

The Manager  
Space Systems  
Spectrum Planning and Engineering Branch  
Australian Communications and Media Authority  
PO Box 78  
Belconnen ACT 2616

**RE: UPDATE TO FOREIGN SPACE OBJECTS DETERMINATION NOVEMBER 2019 (KEPLER, SPACEX AND SWARM)**

The Space Industry Association of Australia (SIAA) is a national organisation formed to promote the growth of the Australian space industry. We speak with authority and credibility on behalf of our members on policy and commercial issues connected with the Australian space industry.

The Space Industry Association of Australia was established in 1992 to promote and assist the development of a viable and self-sustaining space sector in Australia and to encourage, advocate for and promote education, research and development in space science in Australia. Our members include Australian satellite operators, global aerospace prime contractors, Australian State and Territory Governments, the CSIRO, Australian owned companies, research institutes of Australian universities, scientists, engineers, consultants and young professionals. As the peak space industry body in Australia we have been at the forefront of space policy formulation and debate in this country for over 25 years.

The SIAA takes a leading role in advising government on behalf of the space industry. We also provide a forum to promote networking and collaboration among members. Through meetings and events held in various Australian locations, we engage with our members to devise and communicate policies to support the development of the Australian space industry. We actively promote and facilitate commercial, industrial and research opportunities for our members nationally and internationally.

In addition, we harness the skills and expertise of our membership to address issues of common concern to corporations, businesses and individuals involved in, or seeking to become involved in, the benefits of the space sector in Australia and internationally.

The SIAA welcomes the opportunity to provide input to the ACMA with respect to the ACMA proposal to amend Schedule 1 of the Foreign Space Objects Determination to include additional foreign satellite operators Kepler Communications (Canada), SpaceX Services (USA) and Swarm Technologies (USA) and we are pleased to provide this submission on behalf of our members.

The SIAA wishes to thank the Australian Communications and Media Authority (the Authority) for the work the ACMA does in representing Australian interests at the ITU and its efforts to promote the efficient and innovative utilisation of radio frequency spectrum in Australia particularly with respect to satellites and space operations.

Satellite and space based services play an increasing role in the Australian economy. A recent study found that space related products and services are used in every industry sector of the Australian economy.<sup>1</sup> The Australian space industry is growing as more organisations rely on space based platforms to provide essential services in communications, earth observation and positioning, navigation and timing. The newly created Australian Space Agency is dedicated to actively growing the Australian space sector with a goal to triple the size of the Australian space industry from its current levels of \$4 billion per annum and 10,000 staff by 2030 and creating tremendous new activity in the space domain. All space activities rely on radiofrequency spectrum to control the space objects and to upload and download the data. The SIAA welcomes the efforts of the ACMA to ensure that there is suitable radiofrequency spectrum available for the growing number of Australian space activities as well as for the foreign operators providing space based services into the Australian economy.

Australia has a long history of benefiting from foreign controlled space-based services with 17 organisations currently listed in Schedule 1. These include virtually all of the major satellite service providers in both geostationary orbit and low earth orbit which provide voice and data communication services across all industries including broadcasting, remote & regional, maritime & aeronautical businesses as well as providing communications platforms for individuals. Foreign satellite operators carry a significant part of Australia's space based telecommunications traffic and provide valuable services for the growth and productivity of Australian industry.

These satellite services are the result of well-coordinated design, operation and implementation of practices that result in an internationally recognised system of providing services to international customers from space in concert with the ITU specifications for satellite frequency use while respecting the sovereignty and integrity of the radiofrequency environment of each separate country.

As the global satellite communications market adjusts to meet the demands for higher throughput at lower latency as well as very low power, latency tolerant applications, several new constellations and Concepts of Operation (CONOPS) are emerging including those proposed by organisations that are the subject of this Foreign Space Objects Determination namely, Kepler Communications (Canada), SpaceX Services (USA) and Swarm Technologies (USA). The intent to amend Schedule 1 of the Foreign Space Object Determination to include these new operators is an acknowledgement of new players seeking to serve the Australian market and is welcomed by the SIAA.

The SIAA supports the intention of the ACMA to amend Schedule 1 of the Foreign Space Objects Determination to include Kepler Communications (Canada), SpaceX Services (USA) and Swarm Technologies (USA).

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<sup>1</sup> *A Selective Review of Australian Space Capabilities, Asia Pacific Aerospace Consultants 2015-16, page 11.*

In supporting this amendment the SIAA looks forward to the additional services intended to be offered to the Australian marketplace. The SIAA expects that subsequent licenses for these operators to utilise space spectrum over Australia will include the acceptance by the proposed operators of the ACMA's policy on the efficient use of radio spectrum, the adoption of techniques to reduce and mitigate orbital debris hazards and the acceptance of any operating restrictions that may be required to protect space spectrum that supports scientific and astronomical research.

In general the SIAA supports initiatives that will assist the growth of the Australian space industry which includes the provision of space based services in Australia by both Australian and foreign satellite operators. The SIAA recognises that the availability of radiofrequency spectrum for the control of space objects and provision of space based services is a necessary and critical element for the growth of the Australian space industry. The SIAA notes that it is essential for the ACMA to protect and enhance access to radiofrequency spectrum for a wide range of satellite operators in order to ensure the continued growth of the Australian space industry.

If you have any questions or comments about our submission feel free to contact the SIAA at [chair@spaceindustry.com.au](mailto:chair@spaceindustry.com.au).

Best regards,

Rod Drury, CSC  
Chair, Space Industry Association of Australia

19 November 2019