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| **World Radiocommunication Conference (WRC-15) Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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| PLENARY MEETING | **Addendum 8 to Document 9-E** |
|  | **14 October 2015** |
|  | **Original: English** |
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| European Common Proposals | |
| Proposals for the work of the conference | |
|  | |
| Agenda item 1.8 | |

1.8 to review the provisions relating to earth stations located on board vessels (ESVs), based on studies conducted in accordance with Resolution **909 (WRC‑12)**;

Introduction

Since Resolution 902 (WRC-03) was approved, and as confirmed by Resolution 909 (WRC-12), the technology used by ESVs has advanced considerably, including the use of spread-spectrum modulation and other techniques which may improve compatibility with terrestrial co-frequency services.

In that frame, Europe is of the view to take in account these technical evolutions and consider definition of reduced separation distances while ensuring protection of Fixed Service with similar regulatory approach as currently contained in Resolution 902 (WRC-03).

Europe therefore proposes to establish a set of different protection distances for different maximum e.i.r.p. levels of ESVs towards horizon with the aim to reduce protection distances taking into account various technologies of ESV.

Europe noted that some fixed service stations on off-shore platforms are currently operated but no specific provisions have been foreseen in the revised Resolution 902 since such stations are not taken into account in the existing Resolution. The introduction of specific measures to protect these stations may lead to much larger separation distances than at present and to a regulatory regime that may be difficult to implement by ESV operators.

This proposal is covered by Method D of the CPM Report.

Proposal

MOD EUR/9A8/1

RESOLUTION 902 (REV.WRC-15)

Provisions relating to earth stations located on board vessels which operate in fixed-satellite service networks in the uplink bands 5 925-6 425 MHz and 14-14.5 GHz

The World Radiocommunication Conference (Geneva,2015),

...

resolves

1 that ESVs transmitting in the 5 925-6 425 MHz and 14-14.5 GHz bands shall operate under the regulatory and operational provisions contained in Annex 1 and the technical limitations in Annex 2 of this Resolution;

2 that ESVs transmitting maximum e.i.r.p. spectral density levels such that the required protection distances established in this Resolution are shorter than those contained in Resolution 902 (WRC-03) shall operate in accordance with the regulatory conditions established in this Resolution from the date it comes into force;

3 that ESVs transmitting maximum e.i.r.p. spectral density levels such that the required protection distances established in this Resolution are larger than those contained in Resolution   
902 (WRC-03) shall have one year from the date this Resolution comes into force to conform to the conditions established herein,

...

ANNEX 1 TO RESOLUTION 902 (REV.WRC-15)

Regulatory and operational provisions for ESVs transmitting in the 5 925‑6 425 MHz and 14-14.5 GHz bands

4 The minimum distances from the low-water mark as officially recognized by the coastal State beyond which ESVs can operate without the prior agreement of any administration are given in Table 1 for the 5 925-6 425 MHz band and in Table 2 for the 14-14.5 GHz band, taking into account the technical limitations in Annex 2. Any transmissions from ESVs within the minimum distances shall be subject to the prior agreement of the concerned administration(s).

...

10 When ESVs operating beyond the territorial sea but within the minimum distance (as referred to in item 4 above) fail to comply with the terms required by the concerned administration pursuant to items 2 and 4, then that administration may:

– request the ESV to comply with such terms or cease operation immediately; or

– request the licensing administration to require such compliance or immediate cessation of the operation.

Table 1

Values for the 5 925-6 425 MHz band ESVs

|  |  |
| --- | --- |
| Maximum e.i.r.p. transmitted toward the horizon (dBW in 11.2MHz) | Minimum distance from low- water mark\* (km) |
| 20.8 | 328 |
| 10.8 | 233 |
| 0.8 | 134 |
| -9.2 | 57 |
| \* Low-water mark as officially recognized by the coastal State. | |

Table 2

Values for the 14-14.5 GHz band ESVs

|  |  |
| --- | --- |
| Maximum e.i.r.p. transmitted toward the horizon (dBW in 14 MHz) | Minimum distance from low- water mark\* (km) |
| 16.3 | 125 |
| 6.3 | 97 |
| –3.7 | 43 |
| \* Low-water mark as officially recognized by the coastal State. | |

ANNEX 2 TO RESOLUTION 902 (rev.WRC‑15)

Technical limitations applicable to ESVs transmitting in the bands 5 925‑6 425 MHz and 14-14.5 GHz

|  |  |  |
| --- | --- | --- |
|  | 5 925-6 425 MHz | 14-14.5 GHz |
| Minimum diameter of ESV antenna | 1.2 m | 160 cm |
| Tracking accuracy of ESV antenna | ±0.2° (peak) | ±0.2° (peak) |
| Maximum ESV e.i.r.p. spectral density toward the horizon | 17 dB(W/MHz) | 12.5 dB(W/MHz) |
| Maximum ESV e.i.r.p. towards the horizon | 20.8 dBW | 16.3 dBW |
| Maximum off-axis e.i.r.p. density1 | See below | See below |
| 1 In any case, the e.i.r.p. off-axis limits shall be compliant with the FSS intersystem coordination agreements that may agree to more stringent off-axis e.i.r.p. levels. | | |

Off-axis limits

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**Reasons:** To implement the set of various separation distances according to Method D of the CPM Report.

Note: Resolution 902 is referred to in Nos. 5.457A**,** 5.457B**,** 5.506A and5.506B. Should WRC-15 decide some changes on this Resolution, a consequential update to the date of this Resolution in the above four provisions of Article 5 would be needed.

SUP EUR/9A8/2

RESOLUTION 909 (WRC‑12)

Provisions relating to earth stations located on board vessels   
which operate in fixed-satellite service networks in the   
uplink bands 5 925-6 425 MHz and 14-14.5 GHz

**Reasons:** Studies are completed.

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