasters and within the commercial broadcasters the Seven Network stations are showing the most.

It would appear then that the broadcasters are able to meet the quota without difficulty, but as the Issues Paper points out this represents a relatively small proportion of total broadcast time. Does this mean that the quota should be increased? One argument might be that the more HDTV programming that is available the greater the incentive for consumers to change to digital in order to take advantage of the better quality images and sound. On the other hand given the uncertainty about the take up of HDTV and the uses to which those people who have acquired enabled sets are putting them it could be argued that the quota should remain as is for the present time.

It is the AFC's understanding from evidence given by the ABA to the House of Representatives Standing Committee on Communications, Information Technology and the Arts inquiry into the take up of digital television that the ABA is undertaking attitudinal research into what might be causing people to upgrade or not upgrade to digital television. The AFC expects that the results of that research will assist in determining at least the level of understanding in the community and may also provide insights that will assist in further policy formation on the issue of quota levels.

A decision on whether to increase the quota level is also dependent on the decision the Government takes in relation to multi-channelling. If multi-channelling does go forward what role will HDTV then have in the mix of incentives for the transition to digital. It may be that both HDTV and multi-channelling are mandated or it may be that the mix of these services becomes a matter of choice for the broadcasters. Until these policy decisions are determined, the AFC's view is that the HDTV quotas should not be increased.

However, if HDTV remains the primary incentive for digital conversion then consideration might be given to setting a series of targets for the raising of the quota based on an assessment of the availability of HDTV programming and the timeframe for the complete conversion to digital television.

The ABA does not provide detailed information on what programs have been broadcast in HDTV mode. As the Issues Paper indicates, the programs being provided in HDTV tend to be news current affairs, lifestyle, drama and variety, with some children's programs. It is also not clear how much Australian programming is being provided in HDTV. However, it would appear that some Australian drama, such as *Home and Away*, *Blue Heelers*, *All Saints* and *Last Man Standing* are being broadcast in HDTV, in addition to other genres of Australian programming.

What is clear is that a significant amount of investment has been made by the Australian production industry into HDTV infrastructure – both by production companies and facilities. This investment has been underpinned by the presence of the HDTV quota as well as the development of HD standards internationally and future business planning. During this review, the Australian Broadcasting Corporation (ABC) announced it will be upgrading its studio and field production equipment to HD at a cost of over \$10 million, citing such reasons. With such significant business investments being made, the AFC believes that it would be in the interests of the production industry that the government make a final and conclusive decision on HDTV in order that there be certainty for production companies and facilities into the future.

A key object of the Broadcasting Services Act is the promotion of a "sense of Australian identity, character and cultural diversity." For this reason there is regulation for Australian content on commercial television to ensure that this cultural objective is met. If HDTV continues to be the primary incentive for digital conversion the AFC would want to see that reasonable levels of Australian programming are being provided in HDTV to ensure audiences have a choice between Australian and foreign programs.

To ensure a proper assessment of this can be made we recommend that as part of their reporting requirements in relation to the quota, the broadcasters should be required to report on the amount and nature of Australian programming being broadcast in HDTV. Further, the AFC recommends that the ACMA in publishing its reports on compliance with the quota also provide comparative information on the proportions of HDTV and analogue Australian content being broadcast. This analysis would allow for a proper assessment of whether sub quotas for Australian content in HDTV might be necessary in the future.

The AFC notes that the issues paper canvasses the possibility of inserting requirements to ensure a certain number of hours of Australian programs or drama or documentaries be provided in HDTV. The AFC believes that consideration of such a proposal would need to occur once a decision has been made by the Government in relation to multi-channelling and HDTV, and the level of Australian content currently being broadcast in HDTV is clearer. The AFC recommends that, if the government decides to maintain the HDTV quota, a review should take place into the levels of Australian HDTV content being screened and the possibility of introducing subquotas.

5. Conclusion

In summary, the AFC is concerned that the arrangements for digital conversion and HDTV do not undermine the underlying cultural objectives of

content regulation and that Australian programming is not disadvantaged in relation to foreign programming.

The AFC argues, that it is essential that Australian programs are well represented in HDTV programming.

Access to minimum levels of Australian content by Australian audiences is a fundamental tenet of our television system. Whatever the government ultimately determines in relation to new television services, the new system as a whole, and its component parts, must deliver to Australian audiences adequate levels of choice, quantity and diversity of Australian content. At minimum, these levels must be at least equivalent and in proportion to those which audiences currently enjoy on free-to-air television.

To ensure a proper assessment of this can be made the AFC recommends that as part of their reporting requirements in relation to the quota the broadcasters should be required to report on the amount and nature of Australian programming being broadcast in HDTV. Further, the AFC recommends that the ACMA, in publishing its reports on compliance with the quota, also provide comparative information on the proportions of HDTV and analogue Australian content being broadcast. This analysis would allow for a proper assessment of whether sub quotas for Australian content in HDTV might be necessary in the future.

The AFC recommends that consideration of HDTV subquotas for drama, documentary or other programming would need to occur once a decision has been made by the Government in relation to multi-channelling and HDTV, and the level of Australian content currently being broadcast in HDTV is clearer. The AFC recommends that, if the government decides to maintain the HDTV quota, a review should take place into the levels of Australian HDTV content being screened and the possibility of introducing sub quotas.

The AFC believes that it is in the interests of the production industry to have the government make a final and conclusive decision on the HDTV, multichannelling and digital television regimes in order that there be certainty for companies and facilities into the future.

Until these policy decisions are determined, the AFC's view is that the HDTV quotas should not be increased. However, if HDTV remains the primary incentive for digital conversion then consideration might be given to setting a series of targets for the raising of the quota based on an assessment of the availability of HDTV programming and the timeframe for the complete conversion to digital television.

Finally the AFC believes the ACMA needs to play a significant role in educating in the public on HDTV and facilitating take-up.

Appendix A: The introduction of television, colour television, subscription television, video and DVD

A.1 Introduction of television

When television was introduced it did not become immediately available to all Australians with a desire to watch it. Rather, there was a planned progressive introduction of television over about a ten year period starting with the capital cities and then moving to provincial and country Australia. Some stations in the latter areas not going to air until the late sixties and early seventies. Moreover, the roll out of television to the most remote areas of Australia was still occurring in the eighties. This tends to skew the picture of the take up of television since we can assume there was a large unmet demand that was constrained by the decisions made about the structure of television.

One thing that can also be said is that there was a very high awareness of television before its introduction in 1956. The pros and cons of its introduction were the subject of continuous public debate from the early fifties and set manufacturers and retailers coordinated the manufacture and promotion of television once the decision was made to go ahead with its introduction. Once it did start, potential adopters had the opportunity to sample it in store demonstrations and in the homes of friends and neighbours. In other words there was probably very little confusion about what television had to offer.

Sydney and Melbourne have had television since it started and while data about the rate of take up across the nation is not easy to find, the most consistent set comes from these cities.

The data shows that the take up of television in Sydney and Melbourne was fairly rapid, so that over 50 per cent penetration was achieved by 1959 and over 80 per cent by the end of 1962. However, take up was uneven, with Melbourne leading Sydney until the end of 1961 and it was subject to seasonal variation with more sets being acquired in winter rather than summer. It took until the end of 1966, which was a year after the TEN stations commenced, for set penetration to reach 95 per cent in Sydney and Melbourne.²¹

It took ten years from its introduction into the two largest cities in Australia for television to reach virtual saturation – a technology the benefits of which must have been clearly understood by almost all in the community. Finance would have been an issue for some, but the price of sets declined as take up

²¹ Hughes H 1959, "The impact of television on the Australian economy: A preliminary assessment", *Economic Monograph No 22*, November; Jones C and Bednall D 1980, *TV in Australia: Its history through ratings* Australian Broadcasting Tribunal, Sydney; George Patterson 1963, *Television Report Number 17*, Melbourne

increased and many people who acquired sets did so by using consumer credit.

A.2. Colour television

Colour television was introduced in 1975. The American system had gone to colour in the mid fifties and the European in the mid sixties. The delay in Europe was caused by the push by the European consumer electronic companies to develop their own system and to exclude RCA, the owner of the patents for the NTSC colour system from the European market.²² Australia had adopted the European television standard and was to some extent dependent on the roll out of the European colour standard. The PAL standard was adopted by Australia in 1969 and in March 1972 Prime Minister McMahon announced colour would be introduced from 1 March 1975.

McMahon and Whitlam delayed the introduction of colour television until 1975 in part so that manufacturing of sets could be retained in Australia, helping economic growth and employment and so that the effect of consumer spending on the economy could be better regulated. They also set a long and clear lead time for the start of colour so that there was considerable time for consumers to consider the acquisition of a colour set.

Colour television took off almost immediately reaching more than 50 per cent penetration in Sydney and 48 per cent in Melbourne in 1977. It reached 89 per cent penetration in the five capital cities by 1981, but it then slowed taking until 1984 to reach more than 95 per cent of the population.²³

A.3. Subscription television

Subscription television started in Australia in 1995 about twenty years after the Australian government began the consideration of its introduction. It reached the point of take off in 1996. It reached more than one million households in 1999 and at present 1,673,000 households subscribe.²⁴ What is not known is the number of households in the last decade that have tried subscription television and discontinued it. This is because the subscription platforms do not generally make available their so-called rates of 'churn'. But it does mean that penetration stands at about 23 per cent of television households.

²² Austin MT and Milner HV 2001, "Strategies of European standardisation", *Journal of European Public Policy*, 8:3

²³ AC Nielsen, *Australian television : a ratings history, 1956-1998*, Sydney 1999: Dowling GR 1980, "Application of the Bass new product model to Australian television sales", *Australian Journal of Management* Vol. 5 Issue 1/2

²⁴ ASTRA 2005, Television review of 2004, At : http://www.astra.org.au/content/pdf/ASTRA_SubTVTrends_2004.pdf Accessed 20 June 2005

This level of penetration after a decade is not unreasonable by world standards. Factors that may have affected the rate of take up would include the cost of subscription, competition from other home entertainment options such as games and home video, and the picture quality and choice of viewing on terrestrial television being satisfactory for a significant section of the population.

While it does seem clear that the promotion of digital has been successful in convincing existing customers to switch to digital, it is less clear, in the absence of data, whether this has had the effect of convincing new subscribers to purchase the digital package.

A.4. Videocassette Recorders and DVD

The VCR was introduced into Australia in about 1981 and became the first device that attached to the television extending the range of viewing options available to Australian households. Its introduction cut across the diffusion of colour television and like colour television its take off was almost immediate. By 1984, the year that colour penetration reached more than 95 per cent, metropolitan households with a VCR reached 26 per cent and by 1987 it surpassed 50 per cent of metropolitan households.

However, it took until 1995, almost 15 years from its introduction, for the number of VCRs in metropolitan household to exceed 80 per cent and in 2004, almost a decade later, this figure stood at 86 per cent. In fact VCR ownership is in decline, even in households with more than one VCR. This can be explained in large measure by the meteoric rise in DVD player ownership, but it should be noted that despite the fact that Australia has been one of the strongest video rental markets in the world VCR ownership in metropolitan households was starting to flatten even before the introduction of the DVD player.²⁵

DVD players came on to the Australian market in 1997 and reached take off in about 1999. Since then the growth of DVD ownership has been rapid, particularly in the last two years as the cost of players has declined. DVD ownership has grown from 12 per cent in metropolitan households in 2001 to 62 per cent in 2004 making its penetration comparable to the take up of television in Sydney and Melbourne in the late fifties and considerably faster than the take up of the VCR.

Wholesale revenue from videotape and DVD distribution has grown by 355 per cent since 1990, reaching \$1,125.8 million in 2004.

²⁵ AFC, *Get the Picture*,

The proportion of distributors' revenue coming from the supply of VHS tapes to rental outlets has declined from 76 per cent in 1990 to just 3 per cent in 2004, reflecting the dramatic take-off of DVDs, particularly via sell-through retailers.

DVDs as sell-through product have represented a genuinely new market opportunity for video distributors. Total sales to retail outlets have grown from \$189 million in 1998 (all VHS) to \$903 million in 2004, with \$854 million of this coming from DVDs. Over the same period, total sales to rental stores have remained solid at around \$200 million annually (\$222 million in 2004, with \$189 million from DVDs). DVDs now account for 92.7 per cent of revenue to distributors.²⁶

Where DVD ownership will go may be predicted by the fact that manufacturers have started to phase out the production of new VCRs and one can assume that those with VCR only will be motivated to replace them with a DVD. However, the most interesting question is whether DVD growth will ever exceed the high point of VCR ownership.

²⁶ Ibid and "Record year for Oz distributor revenues", *Screen Digest*, 1 April 2005