

RECOMMENDATION ITU-R SF.1585*

Example approach for determination of the composite area within which interference to fixed service stations from earth stations on board vessels when operating in motion near a coastline would need to be evaluated

(Questions ITU-R 226/9 and ITU-R 254/4)

(2002)

The ITU Radiocommunication Assembly,

considering

- a) that the World Radiocommunication Conference (Istanbul, 2000) (WRC-2000) adopted Resolution 82 (WRC-2000) concerning provisions for earth stations on board vessels (ESVs) operating in the bands 3 700-4 200 MHz and 5 925-6 425 MHz;
- b) that *resolves* 1 and 2 of that Resolution calls for ITU-R to urgently study regulatory, technical and operational constraints which would need to be applied to ESV operations, including those transmitting in the 14 GHz band;
- c) that the use of ESVs will not require coordination when operating beyond a minimum distance from shore within which there is a potential for causing unacceptable interference to stations in the fixed service (FS);
- d) that there is a need for ESVs operating within the minimum distance referred to in *considering* c) to not cause unacceptable interference to terrestrial stations;
- e) that ESVs have preliminary technical characteristics such as those described in Recommendation ITU-R S.1587,

recommends

- 1 that Annex 1 may be used as an example approach to determine the composite area within which interference to fixed stations from proposed operations of in-motion ESVs should be evaluated.

* This Recommendation should be brought to the attention of Radiocommunication Study Group 8 and the Special Committee.

ANNEX 1

Example approach for the determination of the composite area within which interference to FS stations from ESVs when operating in motion near a coastline needs to be evaluated**1 Introduction**

ESVs are potential sources of interference for stations in the FS operating in the same band. This Annex describes a method that may be used by administrations to determine the appropriate areas within which the operation of ESVs must be coordinated with stations of the FS when that operation is within a distance from the shore, as defined in **draft new Recommendation ITU-R SF.[Doc. 4/95-9/154]** of any administration.

The potential interference effects from ESVs can be avoided by examining potential interference to receivers operating in the same frequency band located within the composite area determined for the motion of the ship near the coast. The use of particular frequencies may need to be avoided where the predicted worst-case interference to FS operations on such frequencies exceeds the specified interference criteria.

2 ESV operation close to shore

When vessels equipped with earth stations are operating close to shore, determination of the area within which unacceptable interference may occur is a critical step in the process to ensure that such unacceptable interference does not occur. Determination of this composite area requires knowledge of the limits of the position of the vessel as it approaches land, enters a port or harbour, and proceeds to the vessel's final stationary point at the dock or at anchor. Similar limitations must be defined for the ESV operations as the vessel leaves its stationary position in the port and proceeds to the open sea.

Maritime navigation regulations define the requirements for vessel motion within the sea-lanes and port channels. A vessel larger than 300 gross tonnage must stay within the area known as the sea-lanes as it approaches a port. Once inside a port or harbour, the vessel must follow the port channels to its final stationary position at the dock or mooring at a pre-designated stopping point. The sea-lanes and port channels are clearly marked on the water with buoys and other defined aids to navigation. They are also clearly designated on maritime charts published by local and international regulatory authorities.

Once within the sea-lanes leading to a port or harbour and the channels within that port, a vessel may not go outside the marked areas, nor may it stop or anchor at any point except as directed by the local authorities. These limitations on vessel motion define the extremes of position for all larger vessels, including those equipped with ESVs. These extremes of position (that is, the administration-mandated limits of permissible vessel motion) define the "operating contour" for all larger vessels operating in a particular port or harbour.