

May 11th, 2023

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

Dear Manager

Submission to Five-year spectrum outlook 2023-2028

Executive Summary

- 1 Centum Research & Technology (Centum) welcomes the opportunity to respond to the Australian Communications and Media Authority's (ACMA) Five-year Spectrum Outlook for 2023-28 (FYSO).
- 2 Centum has developed an airborne mission system for search and rescue, which is designed to search for people in distress situations by detecting and locating mobile phones in areas with or without cell network coverage, including under adverse weather conditions (Lifeseeker Device).
- 3 As outlined at paragraph 7, to locate mobile phones and thereby perform its search and rescue functions, the Lifeseeker Device requires the ability to transmit in the radio frequency channels of mobile network operators in Australia.
- 4 Based on our discussions with the ACMA, we understand that to lawfully enable the use of Lifeseeker in Australia and provide its end users with a legal basis to transmit in the radio frequency channels of mobile network operators, Centum and its end users require the ACMA to issue a new class licence under section 132 of the Radiocommunications Act (Cth) 1992 (Radiocommunications Act).
- 5 The purpose of this submission is to outline why we believe the ACMA should include on its FYSO and its upcoming work plan the issuance of a new class licence to enable Centum and its end users to use Lifeseeker in Australia.

Background to the Lifeseeker Device

- 6 The Lifeseeker Device:
 - (a) comprises of a sensor that is usually installed in a manned aircraft or drone (depending on the product model), a set of antennas, and a user-friendly web-based interface that can run in tablet or laptop; and
 - (b) acts as a base transceiver station, transmitting in radio frequency channels, to connect with a target phone under search, without disturbing network providers' communications.
- 7 To locate mobile phones and thereby perform its search and rescue functions, the Lifeseeker Device requires the ability to transmit in the radio frequency channels of mobile network operators in Australia. These frequencies are licenced to various commercial entities for the purposes of operating those networks under spectrum licences which provide exclusive access to and use of those frequencies.

- 8 Based on our conversations with the ACMA, we understand that:
- (a) the Lifeseeker Device is not appropriately accommodated for under:
 - (i) the existing licencing regime; and
 - (ii) the existing law enforcement exceptions contained within the Radiocommunications Act; and
 - (b) the best way to lawfully enable the use of Lifeseeker in Australia is through the creation of a new class licence.

Response to the FYSO

- 9 Five-year spectrum outlook 2023–28 and 2023–24 work program.
Draft for consultation (issued in March 2023).

International approach

- 10 Given its significant utility and public benefit, Centum has successfully worked with the regulators of the following jurisdictions to accommodate the Lifeseeker Device into their existing legal framework:
- (a) the United States of America;
 - (b) Canada;
 - (c) the European Union;
 - (d) Norway; and
 - (e) Switzerland.
- 11 By finding a way to accommodate this innovative technology, in 2022, the Lifeseeker Device was used to perform approximately 100 successful missions in Europe with an average mission time of less than 1 hour.
- 12 Whilst we appreciate that the ACMA is bound by Australian law requirements, we believe this demonstrates the utility and support for Lifeseeker at an international level, and if Lifeseeker is issued a class licence, we hope to bring these efficiencies into Australia.

Considerations for Spectrum Management in Australia

- 13 The object of the Radiocommunications Act is to promote the long-term public interest derived from the use of the spectrum. This is to be achieved by ensuring the efficient planning, allocation and use of the spectrum, and the facilitation of the use of spectrum for various purposes including, relevantly, national security, public safety, and community purposes.
- 14 Under the Radiocommunications Act:
- (a) the ACMA may issue by legislative instrument, class licences with conditions the ACMA sees fit (section 132 and 133 of the Radiocommunications Act);
 - (b) the ACMA must not issue a class licence that is inconsistent with the spectrum plan or any relevant frequency plan (section 137 of the Radiocommunications Act); and

- (c) where a radiocommunications device operates at one or more frequencies and within one or more areas, to issue a class licence, the ACMA:
 - (i) must be satisfied that:
 - (A) issuing the class licence would not result in unacceptable levels of interference to the operation of radiocommunications devices operated, or likely to be operated, under spectrum licences; and
 - (B) issuing the class licence would be in the public interest; and
 - (ii) must consult all licencees of spectrum licences who may be affected by the proposed class licence (section 138 of the Radiocommunications Act).

15 We believe the ACMA has a legislative basis to create a new class licence for certain users of Lifeseeker, given the Lifeseeker Device:

- (a) is consistent with the Australian Radiofrequency Spectrum Plan 2021 (Cth) (Australian Radiofrequency Spectrum Plan);
- (b) has been designed in a manner that it does not disturb public network communications or cause harmful interference to the Radiofrequency Spectrum Plan. This is because the Lifeseeker Device:
 - (i) generates a temporary new base transceiver station in a search area to connect with a phone under search and operates in a small isolated search area;
 - (ii) performs an analysis of the operational environment by decoding all GSM, WCDMA and LTE signals generated by network providers' base transceiver station in the search area; and
 - (iii) generates GSM signals in free RF channels and WCDMA/LTE signals in either free channels or using modulation codes different from the ones used by the network providers in the environment; and

16 We would be happy to assist the ACMA liaise with and obtain the approval of the mobile network providers who may be affected by the proposed class licence including by demonstrating that the Lifeseeker does not and will not cause any interference or disturbance with their public network communications.

Proposed actions

17 Given the significant public utility and support for Lifeseeker both internationally and Australia, we submit the ACMA should include on its upcoming work plan under its FYSO the creation and issuance of a new class licence to Centum and the following end users, who have expressed interest in using the Lifeseeker Device for search and rescue missions in Australia:

- (a) the Australia Police or the police force of an Australian State or Territory (Queensland, Western Australia, New South Wales and Victoria);
- (b) fire-fighting, civil defence and search and rescue organisations including without limitation:
 - (ii) the Queensland Fire and Emergency Service;
 - (iii) the Western Australia Department of Fire & Emergency Service; and
 - (iv) the Australian Volunteer Coast Guard;
- (c) Trackz Pty Ltd;

(c) Owl Optics.

- 18 As a new technology, we believe the operation of a device such as Lifeseeker was unforeseen at the time of making the Australian Radiofrequency Spectrum Plan and we consider that the issuance of a class licence to Centum and its end users to be an appropriate useful and beneficial use of spectrum, which is consistent with the Australian Radiofrequency Spectrum Plan.
- 19 The issuance of a new class licence for Lifeseeker will help ensure that persons undertaking search and rescue missions in Australia are able to utilise advancements in technology, to ensure that these missions are being undertaken in the most efficient manner.

We trust this assists the ACMA in its development of the FYSO. Please feel free to contact Javier Chamorro on [REDACTED] or our legal advisers at McCullough Robertson Lawyers on (02) 8241 5609 if you have any questions in relation to this submission.

Yours sincerely

Javier Chamorro
Chief Executive Officer