1. Background
The Interactive Television Research Institute is an independent non-profit interdisciplinary research centre based at Murdoch University in Perth, Western Australia. Our clients and research partners are global in character and include many of the world’s leading advertising brands and media platforms. Such clients include global leaders in the deployment of digital services including British Sky Broadcasting (BSkyB), the BBC, DirecTV, Turner Broadcasting, ESPN and the American Broadcasting Company. Collectively, our advertising clients account for approximately a third of the US television ad spend. Many now view the Institute as providing one of the world’s leading research centre’s in study of consumer behaviour associated with the evolving digital television industry.

Despite our global focus, we have maintained an active research agenda on issues specific to the Australian market. Recently, for example, we completed a three year study exploring how pre-school aged children respond to interactive television applications. This ARC funded project (in collaboration with the WA Department of Education, the Australian Broadcasting Corporation, Nickelodeon and the Nine Network) has seen over 500 children participate in research conducted in our Portable Audience Research Centre (PARC) – a portable lab housed in a caravan which visited 21 schools. We have also engaged in a number of studies exploring consumer responses to a wide range of digital TV applications. In terms of issues associated with Australia’s digital policy, we remain active participants and have engaged in a number of policy studies – indeed, the ‘beauty pageant’ datacasting option put forth by the Australian Democrats was based, in part, on our submission to the Datacasting Review in advance of the 2000 legislation. In 2002 we also conducted a survey of the digital TV industry for the then Australian Broadcasting Authority. Currently, we maintain a panel of 3000 viewers who participate in our various studies on a regular basis.

The Institute collaborates with researchers throughout Australia and the world attracting significant funding from its industry partners as well as from the Australasian Cooperative Research Centre for Interaction Design (ACID) and from ARC grants. To date the Institute has attracted over $5 million towards such research. ITRI researchers also present research findings at major industry conferences throughout the United States, Europe, Africa and Australasia.
The Institute’s research facilities provide dedicated infrastructure for the study of interactive television viewing. Our labs on the Murdoch campus provide mock living rooms simulating the in-home experience of viewers. In this environment we test digital TV content – usually using research methods reflecting experimental design so as to compare linear and interactive approaches in a controlled environment where variables can be properly isolated. The lab’s infrastructure includes a reference digital head end designed to modulate across satellite, cable and terrestrial platforms; and advanced audience measurement tools including eye gaze monitoring (mapping viewer eye movement over the TV screen), biometric measurement tools (including galvanic skin response) and perception analysers to map viewer’s moment-by-moment perceptions.

2. Submission to the House Committee Inquiry
In May, 2005, the Institute made a submission to the House of Representative’s Standing Committee on Communications, Information Technology and the Arts Inquiry into the Uptake of Digital Television in Australia ("Digital Television - Who’s Buying It?"). In that submission, we argued that Australia’s digital conversion policy to date has failed to deliver on its original objectives and that it has largely defaulted into a policy protecting the status quo. The approach has reflected a series of concessions designed to appease particular segments of the industry – resulting in the cobbling together of a ‘lose-lose’ montage – penalising one market actor to compensate for the fact that another has been disadvantaged in some way. Such an approach, based on assuring mutual disadvantage, clearly fails to respond to consumer demand, inhibiting innovation and chilling market investment.

The submission highlights key failures of the policy to date including an unwillingness to correct the overly restrictive datacasting genre regime following clear market failure in the wake of the collapse of the datacasting auction; the lack of competitive tension (the policy envisioned significant competition between established and new broadcasters which never materialised due to the overly restrictive datacasting restrictions); the absence of any meaningful interactive services; the lack of a backchannel and integrated platform; the absence of mandatory standards across a wide range of issues including receiver standards; constraints which have limited the capacity of national broadcasters to provide the market with innovative services; and the lack of clear consumer incentives and drivers to stimulate digital take up.

The submission concluded with a series of recommendations including the adoption of mandatory standards, the articulation of a digital TV action plan, the release of spectrum for two new digital channels in each market, one of which would play the role of platform integrator/datacaster and the other of which would constitute a digital only 4th network, and to maximise flexibility for spectrum use (including allowance for multichanneling).

The focus of the submission was primarily to voice our concern that the existing policy would fail to meet its objectives by the 2008 target date. Rather than reiterate these again, we have included a copy of our submission as Appendix ‘A’. A copy of the testimony of ITRI’s Director, Professor Duane Varan, at the Committee hearings held at the Institute is also available at http://www.aph.gov.au/hansard/reps/committee/R8604.pdf.
3. Moving Forward
Throughout the course of the past year, Minister Helen Coonan has repeatedly made comments highlighting the unique nature of the current juncture. At her address to the National Press Club on August 31\textsuperscript{st}, 2005, for example, she referenced Cosser’s observation that the current opportunity was akin to the building of the railroads in the 1900s – an opportunity that is ‘not going to come along again.’\textsuperscript{1} Her address to the inaugural ACMA conference highlighted her views that the interests of consumers are the end game translating into a need for new services and diversity.\textsuperscript{2} More recently, in commenting on the release of the current discussion paper she noted:

This changing landscape means it is timely for the Government to review its approach to media regulation and provides an opportunity to develop a strategic framework for media reform in Australia that truly brings us in to the digital age.\textsuperscript{3}

We commend the Minister’s vision in this regard. Clearly, if digital conversion is to be facilitated in the immediate future, a change of course is critical. In this context, we believe the measure to push back digital conversion to 2011-12 is prudent. Although we would have favoured a more aggressive approach to stimulating take up, we believe that proposed reforms provide a cautious approach which may yet prove to stimulate conversion against the newly proposed timeline. We caution, however, that for a 2012 end of simulcast to be met, it will be critical to meet key conversion milestones along the way. In this context, we would recommend further reforms should automatically trigger should the take up rate fall short.

4. Forecasting Digital Take Up
To explore the possible ramifications of the proposed policy we constructed a Bass diffusion model providing a forecast of digital take up going into the future based on Digital Broadcasting Australia’s (DBA) data on take up to date (see figure 1). We caution that we cannot verify the degree to which the DBA accurately reflects market penetration but have used the DBA data as it is the only dataset we know of providing detailed year-by-year estimates through the end of 2005. As can be seen by DBA’s data, the rate of digital take up has accelerated dramatically in the past year in particular. This may be the result of the dramatic decrease in set top box which are now available for as low as $85.

On the basis of our Bass diffusion model forecast, other things being equal, the current take up trajectory should facilitate analogue switch-off by 2012. This assumes, however, that current market forces will continue to influence take up. It is possible, for example, that the current take up reflects a disproportionately high number of adopters who purchased digital receivers so as to improve poor reception. The ACMA 2005 Digital Media in Australian Homes survey found that 51\% of adopters indicated improved reception and better picture as their primary motive in adoption.\textsuperscript{4} There could be saturation effects associated with diffusion among

\textsuperscript{1} Address by Senator Coonan to the National Press Club “The New Multimedia World”, August 31, 2005.
\textsuperscript{2} Opening address by Senator Coonan at the ACMA Broadcasting Conference, Canberra, November 9, 2005.
\textsuperscript{3} Address by Senator Coonan to CEDA “Meeting the Digital Challenge: Reforming Australia’s Media in the Digital Age”, Sydney, March 14, 2006.
households with poor reception that will limit the extent to which the existing trajectory continues.

In this context, the proposed reforms (liberalisation of restrictions on national broadcasters, no longer requiring HD-SD simulcast resulting in a defacto multichannel, potential datacasting services, etc.) may counter potential deceleration. Likewise, the reforms may further stimulate take up. On this basis we believe this trajectory can be used as a baseline against which digital penetration can be assessed. If the trajectory can be maintained, analogue switch-off in 2012 appears viable. This would result in a take-up of approximately 65% by June, 2008 and almost full conversion by 2010 allowing the final two years to focus on a strategy to reach diffusion laggards.

We have also attempted to provide a model assuming an 80% take up by 2012 so as to articulate a policy sentiment gap at key milestones. On this basis, a 6% shortfall in 2008 (59% take up) should signal warning lights indicating that the 2012 digital conversion deadline will not be met, other things being equal.

We recommend, on this basis, that the policy set automatic triggers for policy intervention in 2008 if take up is below 65% and in 2010 if take up is below 80%.

![Bass Diffusion Model of Digital TV Take Up Based On Existing DBA Reported Trends](image)

**Figure (1):** Bass Diffusion Model illustrating current trajectory of digital take up as well as alternative model assuming 80% take up in 2012.

We recommend further that such intervention be facilitated at two levels. If the take up by 2008 is at 65% or greater, we would view this as an indicator that the policy is on track to deliver analogue switch-off on schedule in 2012. We refer to this as the ‘optimal trend’. If in 2008 such take up is between 55% and 65%, (our critical marker is actually 59%) then some form of intervention will be required to accelerate take up. This constitutes our proposed ‘moderate intervention trend’. If, however, penetration remains below 55%, we would recommend aggressive intervention so as
to dramatically correct the trend as the policy is at high risk of failing to stimulate
digital take up. We will refer to this final scenario as the ‘aggressive intervention
trend’.

We will explore potential remedies which might be triggered at each of these critical
thresholds later in the submission.

5. Balancing Broadcaster vs. Consumer Interests
At the outset, we think it is important to comment on consumer interests associated
with adoption. Throughout the nine year history of digital television in Australia,
successive ministers have articulated a need to balance between broadcaster and
consumer interests. Minister Alston, for example, repeatedly highlighted the degree
to which “ordinary Australian must be given a compelling reason to buy a new
television set or a new set top box.” Proving better pictures and sound was never
seen as being compelling enough, in their own right, to stimulate conversion. As
Minister Alston explained, “But at the end of the day, I don’t think you’d buy it just
for that (picture clarity), you’d buy it because of the enhancement and the
datacasting…” And again: “Well look I think your point is valid in the sense that
people, at the end of the day, want a greater range of choice of programs, rather than
just simply wanting pretty pictures.” Minister Alston even cautioned against over-
regulation cautioning that: “We must also avoid placing impediments on new and
exciting technologies, denying consumers access to these services by imposing a
regulatory regime that artificially constricts the development of the industry.”

It is important to also note that the advent of digital television in Australia was
supposed to bring with it a host of new digital players designed to stimulate consumer
uptake. Minister Alston asserted: “The Government is confident that its decisions
will ensure that Australians enjoy the best broadcasting in the world while introducing
new information and entertainment options through the establishment of a thriving
and viable datacasting industry.” Alston recognised three keys pillars to the digital
equation: “The Government's objective is to ensure that the transition to digital TV is
as smooth as possible for consumers and, at the same time, provides the right balance
between new and existing players.” Yet it has been the interests of broadcasters,
almost exclusively, that have proven to be the central focus on the policy to date.

The 1998 and 2000 digital conversion legislation recognised that existing broadcasters
would need incentives to invest in digital infrastructure. For this reason, broadcasters
were awarded certain concessions including the 4th network moratorium through the
end of 2006, the datacasting genre restrictions, the free loaning of digital spectrum
and the like. We would argue that the necessary incentives have now been delivered
to existing broadcasters. Indeed, such broadcasters have even received a bonus in the
form of the absence of new competitors (datacasters) despite legislation requiring it.

---

6 Remarks by Senator the Hon. Richard Alston, Minister for Communications, IT & the Arts, to Radio 2UE
   Drive, 21 December, 1999
7 ibid
8 Remarks by Senator the Hon. Richard Alston, Minister for Communications, IT & the Arts, to the Annual
10 Remarks by Senator the Hon. Richard Alston, Minister for Communications, IT & the Arts, to the Digital
   Revolution Conference hosted by Gilbert and Tobin, June 14th 2000.
In this sense, the public has paid its debt… broadcasters have been given their fair go. In the path moving forward, the interests of consumers – who have been short-changed in this equation – should now prevail.

Accordingly, the question we raise is why the proposed policy framework continues to protect the interests of broadcasters above those of consumers? Clearly, consumers favour more content choice. The experience globally has demonstrated that such additional content is the main driver to digital uptake. Our 2002 survey soliciting the views of almost a third of those working in the digital television sector in Australia found that even the industry itself viewed multichannelling as the strongest driver.11 Yet in Australia, both the advent of a fourth ‘digital only’ network and of multichannelling are prohibited.

A key contradiction in the proposed framework, we believe, is that many of the most compelling ‘drivers’ for digital uptake, from the consumer’s perspective, are provisioned for the end of the simulcast period. In this sense they appear out of sequence.

There is another flaw in the ‘driver following switchover’ argument… it provides clear incentive to stunt rather than champion digital conversion. Why should broadcasters stimulate take up when the end result is the introduction of greater competition? We believe that the policy acts as a disincentive rather than a stimulant.

This, we believe, justifies the automatic triggers we are proposing. If market trends fail to grow at an adequate pace or if market sentiment fails to respond to the proposed incentives and stimulators, then consumer drivers should be triggered so that consumer interests can better shape digital take up.

5. The ITRI Survey (2006)

To help further explore the potential policy implications associated with the proposed framework, the Institute conducted a survey drawing from members in its TV Panel. This panel consists of 3000 viewers recruited to participate in ITRI’s on-going research. Most of these panellists were recruited through newspaper ads and direct mail initiatives although a substantial portion were recruited through a local market research firm.

For the purpose of this research, panel members were surveyed to solicit their views on a range of issues associated with digital conversion. Sample boosting for key variables (owners of digital receivers, owners of high definition receivers) helped provide adequate cell sizes for analysis. Unfortunately, the short time frame between the release of the discussion paper (March 14, 2006) and the closing date for submissions (April 18, 2006) made it impractical for us to provide final findings, as the research is still in progress. However, we are happy to provide the Department with preliminary findings based on completion of the first 662 respondents. This represents an approximate statistical error rate of plus or minus 4%. We also weighted the observations in our sample so that the percentage of high definition DTT receivers (3.7%), standard definition DTT receivers (13%) and Pay TV subscribers (24%) exactly matched the actual percentages for penetration in Australia (DTT

---

receiver estimates were based on the 2005 ACMA “Digital Media in Australian Homes” survey).\textsuperscript{12} It should be noted that as the TV Panellists are drawn exclusively from the Perth metro area, the sample is not nationally representative. Nonetheless, some interesting trends emerge.

We presented the respondents with a range of hypothetical scenarios associated with potential digital content distribution including an a) IPTV service without commercials but which charged $2 for TV programs and $4 for movies; b) a similar IPTV service which was free but included advertising; c) a 4\textsuperscript{th} network available on digital receivers only; d) a mobile phone platform charging $2 for TV programs and $4 for movies; e) a similar mobile platform which was free but included advertising; f) a limited subscription TV system available using their existing TV aerial; and finally g) an interactive datacasting channel. Respondents were provided with descriptions of each of the above scenarios and selected their response using a 7 point semantic differential scale from highly unlikely to highly likely. Figure (2) illustrates the weighted means of respondents based on our preliminary data.

![Figure (2): Weighted means reflecting likelihood of adoption of various digital scenarios.](image)

As can be seen from the available data, the most compelling consumer drivers are multichannelling, IPTV (whether for free content with ads or for paid content) and the availability of a digital only 4\textsuperscript{th} network. None of the other options, including mobile video or datacasting, reflected positive consumer sentiment.

We divided our respondents into nine cells based on whether they had adopted digital receivers (further divided by high vs. standard definition receivers) and whether they

were pay TV subscribers (or if not, whether they were likely to be in the next five years). This allowed us to explore the potential impact of these various scenarios on different consumer cohorts. Figure (3) provides a summary of means across the various sub-cells. Again, as the research is still in progress, it is not possible to draw definitive conclusions. Based on our existing data, however, some preliminary observations can be made.

<table>
<thead>
<tr>
<th>Likely Adoption</th>
<th>Pay TV Subscriber</th>
<th>Likely Future Subscriber</th>
<th>Not Likely Subscriber</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD Receiver</td>
<td>4.87/4.60</td>
<td>6.25/6.00</td>
<td>3.55/4.20</td>
</tr>
<tr>
<td>4th Network</td>
<td>4.87</td>
<td>6.38</td>
<td>3.53</td>
</tr>
<tr>
<td>Mobile (PPV/Free)</td>
<td>2.60/2.50</td>
<td>2.50/2.50</td>
<td>2.35/2.40</td>
</tr>
<tr>
<td>Multichannel</td>
<td>5.97</td>
<td>5.88</td>
<td>5.25</td>
</tr>
<tr>
<td>Limited Pay TV</td>
<td>3.60</td>
<td>4.38</td>
<td>3.45</td>
</tr>
<tr>
<td>Datacasting</td>
<td>3.80</td>
<td>4.75</td>
<td>3.25</td>
</tr>
</tbody>
</table>

| SD Receiver       | 5.00/4.92         | 6.20/6.30                | 5.66/5.15             |
| 4th Network       | 4.50              | 6.60                     | 6.27                  |
| Mobile (PPV/Free) | 1.75/1.92         | 3.30/5.00                | 2.31/2.00             |
| Multichannel      | 5.33              | 6.30                     | 5.80                  |
| Limited Pay TV    | 3.08              | 5.60                     | 4.19                  |
| Datacasting       | 4.25              | 3.70                     | 3.54                  |

| No Receiver       | 5.16/5.50         | 5.32/5.80                | 4.42/4.88             |
| 4th Network       | 4.54              | 5.50                     | 5.07                  |
| Mobile (PPV/Free) | 2.81/3.54         | 3.52/4.15                | 2.59/3.07             |
| Multichannel      | 5.63              | 5.74                     | 5.58                  |
| Limited Pay TV    | 3.84              | 5.09                     | 3.47                  |
| Datacasting       | 3.99              | 4.33                     | 3.61                  |

**Figure (3):** Table of means for adoption across the different digital scenarios broken down by pay TV subscription and digital TV receiver adoption (based on preliminary data).

The strongest responses to the adoption of IPTV services come from those who have not yet subscribed to a pay TV service but consider themselves likely to do so over the next five years and who have already adopted DTT receivers. This suggests that the strongest impact of IPTV will be in potentially preventing this cohort from subscribing to an existing pay TV provider.

An interesting trend also appears to be apparent with regard to the availability of a 4th digital only FTA network. Here, the impact associated with such a channel is marginal among existing pay TV subscribers but highest among those who consider themselves likely to subscribe in the next five years. Notwithstanding this trend, however, even with the availability of a 4th FTA network, this cohort still considers themselves likely to subscribe within the next five years (HD 5.25, SD 4.60, NR 5.22).

The pattern reflecting respondent enthusiasm for multichannelling is more evenly distributed reflecting positive sentiment across cells. The Limited Pay TV scenario provided positive appeal to likely future pay TV subscribers alone, suggesting that the potential effect of such a service would concentrate most on likely pay TV subscribers (effectively competing with existing providers for growth).
In exploring the potential impact of the various digital scenarios on existing pay TV subscribers, the available evidence shows no negative impact threatening existing subscriptions. It appears that existing subscribers perceive themselves as continuing in their loyalty despite the range of scenarios they were presented with.

6. Optimal Trend
As noted earlier, our Bass diffusion model predicts that there is a strong probability (other things being equal) that the existing digital adoption rate will meet a 2012 analogue switch-off target if current trends continue. In this context, the proposed reforms should further reinforce this trend.

We believe that a number of the proposed reforms should act to further stimulate the market. The removal of the genre restrictions on the multichannelling restrictions imposed on national broadcasters and the removal of the high definition / standard definition simulcast (which, in effect, allows for an HD multichannel) provide the market with significant opportunities to access new content.

We would have preferred to see specifics on the new rules associated with the datacasting regime. There certainly has been no shortage of reviews exploring this landscape… it is not clear why such detail is lacking in the proposed policy framework. Accordingly, it is not possible to predict which new players might emerge and what type of datacasting service they might offer. Hence, datacasting represents an unknown ‘wildcard’ in the conversion strategy… until such detail is provided it will be difficult to evaluate.

Under the optimal scenario, therefore, the current reforms may be sufficient to stimulate digital conversion in 2012.

7. Moderate Intervention Trend
Under a scenario where digital penetration is between 55% and 65% in mid-2008 (or below 80% by mid-2010), we recommend a moderate policy intervention. The primary change in policy we envision under this scenario is the removal of multichannel restrictions on FTA broadcasters. It is important to note that as the provision of such channels is optional (and not imposed on FTA broadcasters), there is a risk that it will not stimulate sufficient take up (in which case a more aggressive intervention may be required at the next two year review). Other intervention measures may also be considered at this juncture.

Broadcasters and the pay TV industry may argue that such competition (from a new ‘digital only’ broadcaster or from multichannelling) would significantly hurt their business models. As the Allen Consulting Group concludes with regards to such multichannelling: “… there is considerable scope to accommodate a reduction in industry-wide profitability before the operational viability of the industry at large is threatened.”13 Likewise, the Allen Consulting Group report considers the argument that quality would diminish ‘unfounded’.14

---


14 ibid
At any rate, by introducing a trigger for the implementation of commercial FTA multichannelling provisions, there are incentives for those who oppose such policy to help champion take up (to prevent such a trigger being activated).

8. Aggressive Intervention Trend
We maintain that a more aggressive intervention becomes necessary if, by 2008, DTT penetration remains below 55%. Our models predict that under this scenario, it will be unlikely that an analogue shut-down can be facilitated by 2012 necessitating further delay in bringing the simulcast period to a close.

We believe that under these circumstances, in addition to the changes suggested in a moderate intervention, a 4th ‘digital only’ FTA network should also be authorised as this will provide the best chance for stimulating take up (although multichannelling provides a more compelling proposition for consumers in our sample, the unpredictability of multichannelling activity by existing FTA networks makes this a less certain driver). Other measures to boost take up might also be considered.

9. Implications of Recommendations on Spectrum Planning
The three scenario mechanism we advocate imposes unique demands on existing spectrum planning. Assuming that the analysis of available spectrum conducted by the former Australian Broadcasting Authority is still relevant, most capital cities will only have capacity for two new digital channels.

We recommend that one of these channels be released for datacasting services. Consistent with our previous submissions, we believe that a beauty pageant represents the best means of allocating this spectrum. In this way, the task of differentiating a datacasting service from a FTA channel is left to aspirant datacasters (that such distinction is protected can then form a key consideration in the selection process).

We also recommend that new legislation be enacted that enables this datacaster to emerge as a platform integrator so that it can potentially deploy a backchannel, EPG and interactive applications that can be integrated across all channels. The lack of such platform integration, we believe, has retarded the evolution of digital interactive services in Australia. Common carrier provisions may need to be imposed on such a platform integrator to ensure that all channels have access to such services on equal terms.

As the intervention triggers may, potentially, necessitate the launching of a 4th network, we recommend that spectrum for the second of these two available channels be held in reserve until 2008. This provides the government with maximum flexibility. Not only can it then evaluate whether take up trends require such a network, but it can also review the performance of the then existing datacasters to evaluate whether to release an additional datacasting channel.

In those cities where more than two channels are available, we would recommend that additional datacasting services be allowed so as to maximise innovation in the market.
10. The Role of Digital Pay TV
In other countries, digital pay TV platforms have played a key role in facilitating digital conversion. Accordingly, statistics reflecting digital take up often aggregate DTT, digital satellite and digital cable take-up. A key question which remains unresolved is whether such aggregation is appropriate in the Australian context.

A key assumption in other markets is that if viewers can access FTA networks over a Pay TV platform then such viewers are no longer dependent upon their terrestrial FTA broadcast system. As Australia has no ‘must-carry’ provisions for FTA signals over Pay platforms, it cannot inherently be assumed that digital Pay platforms provide appropriate substitution. Of course, such ‘must-carry’ provisions don’t have to trigger immediately… it is reasonable to argue that until switch-off is facilitated such a provision doesn’t inherently have to feature as a part of the digital conversion strategy. But if the Government wishes to include digitisation across Pay TV platforms as part of its overall ‘take up’ strategy, it must provide a mechanism ensuring that the FTA signals are available at the time of digital switch over.

Given that other facets of provisions for the end of the simulcast period are outlined in the discussion paper, we would maintain that such ‘must-carry’ provisions should also be included. Alternatively, such Pay TV numbers should not be included in aggregated estimates of digital take up as they have no direct bearing on analogue switch off.

11. The Digital Action Agenda
We were delighted to see a proposed ‘Digital Action Agenda’ feature as a central component of the proposed framework. We believe this constitutes an important part of any strategy moving forward. However, the ‘real’ impact of such an agenda depends heavily on the extent to which such a body is given clear mandate and on the degree to which its views are respected within the industry (necessitating a high profile leaders group). We believe that it is critical that the composition of such a leaders group draws from across the full value chain of the evolving industry representing at least the interests of broadcasters (both commercial and national), consumers, new prospective players, manufacturers (importers/retailers), advertisers and content producers.

12. Consumer Research as an Integral Part of the Action Agenda
The first Digital Action Agenda in 1999 (‘Thinking Outside the Box’) highlighted both technological and consumer drivers in its strategy for digital conversion. Although technical matters soon consumed deliberations associated with implementing digital strategy, consumer issues were largely neglected. For most of the past nine years, there has been little quality research designed to help provide empirical analysis of emerging trends. ACMA’s recent digital survey represents a refreshing development in this regard.

We believe the articulation of a research agenda which clearly lays out key questions which should form a central part of the Digital Action Agenda. Such research not only helps better inform evolving policy, but it provides for a better foundation through which to facilitate dialog with key stakeholders. We are happy to assist in facilitating the development of such a research agenda as part of the wider Digital Action Agenda.
13. Quality of Digital Service
We have focused most of our comments in this submission on the take up of digital television receivers. While the proposed policy may ultimately prove its capacity to stimulate digital take up even further, it is also important to comment on the qualitative character of Australia’s digital service.

For the most part, the proposed policy framework seems likely to produce a digital market with minimal innovation (primarily limited to ‘zapping’ boxes). Accordingly, this will help transplant television’s existing paradigm with minimal disruption. However, the structure of the global market is changing dramatically. The lack of mandatory standards and a common integrated platform significantly constrain the capacity for our market to introduce many of the most exciting features made possible through the digital revolution.

This represents a ‘lost opportunity’ moving forward. To some extent, the changes we’ve suggested help alleviate this problem in part – by creating an integrated platform, for example, enabling interactivity. Our primary concern in this regard is that the lack of such innovation in the Australian FTA environment will insulate Australian content producers from the very significant changes that are taking place throughout Europe and the United States. This will directly challenge our cultural exports which will, in turn, gradually erode the local cultural industries who depend on occasional exports to underwrite investment in the domestic sector.

13. Conclusion
Throughout the past five years, we have been strong critics of the Government’s digital television strategy. We approached this review sceptical of its viability. Following a more detailed review of the “Meeting the Digital Challenge” framework accompanied by our own analysis of market trends and consumer sentiment, we now believe the proposed policy objectives are achievable within the newly proposed timeframe. We strongly suggest, however, that mechanisms be introduced which act to intervene in the event that the consumer take up falls short of the necessary adoption rate to facilitate conversion. As we have demonstrated, more conclusive evidence of this diffusion pattern should be available by 2008.

Assuming a 2012 analogue-digital switchover, this currently positions us at Year 9 of a 15 year roll out. In other words, we have come almost two-thirds of the journey. The Australian digital TV experience to date has been difficult. In all likelihood, the path ahead will be no easier.

We are now confident, however, that with good policy implementation and a flexible approach to the path ahead, an end to the simulcast period can be achieved by 2012.

We welcome the opportunity to provide the Department with any additional information we can which might further assist it in its attempts to craft a path moving forward. Please feel free to contact our director, Professor Duane Varan, at varan@itri.tv if we can be of any further service.
Appendix A

Submission to the
Standing Committee on Communication, Information Technology and the Arts
Digital Television Inquiry

Submitted by
The Interactive Television Research Institute
Murdoch University, Perth – Western Australia
May 3rd, 2005

Background
The Interactive Television Research Institute is an independent non-profit interdisciplinary research centre based at Murdoch University in Perth, Western Australia. Our clients and research partners are global in character and include many of the world’s leading advertising brands and media platforms. In the United States, for example, our advertising clients account for over one third of the US TV advertising spend. Many now view the Institute as providing one of the world’s leading research centres in study of viewing behaviour associated with the evolving digital television industry.

Despite our global focus, we have maintained an active research agenda on issues specific to the Australian market. Currently, for example, we are in the final stages of a three year project exploring how pre-school aged children respond to interactive television applications. This ARC funded project (in collaboration with the WA Department of Education, the ABC, Nickelodeon and the Nine Network) has seen almost 500 children participate in research conducted in our Portable Audience Research Centre (PARC) – a portable lab housed in a caravan which visited 21 schools. We have also engaged in a wide range of studies exploring consumer responses to a wide range of digital TV applications. In terms of issues associated with Australia’s digital policy, we remain active participants and have engaged in a number of policy studies – indeed, the ‘beauty pageant’ datacasting option put forth by the Australian Democrats was based, in part, on our submission to the Datacasting Review.

The Institute’s research facilities provide dedicated infrastructure for the study of interactive television viewing. Our labs on the Murdoch campus provides mock living rooms simulating the in-home experience of viewers. In this environment we test digital TV content – usually using research methods reflecting experimental design so as to compare linear and interactive approaches in a controlled environment where variables can be properly isolated. This includes a reference digital head end designed to modulate across satellite, cable and terrestrial platforms; and advanced audience measurement tools including eye gaze monitoring (mapping viewer eye movement over the TV screen) and perception analysers to map viewer’s moment-by-moment perceptions.

Given the many submissions the Committee will undoubtedly face on this issue, we will keep our comments short. We are happy to expand upon any of the issues noted below and are keen to provide the supporting research, where appropriate, if the
Committee so wishes. Likewise, the Institute’s Director, Professor Duane Varan, is happy to testify directly to the Inquiry if it please the Committee.

**Australia’s Digital TV Roll Out**

There is no question that television market’s globally have experienced a range of challenges associated with the roll out of terrestrial digital TV platforms. Given the wide range of parties which are integral to effectively facilitating this transition and the inherent technical complexities associated with the technologies, this is understandable. Indeed, we believe it represents the single biggest challenge facing the broadcast industry since its inception – significantly more complex, for example, than the transition to colour.

In some regards, Australia’s policy to date has been successful on a number of levels. The necessary transmission infrastructure, at least for most of the capital cities, is largely in place. Australia’s decision to adopt the DVB digital standard (as opposed, for example to the ATSC standard which could have been adopted given the high definition character of Australia’s roll out) has proven itself, by global measures, to have been the best available option. There are now a wide range of digital TV receivers in the market, by some estimates in excess of 10% of households – and these are available at relatively low cost. This is further supported by regular promotional campaigns supported by broadcasters informing viewers of the potential benefits associated with digital television. These achievements should not be discounted.

Despite these gains, however, Australia’s digital policy has not lived up to its potential. Indeed, we believe that on many levels (these will be elaborated on), the policy is failing to live up to its obligations. Our view is that the policy is falling short in significant measure and will not – on its current trajectory – advance Parliament’s intention to shut down analog TV in the foreseeable future. It is also our view that the failure is not a primary function of market factors, per se, but is a direct result of poor policy. Our policy concerns and their potential impact on the market will be addressed in specific terms in this submission.

**A Policy Protecting the Status Quo**

As noted earlier, crafting an effective policy facilitating digital migration is no easy feat. Not only are there a wide range of technical issues to navigate through, but there are a wide range of market actors whose participation is critical to the effective implementation of television’s new value chain. Beyond technical considerations, there are also a wide range of commercial considerations essential to making any approach sustainable. The guiding principles for policy are also often ambiguous as the prevailing principles of the past (e.g. spectrum scarcity) don’t quite fit the new landscape. And it is always difficult to anticipate consumer demand in advance – requiring planning for a future that hasn’t yet arrived.

It’s clear that any transition strategy would have its own challenges. What is problematic about the approach in Australia is not that digital migration is complex… it’s that the process has so clearly shifted from its original stated objectives. Rather than usher in a new age – the policy is attempting to replicate the analog paradigm in a digital universe. The situation is less a reflection of the original legislative intent… rather, it has resulted from the manner in which the policy has been implemented.
At every juncture, the policy has navigated a path forward by making ad hoc concessions designed to appease particular segments of the television industry. What has been cobbled together is a ‘lose-lose’ montage - penalising one market actor to compensate for the fact that another has been disadvantaged in some way. It is a path forward whose premise is based on mutual disadvantage. Rather than maximise the capacity to respond to audience demand (critical in navigating into an uncertain future), the policy inhibits market innovation and chills investment.

This situation cultivates an environment where the only clear ‘win’ is associated with preservation of the status-quo. In other words, the policy framework effectively is designed (whether or not by intent) to migrate the existing paradigm of television – complete with its existing value chain and players – across to digital with minimal disruption. This approach is problematic on three levels. First, it fails to capitalise on the many advantages which digital affords. Second, as a result, there is less incentive for consumers to adopt – significantly delaying analog shut off (thereby maximising spectrum efficiency). Third, it fails to stimulate market adaptation in the television sector – which will be critical to preserving Australia’s capacity to maintain strong cultural industries going into the future (this theme will be elaborated on later in the submission).

It is important, therefore, to question what the intent of the digital migration legislation is. If it is simply to move the existing broadcasters from analog to digital and preserve television’s existing paradigm, then the best path forward would be to adopt a plan similar to the FCC in the United States and require digital tuners in all TV sets by a particular target date. Over the course of 15 years, a migration would naturally be facilitated. The current policy framework serves this direction well… in this environment the transition process is relatively straightforward and simple. The relative cost of this to consumers would also be minimal as television production globally has largely been commoditised – resulting in significant downward pressure on price which, in effect, absorbs perceived negative consumer sentiment (as costs appear to remain stable, in relative terms).

If, however, Australia is to benefit from the full range of benefits enabled by digital and if the Australian market is to adapt to global change in this arena, a more sophisticated policy is required. At this level, Australia’s policy falls short. Specifically, we raise concerns with regards to the following:

**Datacasting**

Perhaps the single area where the policy has most visibly failed has been in the inability to effectively introduce datacasting in Australia’s digital television landscape. The failure of the datacasting auctions was a clear indictment on the market’s rejection of the specific model of datacasting put forth by the Government.

Australia’s datacasting regime is a classic textbook example of poor digital television policy. In fact, 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.
What is even more remarkable, however, is that faced with clear evidence that the standard was non-viable (following the collapse of the auction), the Government chose to continue to adhere to the standard rather than attempt to adapt it to respond to the market. This, we believe, constitutes a fundamental flaw in the digital framework as a whole. It is also a reflection of the process through which the policy is being implemented; highlighting its inability to adapt to market demand.

The original legislation crafted an environment where datacasting was introduced as a vital stimulant to accelerate digital adoption by consumers. The datacasting fiasco has, in effect, left a void in what was supposed to be one of the critical drivers. This, we believe, is the single biggest failure of the policy to date.

**Competition Implications**

A key feature of the digital legislation was a degree of ‘competitive tension’ designed to balance the interests of incumbent and new television players. This recognised, we believe, that incumbents would best be motivated to facilitate the transition where there was competition in the character of the digital service itself. It also responded to on-going pressure to diversify media control in Australia.

The datacasting fiasco has resulted in an environment where there is no competition within the terrestrial digital platform. In this context, key decisions reflecting the character of the platform and its key features are left to incumbents alone – who have minimal incentive to facilitate change. This suggests that, others things being equal, the path moving forward will continue to reflect minimal change – retarding the introduction of the full range of possibilities enabled by digital and thereby slowing digital take-up.

At a level of principle, there are also serious questions here about the degree to which the policy is inhibiting diversity of voice in Australia’s television landscape. The existing situation, dominated by three commercial networks, has been justified in Australia on the basis of spectrum scarcity. A good part of that scarcity has been further replicated by the decision to adopt high definition television. However, the legislation allowed for competition – and the spectrum required to deliver against this was identified. The failure to introduce such competition is, therefore, a further reflection of the failure of the policy to diversify Australia’s television sector.

**Interactive Services**

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. Our research has consistently demonstrated that such interactivity can significantly enhance the viewing experience. Such services also introduce new business models.

In research exploring the impact of interactive advertising, for example, we have demonstrated that interactive ads deliver impact equal to seeing a linear ad repeated three times (see attachment ‘A’). For media planners, this represents a
significant opportunity as attracting repeat exposure gets more and more challenging in a fragmented audience viewing environment. This helps explain why, for example, advertisers in the UK have so enthusiastically adopted interactive ads despite the cost premium associated with such advertising.

Potential new revenue streams are particularly important for broadcasters because the economics associated with television are shifting from ‘economies of scale’ to ‘economies of scope’. In other words, increasingly in the future, a broadcaster’s profits will be made based on their capacity to leverage their content assets across platforms rather than on the basis of the size of the audience on any single platform at any single point in time. In this context, a key challenge for broadcasters is to diversify revenue streams – breaking the almost exclusive dependency they currently maintain on a single model of advertising (the 30 second commercial).

Interactivity, therefore, is critical to embracing television’s new business models. But by its very nature, such interactivity is disruptive to the existing business practise. In this context, other things being equal, broadcasters have more invested in the status quo than in change.

The advent of the Personal Video Recorder ultimately forces this transition in the market as the existing 30 second commercial model rapidly erodes outside of those programming opportunities still able to reproduce critical mass. Advertisers, therefore, are keen to explore new advertising models based on viewer ‘engagement’ rather than viewer ‘exposure’ alone. In time, we believe, a fundamental shift occurs – and this will increasingly require a capacity to facilitate interactive content.

While it is not the role of Government to ‘pick winners’, the issues associated with the lack of interactivity in the current broadcast landscape reflect policy decisions – rather than market forces. By inhibiting datacasting, for example, a critical stimulant for interactive services has been lacking. Ultimately, the failure for Australia’s digital policy to effectively cultivate interactive services is another example of selling consumer’s short on the digital proposition.

**Backchannel and Integrated Platforms**

A wide range of interactive services reflecting digital’s promise require a backchannel facilitating two way interaction with the viewing audience. This has implications for both receiver standards (to be discussed separately) and a significant investment in the back-end technology necessary to facilitate such transactions.

The situation in Australia is such that a backchannel of any meaningful kind is difficult to evolve given the fragmented nature of the platform. As each broadcaster is in complete control of their own spectrum, it is not possible to create a single unified system optimising the experience for viewers.

For example, if a viewer watched an interactive ad on the Seven network and chose to interact – and then switched to channel Nine and chose to interact again (in both cases we’ll assume this required a two way transaction as opposed to a
frontchannel interaction) – this would require two separate calls. For advertisers, this could also mean having to deliver to two different requirements and potentially paying additional premiums for access across two platforms.

Although there have been parties interested in exploring commercial models based on distributing free or subsidised set top box receivers in return for facilitation of the platform, the inability to aggregate across interactive services on the platform significantly chills investment in this regard.

In the UK, by way of contrast, regulators have separated the platform and individual channels across that platform. Although Freeview hasn’t yet attempted to exploit a backchannel (though it has the capacity to do this), this disaggregation of channel and platform enables a wide range of services which make the platform, as a whole, a significantly more attractive proposition for viewers. For example, an EPG sitting across the platform provides a more integrated and fulfilling experience for the viewer than the Australian approach of having separate EPG’s for each channel.

Again, the issue is not to mandate any particular market response… but to facilitate the provision of an integrated platform capable of responding to a wide range of commercial opportunities associated with the backchannel. Australia’s existing policy framework largely inhibits the cultivation of such a platform.

**Receiver Standards**

Although Australia has over-regulated many aspects of the industry, we believe it has under-regulated questions associated with standards. On one level, this creates a chaotic environment with a large range of devices sold in the market with no assurance that they meet minimum standards.

When the digital proposition is limited to ‘zapping boxes’ – as is currently the case – this introduces a minimal risk to the market. Primarily this risk is associated with a loss of consumer confidence in digital due to poor performance of digital receivers. However, as more sophisticated receivers are introduced following the provision of more advanced digital services this creates a chaotic environment as all providers are held to the lowest common denominator. This, in practise, further compromises the digital proposition for viewers.

Mandating digital standards and developing a compliance scheme should be an integral feature in Australia’s digital policy framework.

**Role of National Broadcasters**

It is clear that the provision of either enhanced or additional content is a key driver for digital uptake. The experience in the UK demonstrates that when digital penetration is low, channels have little incentive to provide such content. But as digital adoption approaches a critical threshold (let’s assume this begins to become significant at 33% penetration), channels begin having incentive to make such content available.

So a key question is how new content features as part of the digital proposition prior to it featuring significant enough audience scale. This is a chicken or the
egg question. New content drives uptake. But critical scale is required to provide the necessary incentive to get content in the first place.

In the UK, the national broadcaster (the BBC) has fulfilled this role. The provision of the BBC’s digital content (both its additional channels and its interactive enhancements) have clearly stimulated digital adoption – indeed, in terrestrial space it is probably the main market driver. This has also played a significant role in ‘training’ viewers for the new interactive landscape.

In Australia, however, national broadcasters have largely been inhibited from driving such innovation – not only through limited budgeting but, perhaps more importantly, through legislation barring them from providing specific content genres across their new services. Although a second ABC channel is back on air (and there is good evidence that this is stimulating digital adoption), the policy has largely failed to facilitate an active role for national broadcasters in pioneering innovation in the digital market. This is not due to a lack of desire, on the part of the national broadcasters, to fulfil such a role. Rather, it is a result of the policy framework itself.

**Policy Rationale**
The concerns we voice highlight the degree to which – at a level of principle – the overall objectives associated with the policy remain unclear. Where these principles are clearly articulated, the implementation of policy tends to better steer the transition process.

In other markets the policy rationales are clear. 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 building a base through which to strengthen local industry. What drives policy in Australia?

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 no where near the type of scarcity that is driving change in the American or European markets. Australia also has a limited electronics equipment manufacturing industry – so this seems an unlikely rationale. Although there are significant competition issues in Australia, the chaotic approach to digital here hardly reflects any type of consistent or coherent competition framework. In this sense, digital conversion policy lacks a compelling driving principle.

We would suggest that the main driver for change in Australia should be the need to harmonize the television industry to fundamental change taking place in globally. This, we believe, is important in helping provide a buffer for this transition and in protecting Australia’s cultural exports (which in turn has a profound effect on our own domestic television production capacity).

In terms of buffering change… there is no question that the landscape associated with the structure of the television market is in a period of unparalleled change. We can provide a more detailed discussion of the nature of this change, if the Committee
wishes. In brief, each of the fundamental pillars associated with broadcasting’s golden triangle (delivering mutual value to channels, advertisers and viewers) is experiencing significant disruption. The relationship between viewer and advertising is disrupted by technologies empowering viewers to avoid ads; advertising and channel relationships are being challenged by increasing demand for accountability (reflecting a shift from above to below the line media); and the relationship between channel and viewer is being transformed by growing audience fragmentation (this trend has not yet impacted Australia due to low pay-TV take up).

A range of technologies are further accelerating the process of market disruption because of their capacity to operate outside the parameters of this golden triangle. IPTV (television delivered over broadband) transcends national borders – accelerating fragmentation (particularly among key viewing cohorts). PVR’s disrupt ad models – particular where there is measurement of its time-shifting character (as will be the case in the United States in early 2006). There will be indirect effects associated with the transition as well. For example, the pace of change associated with the PVR market will probably be much more rapid in the United States than here in Australia. Even though the shift plays out on distant shores, it will impact the media planning strategies of the global brands – which account for almost half of the Australian TV ad spend. Hence, even before the effects have fully played out in Australia, they will begin impacting the structure of the market.

Although it is reasonable to argue that broadcasters should be left to their own device to adapt to this shifting landscape, the implications associated with this transition do not limit the potential fallout to broadcasters alone. Australia’s cultural and advertising industries are also put at risk. Hence, decisions by one segment of the market (broadcasters) are currently shaping the capacity of other vital segments (e.g. content producers) to respond to such fundamental market change.

It is also important to note the degree to which Australia’s success in the export of cultural products are put at risk. Australia’s television exports transcend it relative market scale. Such exports have been instrumental in lifting the quality of Australian television content as a whole – because the few sparks of success bring with them windfalls that underwrite significant losses enabling significant investment in television production.

However, as Australia insulates itself from changes playing out in other regions – particularly in the US and European markets – its capacity to effectively export to these markets diminishes over time. This in turn erodes the quality of Australia’s domestic television content sector as well. The negative fallout of all this is further impacted by the increasing availability of international content (distributed through IPTV), further diminishing Australia’s cultural industrial capacity.

Currently, Australia’s digital conversion strategy has minimal (if any) consideration for such factors. There is, for example, no provision in the content quota scheme rewarding the significant risk associated with interactive television content. We believe that articulating the need to develop a competitive digital television content sector provides a meaningful principle (among others) to help shape Australia’s digital conversion strategy.
Consumer Incentive
It is our view that the interest of consumers has not been a driving factor in facilitating the conversion to digital. While better sound and picture provide some level of incentive, there are clear consumer drivers which are specifically inhibited by Australia’s digital conversion policy.

We’ve attached a copy of a survey we conducted on behalf of the Australian Broadcasting Authority (see attachment ‘B’). This survey attempted to get a snap shot of the views of those directly engaged in the digital television sector. At the time, we managed to solicit the views of approximately one third of those in the industry who had any direct experience with digital. In many ways, this reflects a candid view of these opinions. Given the exposure the study received following it’s distribution, it is unlikely that those surveyed would again be so candid in sharing their views.

What stands out in the ABA survey is the degree to which the opportunities which those in the industry believe consumers will respond best to (such as multicasting) are the very drivers inhibited by policy. The converse is also apparent… the policy’s key drivers – such as high definition – are seen as providing the least incentive. 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.

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. This is not possible, however, if key market opportunities are denied. 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 consumers respond to best.

Future Options
On the basis of this discussion, the Institute would make the following recommendations to help accelerate digital conversion:

1. Digital Television Standards
   As noted above, there is a need for a government process designed to mandate specific parameters of the digital conversion process. This does not have to be extensive and span all aspects of the industry – but it must ensure that a minimum technical standard (particularly at the level of set top box) is met. This is not about a single issue (e.g. MHP) – it reflects an on-going need to adapt to constantly changing market forces. Although allowing industry itself to self-regulate is an option, there is no forum which facilitates this from a position of true competitive neutrality. Also, self-regulation has demonstrated, over the past few years, that it moves at a snail’s pace, a position inconsistent with the ambitions of accelerated digital conversion.

2. Digital Television Commission
   In the UK there were significant market advances following the demise of ITV Digital resulting in the articulation of the Digital TV Action Plan. This included a high profile ‘Stakeholders Group’ linking key policymakers and
industry representatives. We believe that Australia would benefit from the creation of an entity given explicit mandate over digital conversion in a forum facilitating close interaction with industry. Naturally, such a group should reflect the diversity of market agents central to any effective transition including broadcasters, datacasters, equipment manufacturers, advertisers, policymakers and academics.

3. Datacasting Channels
We recommend the introduction of two datacasting channels, whose scope would be mandated as follows:

a. Platform channel
As noted earlier, in the UK the Government withstood significant incumbent pressure and separated the platform from its various channels. This has resulted in an integrated channel (Freeview) capable of presenting viewers with a superior digital proposition. By way of contrast, the American approach (similar to Australia’s) of awarding licenses individually provides no coherent integrated platform framework.

We recommend a hybrid approach allowing individual channels full control over their spectrum, but also enabling the creating of a datacasting channel to provide integrated services across the platform. This would provide clear market incentive for an emerging market actor to invest in significant backchannel infrastructure. It might also provide for new distribution models based on maximising distribution of appropriately enabled set top boxes.

The front end of this channel should be an Electronic Program Guide designed to facilitate an integrated viewing experience for viewers. Access to data associated with this guide may be an issue requiring further legal specification. Similarly, provisions associated with fair royalties to platform channels (the cost of ‘clipping the ticket’) may need to be specified so as to enable interactive transactions through use of the platform.

We are keen to assist the Committee in further exploring this option, if it is of interest to the Committee. We believe it will attract significant investment, provide a more cohesive digital terrestrial platform and accelerate adoption by viewers.

b. Digital channel
We would recommend that the second channel be allocated for the provision of a 4th commercial TV network – limited to digital spectrum alone. 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.

4. Flexible Spectrum Usage
As noted earlier, we believe that digital take up is maximised by ‘win-win’ rather than ‘lose-lose’ inhibitions. Rather than build a strategy based on
creating mutual disadvantage for all, we believe an effective policy must stimulate the market with clear incentives for all.

Accordingly, we recommending removing most of the current restrictions and allow the market to itself decide which factors best contribute to digital take up. We would encourage continuation with high definition – but allowing broadcasters the flexibility to use their spectrum for multiple channels, enhancement or other television applications. We would encourage the removal of datacasting restrictions and have provided you with our views as to how the spectrum might best be used. We would also recommend re-visiting a range of prohibitions imposed on the pay-TV sector as the removal of many of the digital restrictions directly impacts them without providing them with new opportunities moving forward. This may require a separate inquiry.

The principle we advocate here is one of maximum market flexibility so as to allow the market to better identify potential opportunities. However, we caution that without the introduction of new players, who are not invested in the current television paradigm in Australia, the necessary competitive tension may be lacking to fully exploit such opportunity.

**Conclusion**

As a non-profit independent research centre based in Australia, the Interactive Television Research Institute is keen to assist, in whatever way it can, the needs of the Committee. We believe that the current review plays an important role in shaping the very structure of Australia’s television landscape for decades to come. We are happy to provide the Committee with any further research or background information available to us (subject to our own Confidentiality constraints). Likewise, as noted earlier, our Director would be please to testify at the Inquiry if it please the Committee.

We wish the Committee well in its deliberations.