

Submission by
Australian Consumers' Association¹
To
House of Representatives
Standing Committee on Communications, Information Technology
and the Arts
Inquiry into the uptake of digital television in Australia²
May 2004

Preface

The Australian Consumers' Association (ACA) is a not-for-profit, non-party-political organisation established in 1959 to provide consumers with information and advice on goods, services, health and personal finances, and to help maintain and enhance the quality of life for consumers. The ACA is funded primarily through subscriptions to its magazines, fee-for-service testing and related other expert services. Independent from government and industry, it lobbies and campaigns on behalf of consumers to advance their interests.

ACA also sits on the Australian Standards Committee *CT/2 – Broadcasting and related Services*, representing the interests of consumers in the development of the transmission, receiver, and interoperability standards that underpin digital television (DTV) in Australia. ACA has been involved in the debate surrounding the introduction of DTV since it started.

Introduction

The Australian Consumers' Association welcomes this Inquiry into the uptake of digital television in Australia. To make sense of our observations on this topic, we feel it is essential to briefly present our overview of the bigger picture of how the introduction of the DTV change has been mismanaged.

what might have been ...

The current direction for the digitalisation of the broadcasting industry has been driven by commercial and technological, rather than consumer, considerations. In our opinion, had the consumer view been taken, a very different shape for DTV in Australia would have emerged. Our view of this alternative colours our response to this Inquiry. We do not harbour vain hopes of a wholesale change in the direction of DTV in Australia. However, important concepts reside in the alternative that should not be lost in looking at the current environment. Digital broadcasting brings a number of benefits: improvements in picture and sound, more stable reception (although with different edge characteristics³), the possibility of enhanced and interactive services, and importantly, significant efficiencies in the utilisation of spectrum.

¹ ACA File Reference; 2 May 2005; Contact Charles C. Britton (02) 95773290

² <http://www.aph.gov.au/house/committee/cita/digitaltv/infopaper.pdf>

³ In marginal reception areas DTV remains of high quality until it fails – this is called the 'cliff effect'; analogue transmission attenuates gradually, delivering a marginally watchable picture often considerably outside the formal transmission zone – this is often referred to as a 'graceful degradation'

These efficiencies occur because digital compression techniques can be used to squeeze the information for TV picture and sound into smaller packages. These then do not require as much capacity to transmit. Thus the equivalent to our current PAL TV signal can be carried in about one quarter of the capacity currently dedicated to it. This is usually called standard definition digital TV or SDTV. SDTV opens up the possibility of sending four channels out where one currently exists. Therefore current broadcasters now possess the spectrum to transmit four times (at least) in digital what they do in analogue currently.

Our view has been that the windfall gain in transmission capacity due to digital efficiencies in the use of bandwidth should accrue to the community. Spectrum should have been allocated in SDTV (or some other administratively convenient unit) and auctioned. The current broadcasters should have been allocated one SDTV digital channel to allow migration of their current service to digital – this could have been achieved using a single multiplex facility on one analogue-equivalent channel. Perhaps an incentive to speed migration could have delivered them a second SDTV ‘chunk’ if the migration to digital was accomplished speedily, and they relinquished their analogue spectrum on time.

Our suggested approach would have rendered spectrum more granular and saleable. Players would be allowed to purchase a number of ‘chunks’ of spectrum and use them to provide standard television, multi-channels, multi-media services, low data rate utility services, and if there were to be an economic case to do so, aggregate sufficient bandwidth to create a high definition television (HDTV) offering. Thus, in an orderly way, all the various ways of using DTV technology would have been introduced, without the artificial distinctions and complex definitions. It would have smoothed the path for what to make of digital radio, which has the capacity to transmit pictures (and probably video) to look a lot like what has been characterised as datacasting.

Eventually all digital channels would become more or less multi-media, more or less interactive, shaped by consumer demand and service choice. Of course, the policy challenges of easing the transition to an increasingly competitive market, regulating Australian content, cross-media and foreign ownership would not disappear. These would require a policy response sensitive to the realities of digital convergence, coupled to an awareness of the ‘old-economy’ context that remains the main game for present.

what should be ...

ACA has a policy vision relevant to the current situation. In our view, it would be better public policy to enable the broadcasters to experiment with and deploy the full potential of the technology, while at the same time facilitating the entry of entirely new players with spectrum opened up by digital technology. In thumbnail terms we argue the following.

- A fourth commercial free-to-air (FTA) TV network should be allowed in the digital, but not analogue, space. The moratorium on any additional television

of the signal. Consumers value the preservation of signal quality, but can be disappointed by losing marginal analogue reception from transmitters for which they are notionally out of zone.

licenses casts a long and unwelcome shadow over the digital landscape. We are concerned with indications that this may well roll on to be a prohibition with no specified end-date. We believe the digital-only channels⁴ is realistic, possible and would provide an attraction for consumers to migrate to DTV. In our estimation this is the best way for the Government to intervene in the marketplace, i.e. set conditions for industry to create ‘pull’ factors, rather than adopt settings that favour inertia and then conjure with ways of ‘pushing’ consumers towards some desired end.

Development of digital-only TV services could be given a holiday from cross-media rules or media competition rules if reform of these proceeds. Such relief should be qualified with a sunset clause or milestone such as a threshold market or audience share, to trigger for divestment from the parent company. Some adjustment of Australian content rules may be appropriate given the digital only environment they would be confined to and multi-channel options they may be pursuing. However we do not consider there is any scope to exempt entrants from consumer protection standards. Entrants should be subject to the same subscription-prohibition and anti-siphoning as existing FTA broadcasters, because they would aspire to join this class of operator.

- The notion of datacasting should be removed from the legislative framework. The digital TV plans have dealt a deathblow to effective experimentation with digital TV – as the Review notes other countries have more successfully engaged the multi-channelling dimension of the technology. We have concerns 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.
- The legislated requirement to broadcast high definition (HD) content should be withdrawn. Our view is that HDTV as a compulsory part of the DTV landscape is just a further obstacle to the development of services that might suit consumers. There may evolve a niche market for more or less occasional HDTV feature broadcast. If the market demands and can bear this evolution, it would be useful; otherwise there is no case in our opinion to require any broadcaster to carry it.
- The incumbent FTA networks should be allowed to use their spectrum as they see fit (multi-channelling, high definition, program enhancements, data services etc), provided a standard definition service is maintained, and that this SDTV service be a simulcast of the analogue service while it remains in operation. Digital broadcasters must be given sufficient latitude to make and alter business propositions for consumers quickly and vigorously to discover what really works in this interactive market space. The conclusion we have drawn from observing DTV developments (or the lack of them) is that the regulatory corset into which DTV had been laced must be eased significantly for viable business models to even be tried in sufficient numbers for the

⁴ if allowed to fully utilise the possibilities of the medium – something we argue below should also apply to current FTA operators

market to determine what consumers actually want from this unexplored innovation.

However the FTA networks should not be permitted to offer subscription services. If they were to be allowed to do so this, they should be subject to regulation to ensure the continuance of FTA services as consumers currently enjoy them and require direct remuneration to the public purse for spectrum so employed.

- The national broadcasters should be allowed and resourced to do the same as the commercial operators.
- The demise of datacasting would free 2 clear national digital channels. 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 DTV broadcasting-proper, the opportunity for a successor Government to take a different path with a critical national resource must be preserved.
- A sensible use of these channels would, in our view, see one deployed for the 4th commercial network. The other should be configured as a community resource multiplex for (say) 5 standard definition services. These could be assigned for community broadcast, a national indigenous service, state and local government services and other community uses.

Such reforms would drive the digital change in TV to the consumers' advantage without destabilising the industry hugely.

Switching off analogue

It is impossible to ignore these wider DTV policy settings. There is a legislated date to reclaim analogue spectrum. However, it is unclear why there would be any urgency to do this, given the prohibition on further broadcasters, the failure of the datacasting model to attract commercial attention, and the probably disinterest of telecommunications companies in acquiring further large chunks of spectrum on which to run additional mobile services.

The Productivity Commission Broadcasting Inquiry observed in its final Report in 2000:

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?⁵

These questions remain unanswered five years later, and are highly relevant to this Inquiry.

⁵Productivity Commission Broadcasting Inquiry Report P11
<http://www.pc.gov.au/inquiry/broadcst/finalreport/>

The question of the analogue TV spectrum cut off date is now a looming consumer issue, especially with consumers buying expensive multi-tuner (analogue) equipment such as plasma screens and Hard Disk/DVD recorders - with a notional 3 years to go before switch-off. This has both retail disclosure and policy implications about how to give consumers greater certainty and help them retain the value of their equipment. Faced with the sluggish take up of DTV and suggestions for things like compulsory inclusion of digital tuners in all televisions or subsidies for consumers to acquire digital set-top boxes, it is important to analyse the consumer context of DTV as a technological change.

Television presents a difficult problem in terms of regulation – while it is relevant to regulate the media and spectrum management spaces, it is not usual or desirable for government to intervene in the appliance market, except for reasons of safety. In general, consumers in a competitive market make the best choices of technologies to meet their needs from what is available. 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 an element of ‘chicken and egg’ at play since there is a paucity of receivers and integrated sets for them to choose from. There is also no critical improvement or innovation in services to motivate them.

However, this is the way of markets. Numerous offerings in the consumer electronic marketplace fail to find favour with consumers. In the ordinary course of events this would be of little interest to government. Quadraphonic sound and 8-track stereo simply fell by the wayside, unremarked and unlamented by most. The successful transition from vinyl records to CDs was achieved absent government intervention, and there was no action on the failure of Digital Audio Tape (DAT) or mobile access to the Internet using WAP to achieve consumer market penetration.

It is also instructive to compare the DTV change with other migrations where there is the broadcast or network imperative that might have been seen to require government action. The transition from black and white (B&W) to colour was achieved without government intervention on consumer receiver equipment. It was successful because of an undeniably powerful attraction for consumers, and the retrospective compatibility of existing B&W sets with colour broadcasts and colour sets with B&W broadcast. The transition captured three key requirements for success – attractive innovation, interoperable equipment and backward-compatibility services.

The introduction of FM radio did not have these advantages. AM radio sets continued to function because AM broadcasters continued to function. FM radio has advantages, but not one that overwhelmed AM immediately. Indeed, consumers still enjoy both. Dual tuner radios provided interoperability for those that required it and this has eventually become more or less standard – but without government intervention. A transition to digital radio is a challenge to come, but we hear a great deal less from the radio industry than we do from the TV lobby. We perceive a radio industry more comfortable with competition, with a successful FM introduction behind it and not being pushed ahead of consumer demand by legislation. Where the digital radio may potentially come unstuck is when it runs into datacasting as noted above.

In the transition from analogue (AMPS) to digital mobile phones (GSM and CDMA), there was a government-mandated cessation of analogue network services. There was no question of interoperability of equipment between AMPS and GSM. There was a brief flirtation with dual use analogue/CDMA phones, although these had service quality and battery life issues that meant they did not find favour with consumers. Fortunately the Government has not required all handsets to be so configured. It was clearly possible to interconnect the AMPS network to the other mobile and the fixed line networks, so voice service compatibility was not an issue. However the primary intervention of the Government was that the operation of the AMPS network was to cease. The question of consumer choice did not enter into the picture. The key to the success of the digital mobile phone transition – although it was not without controversy – was the notice and transitional period given to consumers and industry.

Two key differentiators exist between this mobile data migration and DTV. Firstly a relatively small proportion of consumers owning mobile telephones at the time compared with the ownership of televisions. Television enjoys an extremely widespread adoption by consumers, a point returned to below. Secondly the expectations of consumers with regard to equipment life span – consumers expect televisions to last at least a decade, and even then will typically demote rather than discard an older set. Thus many Australian households own multiple sets. On the other hand consumers seem comfortable with mobile phone handsets that last considerably less and are turned over happily on a two or three year cycle. This was the same time frame given for the conversion of mobile phone networks from analogue to digital.

So how do the lessons of these case studies apply to DTV?

1. There is not an overwhelmingly attractive proposition for consumers, certainly not of the order of colour over B&W.
2. The transition is being driven by legislated push rather than market pull from consumers.
3. Service compatibility is currently being achieved by simulcasting rather than inherent compatibility of signal.
4. Pure digital sets would not accept analogue services and vice-versa. Dual tuner sets and set-top-boxes and other converters of digital signals to analogue can achieve some interoperability of equipment.
5. There are important differences in the transition of mobile phones from analogue to digital compared with television.

It is worth considering the current progress in DTV adoption. The Australian Broadcasting Authority publishes an estimate that by the end of 2004, there were 658,000 digital set top box receivers and integrated digital TV sets in Australian homes⁶.

This needs to be put in the context of existing TV installation. The ABA suggests that with approximately 7.3 million TV households, 99% of Australian households have at least 1 set and 55% households have a second one. (2004 Source: Paul Budde Communication estimates⁷). This would yield an adoption rate of about nine percent.

⁶ <http://www.aba.gov.au/tv/faqs/history.htm#14>

⁷ <http://www.aba.gov.au/tv/faqs/history.htm#7>

However, it is important to note that it is estimated there are currently around 17 million televisions in Australia, with an average of 2.4 televisions per household⁸. This drags the rate down to around four percent. A further item of further interest is the ownership of video recorders – the ABS reports 82% in 1997⁹ – all these would include at least one analogue TV tuner. Factoring this number in suggests a further reduction of the rate to three percent. These rates are generous in terms of the number of receivers/tuners that might need conversion, since they does not account for homes with more than one VCR and those with DVD or hard disk recorders with analogue tuners.

This phenomenon has been noted by industry, as the following comment on the UK market from a trade publication illustrates:

Whilst digital television technology (satellite, cable and terrestrial) has penetrated approximately 35% of UK homes, in most cases this is limited to a single TV. Since there are an average of 2.5 TVs per household (total of 60M TVs in 24M households), and on average more than one VCR per household, the retail community sees digital terrestrial TV as a major retail opportunity.¹⁰

However, while industry commentators might like to spin this situation as an ‘opportunity’, the real challenge is to the policy of abandoning analogue transmission any time in the near future. Consumers have not progressed much at all along the route of accepting DTV as a complementary technology for their homes, far less to the point of perceiving let alone accepting DTV as a substitute for their current devices.

Consumers would need to provide a digital-to-analogue converter (an STB or similar) for each device they wish to retain, or purchase another TV or recorder. An irritation for many may well be the fate of secondary embedded tuners for things such as simultaneous recording on VCRs and hard-disk recorders or picture-in-picture mode in TV receivers. This will be a substantial cost, representing as a significant investment over time and an unreasonable impost should it occur virtually overnight. The only supportable approach is to allow consumers to integrate digital receivers into the household portfolio progressively and in harmony with the natural replacement cycle for their equipment.

In our view, an attempt to speed the DTV conversion by requiring new TV sets to have a digital tuner would not address these issues, but would itself raise a number of problems. In summary these would appear to be:

1. What sort of receiver would be mandated?
2. How capable would the mandated receiver have to be in terms such as interactivity, electronic program guide functionality?
3. 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 PC add-in card)?
4. 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

⁸ <http://oceania.digitalmedianet.com/articles/viewarticle.jsp?id=31560>

⁹ <http://www.abs.gov.au/Ausstats/abs@.nsf/0/069a6b7be0bd1702ca256bcd00825590?OpenDocument>

¹⁰ <http://www.showtimemedia.com/pdfs/2002/media02.pdf>

- a poor outcome if there were not similarly priced digital capable sets to take their place.
5. 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.
 6. 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?
 7. What would the enforcement method be?

If a market emerges for dual capability TVs or the price of DTV units drops so that digital sets come to dominate, then so be it. However, in our view, there is no need for government to intervene with a requirement for TV sets to be configured in a specific way, particularly because such an intervention is likely to affect the average price of sets bought, and to impact the range of sets available. In any event such an intervention would not address the installed base of TVs. Would some program of rolling out converter or adapter units be necessary to meet an analogue closure based on the requirement for new sets to incorporate digital tuners?

This in turn raises the question of subsidies for consumers to acquire digital set-top boxes as discussed during the Productivity Commission Broadcasting Inquiry in 2000. Even were scarce public resources to be marshalled to subsidise households to acquire an STB 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.

Given the limited options for recycling broken, redundant or obsolete consumer electronic equipment, which typically contains a significant amount of toxic substances, it is also worth pausing to consider the environmental impact of accelerating the substitution of such a widely held device as the television.

Conclusion

In summary, we agree with the Productivity Commission that “A firm switch-off timetable is important.”¹¹ However we would suggest that the best guide to set this timetable is the behaviour of consumers in the marketplace, as discussed above.

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.

¹¹ Productivity Commission Broadcasting Inquiry Report P12
<http://www.pc.gov.au/inquiry/broadcst/finalreport/>