



**ASTRA submission to the Australian Communications and Media Authority
paper 'Spectrum Outlook: 2011-2015'**

31 August 2011

1. Introduction

The Australian Subscription Television and Radio Association (**ASTRA**) welcomes the opportunity to comment on the Australian Communications and Media Authority (**ACMA**) paper *Five Year Spectrum Outlook 2011-2015 (the Paper)*.

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.

The subscription television (STV) sector is the undisputed 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.

Australia has one of the most heavily regulated broadcast sectors in the world with subscription TV operating in an increasingly competitive environment that is grounded in protecting incumbent commercial free-to-air broadcasters. Subscription TV faces competition from commercial and national broadcasters and their digital multi-channels, new IPTV and on-line content providers streaming services over broadband networks, online movie rental and download services, and DVD rental and sales. Competition in this market will only further increase in the future with developments in technology and the rollout of the National Broadband Network.

2. Spectrum and the Subscription Television Sector

The STV sector is a major user of radiofrequency spectrum (for ENG/TVOB activities and for receiving programming via fixed satellite services) and requires certainty with regard to spectrum availability to ensure continued expansion and to provide an increasing range of services and programs for Australian consumers.

Moreover, the STV sector's need for such spectrum will continue to increase significantly as our outside broadcast requirements (EFP) increase through things such as the AFL agreement (2012-2016) under which the platforms will broadcast every game of every round live.

ASTRA is aware that the ACMA has increasing pressures from spectrum users. As it states in the Paper:

"The context within which the ACMA manages spectrum is rapidly evolving: presenting a challenge for providing regulatory certainty in spectrum planning arrangements while enabling the development and launch of new and innovative spectrum uses. The ACMA leverages off its understanding of this dynamic environment to make efficient, effective and transparent decisions about spectrum management to provide regulatory certainty and flexibility. The second part of this chapter outlines developments that the ACMA considers contribute to spectrum demand changes.

In general terms, demand for spectrum in Australia is driven by technology developments, increased use of mobile devices, international developments and the technical characteristics of a given spectrum use". P21

Principles of Spectrum Allocation

ASTRA is supportive of the principles of spectrum allocation which the ACMA uses to inform its decisions, namely:

1. Allocate spectrum to the highest value use or uses.
2. Enable and encourage spectrum to move to its highest value use or uses.
3. Use the least cost and least restrictive approach to achieving policy objectives.
4. To the extent possible, promote both certainty and flexibility.
5. Balance the cost of interference and the benefits of greater spectrum utilisation.

ASTRA supports the use of the spectrum management principles as a tool to allow the ACMA to make spectrum management decisions. ASTRA also notes the ACMA's adoption of a 'total welfare standard' for use when:

- The policy or legislative framework provides the ACMA with discretion about the tests it might apply;
- A regulatory intervention might have significant economic impact on consumers, producers or other stakeholders.

While ASTRA recognises that the ACMA faces significant challenges in balancing competing demands for spectrum, ASTRA submits that recent decisions regarding spectrum allocation for broadcasting activities have failed to adequately take into account the real needs of an established and continually expanding STV sector. The allocation appears to fundamentally misunderstand the point that the terrestrial networks requirements for such spectrum have not grown anywhere near as much as our sector's requirements for such spectrum to service over 8 million Australians. Subscription television broadcasters compete directly with commercial and national broadcasters, especially in the delivery of live sport, news and information. In ASTRA's view, however, the ACMA has either underestimated or largely ignored the spectrum needs of subscription television in its long-term spectrum planning processes.

3. Significant Spectrum Projects

Digital Restack

ASTRA is supportive of the ACMA's role in ensuring that the UHF band is restacked in such a way as to ensure a contiguous block of spectrum is made available for other uses. Restacking will allow the most efficient use of spectrum and is consistent with the ACMA's principle to "enable and encourage spectrum to move to its highest value use or uses".

Allocation of the Digital Dividend

As noted in the Paper, a contiguous block of spectrum made available by the digital switchover and restack will be reallocated for new uses.

The Paper states that this reallocation comprises two parts:

1. "configuration of the spectrum to determine the produce for sale; and
2. allocation of the resulting spectrum products." (p27)

With regard to the configuration of the spectrum to determine the product for sale, ASTRA would reiterate the concerns expressed in its response to the ACMA's discussion paper 'Spectrum reallocation in the 700MHz digital dividend band' relating to the issue of possible interference from 4G LTE devices into the HFC Network or consumer equipment.

As stated in ASTRA's submission:

The potential of co-channel interference from 4G LTE devices by ingress into either the HFC Network or consumer equipment (STB or household wiring) affecting services carried on these multiplexes is of concern to ASTRA. There have been a number of studies conducted in Europe into this issue¹.

¹ Excentis 'Analysis report on the influence on Cable Networks of the deployment of Electronic Communications Service in the 790- 862 MHz band Version 1.1'

ASTRA notes that the September 2010 meeting of the APT Wireless Forum in Seoul agreed to conduct technical studies to ensure interference free (adjacent channel) coexistence of mobile services with television receivers and set top boxes below the 698 MHz spectral boundary. ASTRA contends that the possibility of such interference, including with HFC cabling is considered when the ACMA is determining a final band plan.

Further information on this issue may be found in the attached report, 'Study into LTE Interference to Foxtel Services in the 700MHz Band'.

With regard to the allocation of the Digital Dividend, ASTRA is supportive of the ACMA's intention to allocate the spectrum via a market-based competitive process. In ASTRA's view, this is consistent with the ACMA's principle to ensure that spectrum moves to its "highest value use or uses".

ASTRA notes that the free-to-air broadcasters have previously argued that they must retain some spectrum for the deployment of new technologies:

"If the broadcasting services bands are redefined with an upper limited at 694 MHz, there will be no remaining spectrum available to permit future technology migration, as there was for the conversion from analogue to digital television. Broadcasters would not be able to trial or simulcast new technologies without disrupting existing services.

Because of the impact on households with legacy reception equipment, a transition to new standards, such as 3D TV, DVB-T2 and MPEG-4 cannot occur without a reasonable period of simulcast. Otherwise many viewers face a loss of or unacceptable interruption to free-to-air television services. Under the Government's 126 MHz Digital Dividend, broadcasters will have no capacity to simulcast²

As ASTRA has stated previously, more efficient use by free-to-air broadcasters of existing spectrum allocations would negate any need for additional spectrum to undertake a transition to new transmission standards or to deliver new services. If the free-to-air broadcasters desire additional spectrum to transition to new technologies, they should be required to purchase this spectrum in an open, market-based auction - as per other users of spectrum - and not have it provided on a free or subsidised basis.

In relation to the timing of the reallocation, ASTRA notes that the Paper states:

The reallocation is expected to take place through an auction of spectrum licences in late 2012, before completion of the digital switchover and restack processes. (p27)

ASTRA is supportive of the ACMA's intention to auction the spectrum in the second half of 2012, prior to the switch off of analog at the end of 2013. The benefits to the Australian population of the redeployment of this spectrum are significant and, as such, any delays to its release should be avoided.

Review of Outcomes for the 2.5GHz Band

As the ACMA is aware, the subscription television sector has particular interest in the future use of the 2.5GHz band and the proposed alternative bands for existing users of the 2.5GHz band. The STV sector currently makes use of the band for electronic news gathering (ENG), electronic field production (EFP) and television outside broadcast operation (TVOB).

The STV sector requires certainty regarding access to spectrum suitable for ENG, EFP and TVOB. This is essential to ensure sufficient growth capacity for future coverage of news, sporting and other major events broadcast by STV.

Date: August 24, 2010
ANGA/IRT Study on Interference from Bidirectional Mobile Services into Cable TV Infrastructures
Cable Europe Labs, Implications of the digital dividend proposals; Cable Europe Labs testing programme Customer Premises Equipment (CPE) QAM modulation and signal
² Free TV Australia Limited, Temporary Trials of 3D and Other Emerging Technologies, 'http://www.freetv.com.au/media/Submissions/2010-0010_SUB_FINAL_3DTV_trials_201010.pdf

More over the ACMA appears not to have recognised in its approach that our requirements for access to such spectrum have grown significantly over time and will continue to grow. For instance, the STV sector's need for such spectrum will continue to increase through things such as the new AFL agreement (2012-2016) under which the platforms will broadcast every game of every round live, which requires our sector to utilise EFP and TVOB even more.

ASTRA notes the relevant new arrangements for the 2.5GHz band as detailed in the Paper:

- > *conversion of ENG apparatus licences to 15-year spectrum licences in the frequency range 2570–2620 MHz ('the mid-band gap' of the 2.5 GHz band) Australia-wide*
- > *ENG access via apparatus licences to additional parts of the 2.5 GHz band in regional areas of known high use, as well as shared access with WAS in other areas, depending on demand for WAS*
- > *ENG access to the following 'alternative bands':*
 - > *shared use of the bands 2025–2110 MHz and 2200–2300 MHz*
 - > *exclusive use of the band 2010–2025 MHz, at least in capital city areas*
 - > *ENG access to frequency bands 1980–2010 MHz and 2170–2200 MHz bands, with the caveat that mobile-satellite services may be introduced into these bands in the future, and the ACMA investigating the viability of long-term sharing between ENG and mobile-satellite services. (p28)*

It is of concern to ASTRA that the new arrangements will in no way provide future certainty for the STV sector and will continue to favour the free-to-air broadcasters to the detriment of the subscription television sector.

2.5 GHz Mid-band Gap

As ASTRA has stated in previous submissions, STV currently accesses spectrum in the 2.5 GHz band through largely informal commercial arrangements with free-to-air television broadcasters that currently hold apparatus licences. This spectrum is used to support various channels on the STV platform, including its 24 hour news and live sports channels. ASTRA is disappointed that the new arrangements for the 2.5GHz "mid-band gap" will not allow STV to obtain direct licences to support and secure its future ENG, EFP or TVOB operations. Allocating spectrum in the 'mid-band gap' directly to free-to-air broadcasters fails to consider all users of the band, is not consistent with the principle to allocate spectrum to the 'highest value use or uses' and fails to provide certainty to the STV sector. In order to ensure that these principles are met, this spectrum should be allocated by a competitive market-based process where all users of the spectrum have the opportunity to obtain licences.

Alternative Bands

ASTRA acknowledges that ACMA has made attempts to offer short term arrangements for alternative bands, however we are deeply concerned on a number of fronts:

1. Our opportunity to directly access spectrum in these alternative bands is limited to either:
 - a. the 1980-2010 and 2170-2200 bands which we understand are likely to be reallocated to MSS and for which long-term sharing with ENG is not guaranteed;
or
 - b. frequencies in the 7.2GHz spectrum band and above which we have indicated would not be suitable for most ENG/TVOB activities due to high power usage and propagation limitations within venues.
2. The STV sector will face substantial equipment swap-out costs if denied direct access to mid-band gap spectrum and if forced to move to the alternative frequencies for ENG, EFP and TVOB operations which have been suggested by the ACMA in the 7.2GHz

band and above. Currently, in the OB environment, FOX Sports uses the same equipment that the FTAs use, owned by the same outsourced broadcast facilities providers.

3. Unlike the free-to-air broadcasters who will be receiving spectrum licences with guaranteed tenure in the mid-band gap, any licences that the STV sector may be entitled to apply for will be limited to apparatus licences with uncertainty of tenure.

4. Future Spectrum Demands - Satellite

The 3.8 GHz band ('C-band')

The Australian STV sector makes significant use of fixed-satellite services (FSS) operating in the 3.6-4.2 GHz band ('C-band'), including AUSTAR, FOXTEL, Optus, Fox Sports and Sky Racing. A wide range of programming delivered by Australian STV platforms is directly sourced from satellite feeds operating in the C-band, including from Disney, Discovery, BBC, and CNN.

ASTRA is opposed to any proposed uses of the C-Band for mobile wireless services that would interfere with the operation of existing and future fixed satellite services in these frequencies. At a minimum, wireless mobile networks should not be authorised to operate in proximities to existing earth stations which are likely to cause interference with satellite communications.

Earth Station Siting

ASTRA notes that the Paper details the proposed issue of earth station siting which the ACMA intends to review:

Due to competing demands between satellite and terrestrial radiocommunications services, the ACMA has identified spectrum management issues associated with the siting of some satellite Earth stations. In certain bands, they currently share terrestrial services in areas of high spectrum demand, such as urban areas.

...

The ACMA is planning to release a discussion paper in the third quarter of 2011 that will review current spectrum management arrangements regarding the deployment of satellite Earth stations in shared bands in metropolitan areas. (P33)

ASTRA is aware that the ACMA is considering the possibility of FSS earth stations operating in the C-Band being moved from urban to less populated areas to reduce spectrum congestion and minimise interference where spectrum is shared by mobile wireless services and satellite communications. As previously noted by satellite service providers, the re-siting of earth stations will result in very substantial costs for the STV sector and program providers associated with infrastructure relocation and the transmission and reception of international programming and ongoing operational costs.

ASTRA looks forward to providing more detailed comments in response to that discussion paper.

Please feel free to contact myself on (02) 9776 2685 or Simon Curtis, Policy and Regulatory Affairs Manager on (02) 9776 2688, if you wish to discuss further any of the issues raised above.

Yours sincerely



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