ASTRA Subscription Television Australia

ASTRA Submission to: Spectrum reallocation in the 700MHz digital dividend band

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www.astra.org.au
ABN 18 051 051 883

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 Digital Dividend Configuration – Potential Uses for the Band

ASTRA commends the ACMA for conducting a consultative process to determine the potential uses for such an important spectrum band. As is often discussed, the propagation characteristics of the 700MHz band make it very valuable spectrum and it is imperative that its highest value use is realised.

Harmonisation

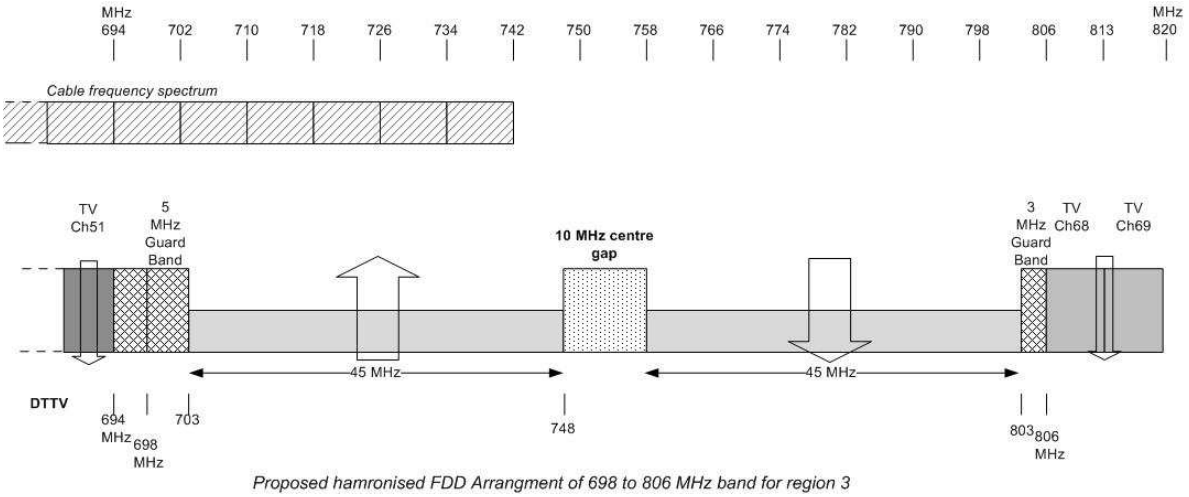
ASTRA is supportive of the configuration of spectrum which maximises the benefits of harmonisation. As a standards taker, Australia's market size dictates that it cannot 'go alone' in relation to spectrum allocation and the benefits of acquiring technical equipment that is harmonised with other countries are significant.

Potential Issues Relating to Interference

ASTRA understands that technical specifications for spectrum in the 700MHz band are being determined through international committees such as the Asia Pacific Telecommunity (APT)Wireless Forum. These committees are tasked with determining harmonised regional band plans for use by LTE networks and devices.

It is probable that 4G LTE devices will operate in a frequency division duplex (FDD) configuration as occurs with existing mobile devices. That is, there is a separate part of the band used for TX and RX for the base station and mobile device with a centre band gap for isolation between TX and RX. The assignment of TX/RX frequencies either high or low in the band is called "Site Sense". Conventionally, Site Sense for mobile devices has been implemented with TX Site sense high for the base station.

Of concern to ASTRA is that the lower end of spectrum being considered for LTE deployment corresponds to the top end of the HFC network spectrum which currently extends up to 750MHz. A number of STV's multiplexes are carried in the effected spectrum. This is illustrated in the below diagram.



Proposed hamronised FDD Arrangment of 698 to 806 MHz band for region 3

The potential of co-channel interference from 4G LTE devices by ingress into either the HFC Network or consumer equipment (STB or household wiring) effecting services carried on these multiplexes is of concern to ASTRA. There have been a number of studies conducted in Europe into this issue[1].

One of the issues in determining the extent of the problem is that LTE specifications are yet to be finalised.

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.

Maximum Public Benefit

Harmonisation must be achieved for the most efficient and cost effective deployment of LTE networks, there is likely to be additional spectrum available in the 700MHz band. ASTRA contends that those wishing to acquire this spectrum should be required to do so through a market-based competitive process.

ASTRA notes that the free-to-air broadcasters contend 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

[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' 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 level variation

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 simulcast"[2]

As ASTRA has stated previously, if the free-to-air broadcasters need 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 addition, it is asserted that:

"These constraints will not apply to competing platforms such as pay TV and IPTV".

It is incorrect to suggest that the same constraints do not apply to subscription television. In order for subscription television to deliver its services to customers, it is required to purchase capacity at market prices, either through cable or satellite. It is estimated that the cost of acquiring this capacity is approximately $200 million per annum. As such, when the STV sector is required to upgrade its services or transition to new technologies, it must do so in the most efficient way to minimise these costs. It is ASTRA's view that the same commercial imperatives should apply to the free-to-air broadcasters.

ASTRA contends that if the free-to-air broadcasters used their spectrum efficiently post analog switch off they would be able to manage the transition to new technologies within their existing allocations.

Timing of Release and Auction

ASTRA contends that the ACMA should keep to the current schedule and supports the auction of 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.

[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