

4 May 2023

The Manager

Economics Advisory
Australian Communications and Media Authority
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Dear Sir/Madam

RE: Proposed changes to apparatus licence pricing structures consultation

The Communications Alliance Satellite Services Working Group (SSWG) welcomes the opportunity to comment on the ACMA's *Proposed changes to apparatus licence pricing structures* consultation. The following responses are to four questions of interest to our members, as listed in the consultation paper.

Dataset and framework

Question 1: Do you have any comments on the proposed usage of the ABS dataset 'Estimated resident population, Significant Urban Areas' as the basis for the framework to update apparatus licence taxes annually using changes in geography-specific population?

There may be small financial benefits for licensing satellite earth stations using geography-specific population values compared to the annual CPI index. However, the population in high-density and medium-density areas of Australia is not the primary customer base being served by the satellite service. The primary customer base is found in low-density, remote-density, on the oceans or remote islands, where terrestrial services cannot provide telecommunications connectivity, and therefore, the population or CPI factor for satellite earth stations may not be the preferable calculation criteria.

Changing the ABS dataset from CPI to population seems to lead to the reduction of the annual tax increases and therefore such change is not opposed by the SSWG. However, while the shift to population-based increases is preferable to CPI indexation, the satellite licensing taxes in Australia remain relatively high in comparison to the international benchmarking and therefore we believe that the ACMA should provide more tax incentives to satellite services, especially where the end user is in remote areas. Please see answer to Q9 (below).

Interference protection pricing

Question 7: Do you have any suggestions on how and where the ACMA could introduce interference protection pricing mechanisms to the apparatus licencing framework?

Class licensing of earth stations, while not apparatus licensing, is a category of licensing that takes into account the potential for and level of interference from the earth station transmitter and to the receiver for a subset of earth stations.

The class licence manages this interference risk through restricting the device to communicate with an apparatus licensed space station. In addition, these class licensed earth stations are either mobile and/or often located in remote areas. Typical applications are for satellite phones, mobile earth stations on land, vessels or aircraft.

Earth station licensees take out apparatus licences where class licences are not sufficient to meet the likelihood of interference and/or the impact of interference is higher, or a class licence is not available. Most cases are in the first two categories.

The SSWG is strongly opposed to the introduction of 'interference protection pricing' to satellite Earth receive apparatus licences for the follow reasons:

- a) Earth station receivers are highly sensitive to low levels of interference due to their small carrier-to-noise (or Interference-to-noise) ratios. Small levels of interference can impact the performance of the satellite link or render the link unusable. These carrier to noise (or Interference to noise) ratios are the basis of agreed ITU-R Recommendations to protect earth station receivers.
- b) A more sensitive receiver does not necessarily equate to poor spectrum efficiency. A more sensitive receiver has the benefit of requiring a lower power from the transmitter at the other end of the link, which improves the interference environment of the transmitter with respect to other receivers that might share the band. For example, a more sensitive earth station receiver would allow for a reduction in satellite EIRP, reducing interference from the satellite to the earth stations of other satellite systems that might share the same band. There is a potential second benefit of reducing the required transmitter power – that there is an overall power reduction, saving energy resources, which is an issue of increasing importance to the telecommunications industry. It is important to examine the overall consequences of such a policy – not just to focus on a narrow part of the spectrum framework.
- c) Receiver sensitivity is an essential part of an Earth receiver station's performance to receive faint signals from space. Such receivers cannot operate co-frequency or co-located with high powered terrestrial transmitters and should not be penalised for this requirement. Receivers without co-frequency or co-located terrestrial transmitters do not need interference protection from other receivers.
- d) The issue is more about incompatible service co-allocations than 'inefficient' spectrum use. Radiocommunication receivers do not exhibit 'inefficient' spectrum use unless incompatible transmitters are introduced. This issue should be avoided at the service allocation or application level and not by penalising legitimate radiocommunication receiver assignments.
- e) As indicated in the answer to Q9 (below), space system licences have already significantly higher annual licence tax levels than other licence types for the same frequency band of operation.
- f) Increasing licence costs on satellite earth receive stations will negatively impact the fledgling space industry in Australia including fixed satellite, space research, Earth Exploration satellite and Meteorological satellite services.
- g) Increasing the Earth receiver station licence tax is unlikely to result in more efficient use of the spectrum by satellite services in Australia but will cause satellite operators and service providers to seek locations outside Australia for their earth stations, decreasing the benefit to Australia in having these services available for remote and low-density locations where terrestrial communication services are not available.

- h) The typical life span of many satellites is twenty years, so the receiver technology of the ground systems is locked in for the life of the satellite network or system. Increasing the taxation of the receiver is unlikely to make changes to spectrum efficiency during that time.

Pricing for varying levels of interference

Question 8: Do you have suggestions for any additional pricing measures the ACMA could consider to encourage spectrally efficient technology deployments?

Discounts on licence fees should be applied where a system can supply a service to Australians, regardless of where they live or work.

Pricing for varying levels of interference

Question 9: Are there any other comments that you would like to give relating to the proposals in this paper or other aspects of the apparatus licence tax regime?

The SSWG appreciates the 2020 reforms to the cost of licensing satellite systems in Australia. Space system licences, however, still bear significantly higher annual licence tax levels than other licence types for the same frequency band of operation:

- a) Earth stations are charged ten times the tax compared to scientific assigned licences.
- b) Earth stations are charged two to three times the tax compared to fixed point-to-point, fixed point-to-multipoint and television outside broadcast station licences.

The SSWG reminds the ACMA of the research carried out by Plum Consulting to establish an international comparison of licensing fees for the ACMA in 2016. Figure 1 on the following page compares Plum's findings with the 2020 Australia earth licence fees by population density area and in three common FSS frequency bands (C, Ku and Ka-band).

It was evident that Australia had significantly higher fees than all the other countries surveyed. While the ACMA's recent pricing reforms addressed the Ku and Ka-band fees to a certain degree, and to some extent the C-band nominal transmit band (5000 to 8500 MHz), the C-band Earth receiver station licence tax continues to be excessive.

Satellite systems of all types (FSS, MSS and remote sensing) cover the whole of the Commonwealth of Australia, including external territories. They do not selectively cover areas of high population density. In line with Government policy on Digital Inclusion, systems that close the gap between city and country by covering all of Australia should receive spectrum pricing discounts to encourage this activity.

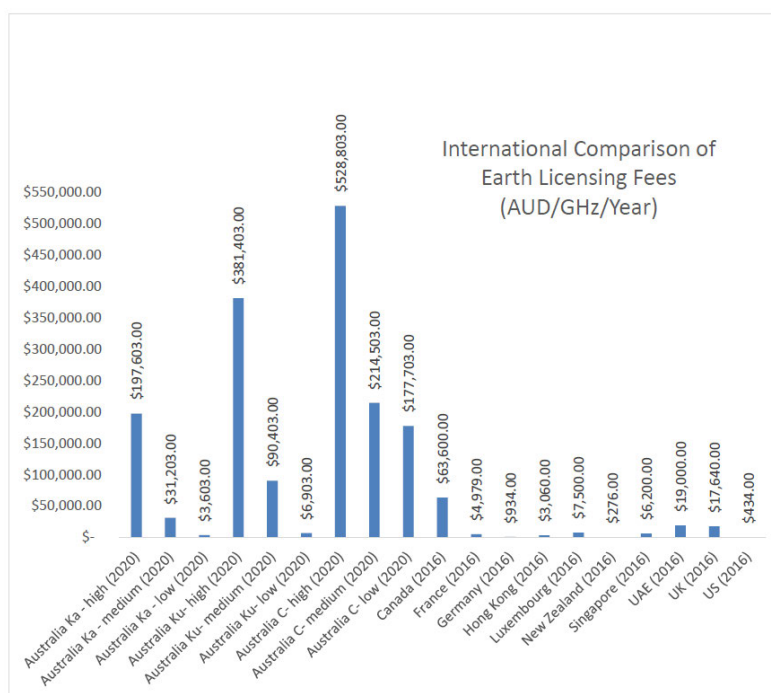


Figure 1: International comparison of earth station licensing fees¹

Yours sincerely,

John Stanton
Chief Executive Officer

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, search engines, equipment vendors, IT companies, consultants and business groups.

Communications Alliance is the most influential association in Australian communications, co-operatively initiating programs that promote sustainable industry development, innovation and growth, while generating positive outcomes for customers and society. Its mission is to create a co-operative stakeholder environment that allows the industry to take the lead on initiatives which grow the Australian communications industry, enhance the connectivity of all Australians and foster the highest standards of business behaviour.

For more details about Communications Alliance, see www.commsalliance.com.au

¹ See Attachment E to ACMA, IFC 19-2016, Review of Taxation Arrangements for Satellite Services Consultation Paper (Aug. 2016).