

25 October 2012

The Manager
Spectrum Transformation and Government
Spectrum Infrastructure Branch
Australian Communications and Media Authority
PO Box 78
Belconnen ACT 2616

By email: ARSP@acma.gov.au

Dear Sir/Madam

Update of Australian radiofrequency spectrum plan – discussion paper

The Australian Subscription Television and Radio Association (ASTRA) welcomes the opportunity to comment on the Australian Communications and Media Authority (ACMA) *Update of Australian radiofrequency spectrum plan* discussion paper.

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.

The subscription TV industry 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. The STV industry has invested billions of dollars in infrastructure, capital, facilities, productions, programs and services, which has been distributed throughout metropolitan, regional and remote areas.

ASTRA provides comment on two issues:

- the proposal for a change to primary status for mobile services in the 3400-3600 MHz band; and
- the identification of services in the 1980-2110 MHz and 2170-2300 MHz bands.

3400-3600 MHz – primary status for mobile services

The Australian STV sector makes significant use of fixed-satellite services (FSS) operating in the 3700-4200 MHz band ('C-band'), including Foxtel, 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 Channels, Discovery Channels, BBC, Eurosport, Bloomberg, TCM, Cartoon Network, Boomerang, Sky News UK, Fox News, CNBC, Animal Planet, ESPN, Kids Co, Al Jazeera and CNN.

ASTRA does not believe that the status change proposed for "mobile" services in the 3400-3600 MHz band from secondary to primary status is appropriate for this round of updates to the Australian Radiofrequency Spectrum Plan. Before the ACMA contemplates such a change, there should be extensive industry consultation with licensed FSS operators in the C-Band on the potential for Low Noise Block (LNB) overload that could be caused to C-Band earth stations by mobile services operating in the adjacent band.

The International Telecommunications Union (ITU) Report ITU-R S.2199 (11/2010) clearly states that broadband wireless access (BWA) services operating in the 3400-3600 MHz band can cause interference to C-Band Earth stations operating in the 3700 MHz to 4200 MHz band, at separation distances from a few hundred metres to several kilometres, due to LNB convertor saturation. The Report noted that in certain cases, particularly if these separation distances are not met, “the interference from BWA may block the reception of the earth station in the band in which it operates”. While mitigation techniques such as installation of a band filter may be employed to reduce the likelihood of LNB saturation, the Report found that the effectiveness of a pass band filter is very limited. The Report concludes that:

“...higher power BWA signals should not be operated in channels adjacent to the edge of the operating FSS band, leaving the spectrum closer to that FSS band for use by BWA signals with lower power.”¹

As the ACMA is aware, there is extensive use of C-Band by FSS operators in WRC Region 3 countries. While ASTRA notes that all or part of the 3400-3600 MHz band was identified by over 100 countries at WRC-07 for implementing International Mobile Telecommunications, only a small proportion of these were from Region 3.

While ASTRA recognises that the 3400-3600 MHz band was identified by the ACMA as a candidate for mobile broadband technologies in the *Towards 2000 – Future spectrum requirements for mobile broadband* discussion paper, that discussion paper also stated that:

The ACMA is undertaking an internal review of the existing technical framework for the band to enable the operation of new technologies and services. The ACMA's proposed changes will be considered by a Technical Liaison Group (TLG) established as part of the ACMA's normal consultation processes for the development or review of spectrum licence technical frameworks.²

ASTRA understands that this TLG has yet to be formed. ASTRA believes that a status change for mobile services in the 3400-3600 MHz band would be premature before the TLG has commenced its work, and without extensive consultation with potentially affected FSS operators in the adjacent C-Band.³

Astra recognises that there is international pressure for 3400-3600 MHz to be allocated for primary use by the mobile service but believes that this cannot be achieved in Australia until TLG work is undertaken to form a technical framework which addresses compatibility between the mobile service and the services in adjacent bands. As such, ASTRA recommends that, at this stage, Fixed Services and Radiolocation services should remain as the primary status services in the 3400-3600 MHz band.

1980-2110 MHz and 2170-2300 MHz – alternative ENG/TOB bands

ASTRA notes that no changes are being proposed to the current allocations for the proposed alternative bands, including the “MSS” 1980-2010 MHz and 2170-2200 MHz bands and the 2010-2110 and 2200-2300 MHz bands. While ASTRA recognises the primary status of space-related operations in these bands, ASTRA is surprised that the ACMA has not proposed, at a minimum, a secondary status change for these bands to include ENG/TOB use, given the extensive consultation process that has been undertaken in relation to the use of these bands for electronic news gathering (ENG) and television outside broadcast (TOB) operations. As the ACMA would be aware FOX Sports has taken out Television Outside Broadcast Station (TOBS) licences in the MSS bands.

¹ ITU-R S.2199 *Studies on compatibility of broadband wireless access systems and fixed-satellite service networks in the 3 400-4 200 MHz band* (November 2010), p.5 <<http://www.itu.int/pub/R-REP-S.2199>>

² ACMA, *Towards 2020—Future spectrum requirements for mobile broadband*, May 2011, p.46.

³ While ASTRA recognises that the ACMA has commenced initial consultation in relation to the location of earth stations operating in C-Band, that process does not directly address issues related to increased deployment of mobile services in adjacent bands.

ASTRA would be keen to understand the ACMA's thinking in relation to identified use in the Radiofrequency Spectrum Plan for ENG and TOB operations in the longer term.

Please contact Simon Curtis, Policy and Regulatory Affairs Manager, on (02) 9776 2684 if you wish to discuss further anything in the above.

Yours faithfully

A handwritten signature in black ink that reads "Petra Buchanan". The signature is written in a cursive style with a large initial 'P'.

Petra Buchanan
CEO