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Via Electronic Submission

The Manager
Spectrum Licensing Policy
Australian Communications and Media Authority
PO Box 13112 Law Courts
Melbourne Vic 8010

SUBJECT: Comments of MCA Providers to the ACMA

On behalf of AeroMobile Communication Limited and SITA FOR AIRCRAFT (formerly known as SITAOnAir), the world’s leading providers of mobile communications onboard aircraft (“MCA”) systems and services (collectively, the “MCA Providers”), we hereby submit the following comments in the Australian Communications and Media Authority (“ACMA”) Consultation 15/2020 “Arrangements for jamming devices and radiocommunications device exemptions.”¹ The MCA Providers appreciate the opportunity to participate in this proceeding, and to provide their perspective on the impact of Consultation 14/2020 regarding licensing in the 850/900 MHz band,² which will both affect MCA operations in Australia.³

Consultation 15/2020 is motivated by a desire to (i) facilitate trials of GPS repeaters to provide coverage in tunnels (which involves amending the Radiocommunications (Prohibited Device) (RNSS Jamming Devices) Declaration 2014); and (ii) make an exemption determination to enable the Australian police to use drone jamming devices to deal with safety and security issues. The consultation document also expressly notes that certain “jamming devices” may be used to facilitate MCA operations. Consultation 14/2020 seeks to move from unlicensed spectrum areas to spectrum licensing throughout all of Australia in the 850/900 MHz band.⁴

¹ “Arrangements for jamming devices and radiocommunications device exemptions,” ACMA Consultation No.: IFC 15/2020 <https://www.acma.gov.au/consultations/2020-05/arrangements-jamming-devices-and-radiocommunications-device-exemptions-consultation-152020> (“Consultation 15/2020”).

² “Draft spectrum re-allocation recommendation for the 850/900 MHz band,” ACMA Consultation No.: IFC 14/2020 <https://www.acma.gov.au/consultations/2020-05/draft-spectrum-re-allocation-recommendation-850900-mhz-band-consultation-142020> (“Consultation 14/2020”).

³ The MCA Providers comment and seek action principally in the ACMA Consultation 15/2020. Given the potential relevance of ACMA action in Consultation 14/2020, however, they respectfully request that the ACMA associate or otherwise consider these comments in both consultations.

⁴ The 850/900 MHz band is one of several frequency bands used by MCA systems to communicate with passenger mobile devices. Compare Consultation 14/2020 with <https://www.acma.gov.au/pmts-class-c-pts-bands>.

The MCA Providers submit these comments: (i) to clarify the impact of these consultations on MCA operations in Australia; (ii) to suggest that another decade of operational experience and regulatory developments favor an update of the regulatory approach governing MCA in Australia; and (iii) to respectfully request, in the context of these consultations, that ACMA extend an exemption determination or otherwise permit MCA operations onboard foreign-registered aircraft throughout all of Australia.

1. MCA Operations in Australia and the ACMA Consultations

The ACMA's current approach to enabling MCA in Australia requires a PMTS Class C apparatus license for MCA operations on Australian-registered aircraft only. These systems may operate on foreign-registered aircraft consistent with licenses issued by the foreign aircraft's registering nation based on well-established principles of international aviation. In both cases, MCA equipment must not cause interference to other licensed systems and services in Australia.⁵

As Consultation 15/2020 recognizes, a low-power Network Control Unit or "NCU" (a device that generates noise to prevent passenger mobile devices from connecting to terrestrial base stations) may help enable MCA operations on aircraft operating in non-spectrum licensed space:

Facilitating meritorious or low-risk devices and applications

There are a range of devices and applications that have a 'jamming' function, but are expressly designed, or likely to have a beneficial purpose. These include:

PMTS jamming devices on aircraft

Currently, sections 6 and 7 of the PMTS Jamming Device Prohibition work to enable the operation, possession and supply of PMTS jamming devices that are part of systems that provide carriage services on board an aircraft in non-spectrum licensed space (the devices operate under apparatus licences). To facilitate this, an amendment to the PMTS Jamming Device Prohibition was made, and the radiocommunications licensing system, rather than an exemption determination, manages the ongoing operation of these devices.

The MCA Providers expect aircraft fitted with NCUs to be in operation for the next 5-10 years, although recent regulatory developments and relevant technical studies have enabled MCA systems to operate without NCUs.⁶ MCA systems also include short-range picocells (low-power, mini-base stations that facilitate in-cabin communications with passenger devices).

⁵ See e.g., <https://www.legislation.gov.au/Details/F2010L01703/5c619222-50a3-401e-a2a4-a316173b5c64>; see also <https://www.acma.gov.au/pmts-class-c-pts-bands>; <https://www.legislation.gov.au/Details/F2015C00770/Html/Text> and <https://www.legislation.gov.au/Details/F2014L00045>

⁶ See, e.g., ECC Work Programme, <https://eccwp.cept.org/default.aspx?groupid=27> and CEPT Report 63 and related documents, <https://www.ecodocdb.dk/document/related/980>; see also WAIC and AI 1.17, https://www.researchgate.net/publication/224260679_Aircraft_Attenuation_Measurements_and_Radio_I_nterference_Scenarios_Between_In-Cabin_and_Terrestrial_Cellular_Networks, at 26-28.

The ACMA's regulatory approach does not contemplate MCA operations within spectrum licensed areas – at least not without the express consent of PMTS licensees, which has proven to be elusive. This approach differs from most other countries, where MCA operation must comply with provisions designed to prevent interference to terrestrial systems but are generally exempt from licensing and not subject to licensee consent.⁷ Given such limitations and the integral nature of the 850/900 MHz band, *the move towards spectrum licensing in the 850/900 MHz band may effectively preclude MCA operations on foreign aircraft throughout all of Australia*. Such an outcome would have a disastrous commercial impact because airlines have implemented business plans (which are already under severe stress given the COVID-19 pandemic) that include providing MCA services to passengers on aircraft flying within Australian airspace.

The MCA Providers understand that the ACMA does not seek to prohibit MCA operations and that such a potential outcome of Consultation 14/2020 is unintended, especially because MCA operations do not appear to have been considered in the consultation document. Nonetheless, unless addressed appropriately by the ACMA either through action in Consultation 15/2020 or otherwise, there will be a direct and material adverse impact on MCA operations in Australia.

2. The ACMA Should Extend an Exemption Determination or Otherwise Facilitate Operation of MCA Systems in Australia

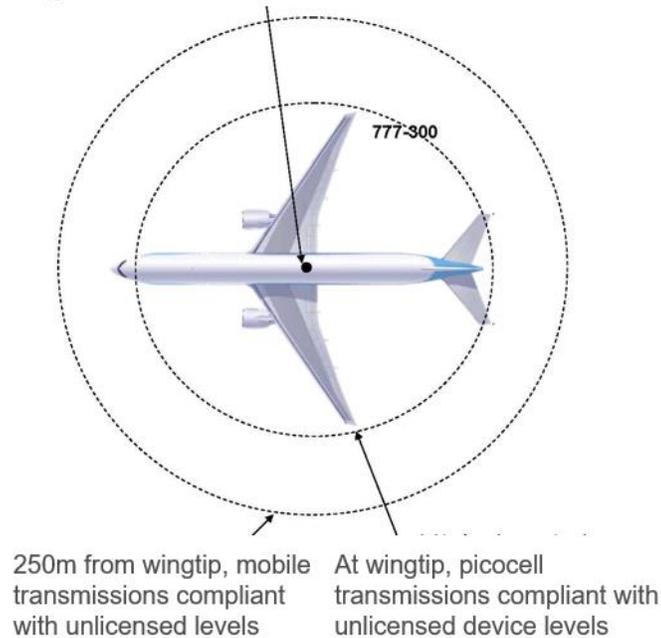
It has been a decade since the ACMA initially adopted its regulatory approach to facilitate MCA operations in Australia. Like most countries, the ACMA has adopted a license requirement for domestic aircraft but not for foreign-registered aircraft. The MCA Providers currently offer MCA services only on foreign aircraft that traverse Australian airspace. The ACMA should ensure through action in these ongoing consultations that moving to spectrum licensing in the 850/900 MHz band will not effectively preclude such MCA operations.

As the ACMA may be aware, its policies of limiting MCA operations to non-spectrum licensed space has required suspension of MCA service on foreign aircraft flying over spectrum licensed areas. This approach will prove entirely preclusive if ACMA moves to spectrum licensing in the 850/950 MHz band without considering its current MCA regulations, even though the use of these and other frequencies by MCA systems is confined to the aircraft cabin. Fortunately, Consultation 15/2020 expressly acknowledges MCA operations and raises the potential for an exemption determination or other solution to the inherent – albeit apparently unintended – conflict between the move to spectrum licensing in Consultation 14/2020 and the ACMA's regulatory approach to enable MCA operations.

⁷ See, e.g., CEPT and European Union documents relating to MCA operations, including ECC/DEC/(06)07, ECC Report 093, and European Commission Decision and Recommendation (April 2008); see also APT Wireless Forum documents relating to MCA operations, including Framework Opinion (adopted, August 2007) (recommends airborne system be authorised by State of aircraft registration and mutual recognition) and Guidelines on Technical Conditions for the Use of Mobile Phones onboard Aircraft (August 2008).

Through compliance with well-accepted international standards and altitude constraints, MCA operations do not cause harmful interference or otherwise adversely impact terrestrial systems and services. As a result of fuselage attenuation and other factors, emissions from NCUs and picocells operating at very low power and are essentially confined to the aircraft cabin. Even the slightly higher-power transmissions of passenger mobile devices are confined to the area immediately around the aircraft and thus will have no impact on terrestrial wireless operations.⁸

Figure 1. NCU and Picocell Power Levels



Because MCA systems operate while an aircraft is at altitude (*i.e.*, only above approximately 3,000-5,000 meters), all components of an MCA system (not just the NCUs) are candidates for an exemption determination. At a minimum, this approach should be considered for MCA systems on foreign-registered aircraft where the ACMA has determined it need not “re-license” MCA operations that are already subject to licensing by a sovereign nation with primary jurisdiction over the aircraft. Such an exemption determination would (i) acknowledge the low-power, non-interfering nature of MCA systems; (ii) recognize equipment licensing by a foreign aircraft’s registering nation consistent with international aviation principles; and (iii) preserve current MCA operations without adversely affecting terrestrial wireless operations in Australia. It may be possible to implement other measures to achieve a similar result, but the MCA Providers believe an exemption determination may be the most expeditious course.

The MCA Providers also believe that such an exemption determination could be extended, at least in part, to Australian-registered aircraft. Although the PMTS Class C license may remain the preferred approach to enable MCA operations on Australian aircraft, effectively limiting MCA operations to non-spectrum licensed areas remains a significant issue. To preserve

⁸ The distances indicated in Figure 1 are for the 1800 MHz band but are indicative of the low-power nature of MCA systems and areas potential affected by such operations across all relevant bands.

regulatory parity and ensure the potential for MCA operations on Australian aircraft throughout Australian airspace, the ACMA should implement a similarly effective solution to this issue for both Australian and foreign-registered aircraft.

3. Conclusion

The MCA Providers sincerely appreciate the opportunity to comment on the foregoing issues. They would be pleased to engage further with the ACMA and other interested parties to ensure that any action taken in these consultations, and with respect to MCA operations generally, continue to protect terrestrial operations from harmful interference but also preserve and expand the opportunity for MCA operations in Australia.

Respectfully submitted,



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*On behalf of AeroMobile Communication
Limited and SITA FOR AIRCRAFT*