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The Manager

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3.4 GHz spectrum licence technical framework *Review of the unwanted emission boundary*

Dear Madam/Sir

Summary

The Communications Alliance Satellite Services Working Group (SSWG), welcomes the opportunity to provide comments to the ACMA in relation to this discussion paper.

This submission does not attempt to answer individually the three questions posed in the discussion paper. Rather, and because we felt there was a degree of overlap between the three questions, we have attempted to answer all three concurrently.

This submission does not represent the views of Optus or Telstra.

The SSWG does not agree with the changes proposed in the discussion paper. We focus, in particular, on the proposed change in the frequency range to which the unwanted emission limits outlined in the paper would apply.

In summary, to provide guidance to Federal Government policy-making in this area, and to help preserve the future of a vibrant and innovative satellite industry in C-band, the SSWG recommends:

1. Maintaining the status quo with regard to the unwanted emission boundary at 3740 MHz, and
2. Applying a focus on site-specific apparatus licensing, with the unwanted emission boundary applying to the site and with no accompanying time constraints

Elsewhere in this submission we raise for the regulator's consideration a broader issue concerning the potential use of Commonwealth Treaty Powers to provide suitable sites for domestic and international satellite operators.

Background to the Recommendation

For the satellite industry, C-band is a uniquely important band because of its coverage and resistance to rain fade. This makes the band vitally important for reliable networking either on a national or global basis in industry applications where 24/7 operational status is needed, or in coping with disaster events. The coverage advantage of geostationary C-band satellites is also very important to traditional broadcasting applications and emerging services which

benefit from this coverage capability. The latter includes interworking with emerging NGSO satellite constellations to give maximum flexibility to these technologies and network futures.

The C-band downlink comprises standard C-band (3.7 to 4.2 GHz) and extended C-band (3.4 to 3.7 GHz). To date, the ACMA has given more than generous concessions to demands from the mobile industry in extended C-band, at some considerable expense to the satellite industry.

With a view to increasing mobile base station transmit powers and the tolerance of satellite receivers, the ACMA has in the recent past compromised on a frequency boundary of 3740 MHz in standard C-band for defining spurious emissions from mobile base stations and their effect on the FSS. It now appears that moving this boundary to 3840 MHz is under consideration, deriving from an increased tunability of mobile base stations.

The satellite industry disagrees strongly with this basis as a premise for changing the status quo, given the ongoing needs of the satellite industry in C-band. It appears to the satellite sector that this threatens to unnecessarily drive the 'thin end of the wedge' further into standard C-band at the hands of the regulator – at the expense of satellite operators and their Australian customers.

Arguments for extending out the frequency boundary proposed by the ACMA are accompanied by an undertaking to protect existing FSS earth stations whereby mobile spectrum licensees would be required to protect existing satellite apparatus-licensees to the levels stated in the current RAG Tx document, which is consistent with a protection boundary of 3740 MHz. The ACMA, however, concedes that the proposed boundary change may affect the ability of operators to licence new FSS earth stations in the 3740 to 3840 MHz band, and the ACMA is suggesting a more appropriate planning and siting of new FSS earth stations. This proposition is somewhat simplistic and may have destructive consequences for the satellite industry in C-band. It is also incompatible with new licensing arrangements which are under development.

To suggest a different location of new earth stations is economically unsound for the satellite industry. Operating more sites for the purposes of existing and future services provided has many complications all of which detract seriously from operational, financial and organisational arrangements. It is of concern that the ACMA is presently focussed on siting of earth stations and different protection arrangements (for existing and the future) and not focussing on protection of earth station sites which would allow for shared access of a site and subject to protection conditions which are consistent both now and into the future for those sites. In addition to this, the site scenario would fit appropriately into the Area-Wide Apparatus Licence concept which the ACMA is currently promoting. There needs, ideally, to be coherence across the objectives and different consultations coming from the regulator.

The SSWG does not support the proposal to change the current 3740 MHz spurious emission boundary to 3840 MHz while the ACMA is still in the process of reviewing the 3700 to 4200 MHz band. A change of the current spurious emission boundary in this early stage will prejudice and possibly prejudice the outcome on the 3700 to 4200 MHz band review which is still in progress. Furthermore, before any decision is made on this matter, licensees in the 3.4 GHz band should be required to provide data to the ACMA on any significant price differences between 5G equipment for the N77 profile band and equipment for the N78 profile band. Without first analysing and better understanding this information it is premature to argue that minimizing financial implications of any future defragmentation process in the 3700 to 4200 MHz band (if it occurs) justify changing the current 3740 MHz spurious emission boundary to 3840 MHz.

Finally, it is stated in the Consultation Paper that devices registered under a 3.4 GHz spectrum licence are not required to protect FSS earth stations licensed after they are registered. One of the consequences of such an arrangement would be to limit the flexibility of FSS operators to deploy new earth stations in the 3700 to 4200 MHz band in some areas within Australian territory. The SSWG believes there is no value in obtaining an apparatus licence for new earth stations with such limited flexibility in the 3700 to 4200 MHz band. Such arrangements, to some degree, downgrade the status of FSS from a primary service to a secondary service in the 3700 to 4200 MHz band and the SSWG does not believe that this is the intention of the ACMA.

Potential Use of Treaty Powers

The Perth International Telecommunications Centre (PITC), located at Landsdale, near Perth, has for several decades been a key satellite communications facility in Australia, operating at multiple frequency bands and supporting a large number of satellites and constellations, both commercial and non-commercial.

The operations included a deep space facility, operated by the European Space Agency (ESA) providing launch and early orbit phase (LEOP) support to the agency, among other functions.

During the period approximately 2000 to 2012, demand for other radiocommunications in the Landsdale area, including wireless broadband, developed to the extent that these operations were no longer considered viable. Considering this – and with support from the Australian Government using its treaty powers, ESA agreed to relocate its S-band services to another location further north, near the town of New Norcia, by the end of 2015.

The SSWG believes it is worth investigating whether similar powers could be used to establish, on the site-starved Australian eastern seaboard, a multi-occupant satellite facility site that could benefit international and domestic operators alike, and provide a basis for continued strong and non-controversial development of the sector in Australia – in line with the Government's stated ambition to aggressively grow the domestic space sector.

To that objective we note the ACMA's *Earth station siting - Guidance on the establishment of new Earth stations and other space communications facilities or the expansion of existing facilities* Discussion Paper in 2011. This paper sought to provide a strategic approach to meeting the requirements for satellite Earth stations and space communications in a sustainable way into the future.

Thank you for the opportunity to make this submission. If you have any questions, please do not hesitate to call Mike Johns on (02) 9959 9125.

Yours sincerely,



John Stanton
Chair
Satellite Services Working Group (SSWG)

About Communications Alliance

Communications Alliance is the primary telecommunications industry body in Australia. Its membership is drawn from a wide cross-section of the communications industry, including carriers, carriage and internet service providers, content providers, equipment vendors, IT companies, consultants and business groups. Its vision is to provide a unified voice for the telecommunications industry and to lead it into the next generation of converging networks, technologies and services. The prime mission of Communications Alliance is to promote the growth of the Australian communications industry and the protection of consumer interests by fostering the highest standards of business ethics and behaviour through industry self-governance.

For more details about Communications Alliance, see:

<http://www.commsalliance.com.au>