

Inmarsat Response to Ofcom’s Consultation on “Proposed measures to require compliance with international guidelines for limiting exposure to electromagnetic fields (EMF)”

12 June 2020

1 Introduction

Inmarsat is pleased to respond to Ofcom on this consultation regarding exposure to electromagnetic fields. Many of the terminals operating in the Inmarsat networks, including the L-band terminals, aircraft terminals operating in the European Aviation Network (EAN), and Ka-band Global Xpress terminals operate with power greater than 10 W EIRP and so would fall within the scope of the proposed new regulations. The complementary ground component base stations used in the EAN also transmit with power greater than 10 W EIRP.

Inmarsat already requires that the terminals that operate in our networks meet certain requirements to be able to ensure their correct operation and to be able to be deployed and used safely in virtually all countries of the world. These requirements are applied through our own internal standards and by reference to standards developed by external bodies such as ETSI, the IEC and IEEE. This includes meeting requirements for human exposure to electromagnetic fields.

Inmarsat is a licensee in the UK regarding ground stations used by the EAN. Other Inmarsat devices used in the UK are not licensed to Inmarsat, but are either licence exempt (in the case of land mobile terminals) or are included in the ship or aircraft radio licence (in the case of maritime terminals and aviation terminals).

Protection of the public from exposure to electromagnetic fields is an important consideration and the means to ensure that the necessary limits are met must be effective while minimising constraints and costs on the users, installers, operators and manufacturers. These means may include the use of warning markings and/or installation location restrictions where intentional radiations from use terminal equipment exceed limits in the proximity of the user terminal. We are not aware of any significant problem with the current regime based on voluntary standards,

and Ofcom has not provided information about any cases where the limits may previously have been exceeded. Nonetheless, we accept that it is important to provide a high level of assurance to the public on this matter and hence Inmarsat can generally agree with the approach proposed by Ofcom.

2 Answers to questions

Question 1: Do you agree with our proposal to take steps to mitigate risks related to EMF and be in a position to hold licensees, installers and users to account if issues are identified? Please explain the reasons for your response.

We agree that licensees, installers and users may be held to account if issues are identified as these bodies have the capability of resolving issues if they arise.

Question 2: Do you agree with our proposal (a) to include a condition in spectrum authorisations requiring compliance with the basic restrictions for general public exposure identified in the ICNIRP Guidelines; and (b) that this condition should apply to equipment that can operate at powers greater than 10 Watts? If you do not agree with this proposal, please explain what alternative measures you think would be appropriate and why.

We are content that the ICNIRP Guidelines form the basis of the requirements. We believe that Ofcom should also accept other means of maintaining EMF emissions at safe levels. In particular, IEEE standard C95.1-2019; “IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz”, like the ICNIRP Guidelines, is based on a broad review of academic research (including the ICNIRP Guidelines) and provides limits that are in many cases identical to those in the ICNIRP Guidelines. Inmarsat already requires certain terminals to comply with the limits in this IEEE standard. The difference between the two sets of guidelines seem to be few and where they occur, the differences are small and would not compromise safety.

Question 3: Do you agree with our proposed guidance on EMF compliance and enforcement? Please explain the reasons for your response.

Inmarsat generally agrees with the proposed guidance, but would welcome explicit reference in the guidelines that compliance with IEEE standard C95.1-2019 is adequate to meet the safety limits.