



**Submission to the Australian Communications and Media Authority's Discussion Paper:
Temporary Trials of 3D TV and other emerging technologies**

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Introduction

About ASTRA

ASTRA is the peak industry body for subscription television in Australia. ASTRA was formed in September 1997 when industry associations representing subscription (multi-channel) television and radio platforms, narrowcasters and program providers came together to represent the new era in competition and consumer choice. ASTRA's membership includes the major subscription television operators, as well as channels that provide programming to these platforms. A list of members is attached at Annexure A.

The subscription TV industry is the undisputed market leader of digital broadcasting. A dynamic sector that is constantly evolving and growing, it is received nationally by 34% of Australians through their homes and many more through hotels, clubs and other entertainment and business venues.

Since its inception, over \$A9 billion dollars has been invested in infrastructure, capital, facilities, productions, programs and services in order to establish and develop the subscription TV industry. ASTRA's members are responsible for the bulk of this investment which has been distributed throughout metropolitan, regional and remote markets. Consequently, the sector has created an enormous number of jobs, investment, infrastructure and production content throughout Australia. In 2009 the subscription television industry invested \$541.4 million in Australian content. In addition, the sector directly employed 4,643 people. The industry continues to invest heavily in its own growth and the growth of the Australian film and television broadcast sectors including the continuing investment in television programming and production.

The Emergence of 3D Television

ASTRA and its members are the leaders in innovative technology including the introduction of 3D Television in Australia.

With the broadcast of the Australia v New Zealand football friendly on 24 May 2010 on FOX Sports, FOXTEL and AUSTAR became the first broadcasters in Australia to televise 3D to Australian homes. FOXTEL has also announced that from 1 November 2010 that it will launch Australia's first dedicated 3D channel. AUSTAR is also looking at broadcasting a 3D channel to its subscribers during 2011. It is worth noting that FOXTEL and AUSTAR managed the trialing and introduction of this technology without access to free or subsidised spectrum and that the 3D channel will also not rely on the use of any such spectrum.

FOXTEL 3D will be a mix of sport programs and live events from FOX SPORTS and ESPN. The 3D Channel will be available to FOXTEL's HD subscribers who also subscribe to the Sports Package. ESPN 3D sports programming will be simulcast from ESPN HD channel and includes NBA, College Football and XGames. FOX Sports will be broadcasting popular sports events including Wimbledon Tennis¹.

The 3D channel demonstrates subscription television's commitment to innovation and continued investment in cutting edge services for subscribers. FOXTEL and AUSTAR offer over 200 channels providing premium programming across all genres, including multiple channels in high definition. FOXTEL and AUSTAR both operate entirely digital services, which places them at the forefront of digital broadcasting in Australia, and each broadcaster offers integrated high definition personal digital recorders that allow for multiple recordings of programs while viewing another channel live.

¹ FOXTEL 'FOXTEL announced dedicated 3D channel and new channel line', <http://www.foxtel.com.au/about-foxtel/communications/foxtel-announces-dedicated-3d-channel-and-new-channel-line-u-94874.htm>

Spectrum Requirements and Availability

Technological innovation in communications has placed increasing pressure on the demands for spectrum and it is widely acknowledged that demand for spectrum continues to increase.

In this context, ASTRA is supportive of the Government's decision to make a 126MHz of spectrum available for the digital dividend. The productivity benefits to be gained by the Australian community by the Government delivering this digital dividend and enabling it to be put to the highest value use through an open price-based process, will outweigh the costs of re-stacking the UHF band and the impact to viewers.

Temporary Use of the Seventh Channel for 3D TV Trials

ASTRA is supportive of innovation and of the role that apparatus scientific licences play in allowing technologies to be trialed on a temporary basis. The licensing system allows those with uses for radio spectrum to assess the viability of new technologies prior to investing significant money in implementation.

However, it is of concern to ASTRA that trials of this technology carry on for any significant length of time. A trial, by definition, needs to be limited in its scope. It should not be used as a means to provide otherwise commercial broadcasts under the guise of industry trials.

The ACMA's *'Dealing with Applications for Apparatus Licences for the Trial of New Radiocommunications Technologies—Guidelines'* states the following with regard to the duration of trials:

- *Scientific licences for trials of new radiocommunications technologies will generally have a maximum duration of 12 months and will not generally be extended or renewed beyond this time.*
- *Triallists should not expect that new scientific licences for similar trials will be issued once the scientific licence for the original trial has concluded.²*

The Nine Network has already trialed 3D technology in separate periods being May to July 2010 and again in October 2010.

The Nine Network's report on the first trial states:

"Nine Network Australia was very satisfied with the outcome of the first free-to-air 3D trial broadcast in Australia. The technical operation and delivery was flawless, the production of live events was truly groundbreaking and the communication of information to consumers and retailers was well-managed and comprehensive."³

Given the success of the technical trial, ASTRA has concerns that the Nine Network would seek to pursue additional commercial broadcasts using spectrum licensed pursuant to Apparatus Licences issued for the conduct of trial broadcasts, free of charge. ASTRA is unclear why the Nine Network would need to conduct additional trials given the success it achieved with the trials it has already conducted.

Frame Compatible vs Non Frame Compatible

While broadcasters continue to trial the 'Frame Compatible' approach, it is clear that the 'Non-Frame Compatible' approach is the most efficient when it comes to spectrum usage. The Paper states:

² ACMA, *'Dealing with Applications for Apparatus Licences for the Trial of New Radiocommunications Technologies – Guidelines'*, http://www.acma.gov.au/webwr/aca_home/publications/reports/info/trials_new_techngy_guidelines.pdf

³ Nine Network Australia: 3D Broadcast #1: Report to the Australian Communications and Media Authority, http://www.acma.gov.au/webwr/_assets/main/lib311927/nine_network_aust_3d_report_to_acma.pdf

“this efficiency suggests that the non-frame compatible approach may offer the potential for free-to-air broadcasters, in time, to employ 3D technology as part of the suite of services provided on their own dedicated multiplexes.”

There are many benefits in pursuing the ‘non-frame compatible’ approach. In Broadcast Australia’s White Paper ‘3D or Not 3D: the Road ahead for TV’ it states:

“Non-frame-compatible content, on the other hand, is backwards-compatible for 2D viewing on existing 2D TV sets without modification. For this reason, the 3D Blu-Ray standard adheres to this format to allow 3D Blu-Ray discs to be played on 2D televisions. Full-resolution MVC and ‘2D-plus’ formats require approximately 40 to 70% more bandwidth than 2D HDTV. This effectively means that both 2D and 3D content can be delivered in a common signal stream using less than two conventional HDTV channels. This is ultimately more efficient than frame compatible 3D TV techniques, where the 3D video occupies an entire separate channel from 2D. Considering all the signals that need to be carried to support 2D and 3D, the MVC/2D-plus formats are the more efficient way to integrate 3D into the service mix. From an encoding perspective, they are however significantly more complex”⁴

According to the White Paper, however:

“Whichever 3D TV format becomes dominant, additional bandwidth will be required for these as well as other emerging services”⁵

ASTRA is supportive of broadcasters pursuing efficiencies in spectrum use. However, ASTRA does not support ongoing trials of technology that will not be pursued over the longer term. As such, consideration needs to be given as to the need to continue to trial ‘frame compatible’ approaches to 3D broadcasting.

Managing Spectrum in the Public Interest

With growing demands being placed on radio spectrum it has become increasingly important for regulators engaged in spectrum management to ensure that they manage this finite resource in the public interest.

It is of concern to ASTRA that broadcasters will pursue 3D television trials with an expectation that spectrum will be provided to them on a free or subsidised basis for enhanced technology.

ASTRA is concerned that there is a risk, given the evolving nature of 3D television technology, ongoing trials will end up, in effect, being perpetual in nature. This is contrary to the principles of the Guidelines.

In Free TV’s submission to the Digital Dividend Green Paper, it was stated:

“The current proposal for a 126 MHz Digital Dividend does not provide sufficient allocation of 7 MHz of spectrum to allow for broadcasters to move to new standards such as DVBT-2 and MPEG-4. Broadcasters would also be limited in their ability to provide emerging new technologies such as 3D TV. These constraints will not apply to competing platforms such as pay TV and IPTV. Viewers should not be forced to pay for these enhancements.”⁶

⁴ Broadcast Australia, ‘3D or Not 3D: the Road Ahead for TV- White Paper’, http://www.broadcastaustralia.com.au/assets/files/White%20Papers/BA_3D_TV_WhitePaper.pdf

⁵ Ibid

⁶ Free TV ‘Submission to the Digital Dividend Green Paper’, http://www.freetv.com.au/media/Submissions/2010-0003_SUB_Free_TV_Submission_to_Digital_Dividend_Green_Paper_050310.pdf, 5 March 2010

There is no public policy justification for reserving or allocating spectrum to the free-to-air broadcasters on a free or subsidised basis to extend their services, introduce supplementary channels or additional features such as 3D television. A desire by the free-to-air broadcasters to develop 3D services on digital terrestrial television is not sufficient reason to set aside the market led approach to spectrum allocation. If the free-to-air broadcasters believe strongly in the importance of developing 3D services on digital terrestrial television they should prioritise resources accordingly and provide these services on a fully-funded commercial basis.

The Paper identifies that existing Free to Air multiplexes do not provide sufficient bandwidth to support 3D trials and ultimately 3D broadcast, in addition to existing Standard Definition and HD services. However, improvements in digital technology, such as encoders, and adopting an efficient 3D broadcast format, will allow Free to Air operators to deploy 3D technology as part of the suite of services on their own dedicated multiplexes.

As ASTRA noted in its submission to the Government's Green Paper on the Digital Dividend, the FTA networks spectrum allocation – after analogue switch off and the redeployment of the spectrum they currently use for analogue transmission to new services – will allow the FTA networks to offer new services such as 3D if the networks use this spectrum efficiently. However, because the Free to Air broadcasters do not currently pay a market rate for spectrum, there is limited incentive to invest in technology to ensure its optimisation, including upgrading encoders to twenty first century broadcast standard.

Consumer Protection

ASTRA is concerned there is a danger that providing 3D television trials on an ongoing basis will set up a community expectation that this technology will be available on permanent basis on free-to-air television when there is no commitment from commercial free-to-air broadcasters to provide this service on a fully-funded commercial basis. In particular, ASTRA is concerned that, to date, free-to-air broadcasters have set up an expectation that 3D television broadcasts will be on-going, with broadcasts being supported by advertising and sponsorship from manufacturers of 3D televisions.

ASTRA notes that *“allocation of spectrum for a trial confers no rights of use of that spectrum other than for the purpose and duration of the trial.”*

ASTRA notes that the ACMA as well as the Australian Competition and Consumer Commission have been required to deliver warnings to Australians in relation to 3D television trials⁷. However, it is clear that retailers and electronics manufacturers are heavily marketing the benefits of 3D television. It is ASTRA's concern that continuing to create a demand and expectation is being done by the commercial free-to-air broadcasters to provide a justification for additional access to free or subsidised spectrum.

The Paper also notes that:

“in order to maintain their existing suite of 2D services and also provide additional 3D content, broadcasters would require access to additional spectrum to conduct trials”.

As stated above, the expansion or enhancement of existing broadcasting services – such as 3D – do not deliver on the public policy outcomes outlined in the *Broadcasting Services Act 1992* relating to Australian content, children's programming and access for the deaf and hearing impaired.

As such, there is no public policy justification for reserving or allocating spectrum to the FTAs on a free or subsidised basis to extend their services, introduce supplementary channels or additional features such as 3D.

⁷ ACCC 'ACCC, ACMA urge consumers to be cautious when buying a 3D television to watch AFL, NRL grand finals', <http://www.accc.gov.au/content/index.php?id=948356>

If the FTAs need to acquire additional spectrum for 3D broadcasts, they should be required to do so via an open, price-based allocation process. Alternatively they can use their existing allocation of spectrum – post analogue switch off and the restack – for new service such as 3D if they utilised this spectrum efficiently

Extensive spectrum has already been gifted to FTAs and to allocate more would be a distortion of the market, particular when that allocation would be for a niche service that can only be accessed by a small percentage of the community. Moreover, it would be an unwarranted increase in the direct public subsidy enjoyed by public service and commercial broadcasters.

In 1998, the FTA broadcasters were loaned spectrum to enable them to simulcast their existing service in analogue and digital to ensure consumers were not disadvantaged during digital switchover. The public policy objective associated with the provision of spectrum at no cost was that the networks would encourage DTT take up and the Government could switch off the analogue television signal by 2008. Associated with this objective, it was considered that the way to advance digital take-up would be through the provision of High Definition (HD) services. The Government considered that this policy would provide:

“a framework which will enable commercial and national free-to-air broadcasters to embark confidently in building the next generation of television services, which will be an important plank in Australia’s development as an information economy”⁸.

However, the reality is that the FTAs were not successful in driving digital take up and, as a result, digital switchover in Australia has been significantly delayed to the end of 2013.

Innovations such as 3D television will made available to the Australian community by alternative, commercially funded platforms. Examples of alternative delivery platforms include cable and satellite subscription television as well as internet protocol television (IPTV). In addition, the deployment of the National Broadband Network will enable and encourage take up of alternative television services. If the FTAs need to acquire additional spectrum, they should be required to do so via an open, price-based allocation process.

Other Uses of Available Spectrum

ASTRA has no comment in relation to nominating other technologies to be trialed. However, ASTRA takes the view that the trialing of 3D technology should not take precedent over other technologies which could also make use of the seventh channel. ASTRA notes that other uses flagged for possible trial in the seventh channel include audio description and coding and transmission technologies.

⁸ Alston, R, ‘Television Broadcasting Services (Digital Conversion) Bill, 1998, Second Reading Speech, available at: http://www.richardalston.dcita.gov.au/Article/0,,0_4-2_4008-4_12264,00.html