IWG-3/006REV2
(9/21/12)

DRAFT PRELIMINARY VIEW

2015 WORLD RADIOCOMMUNICATION CONFERENCE

PRELIMINARY VIEWS ON WRC-15
Agenda Item 1.8

AGENDA ITEM 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);*

ISSUE: possible revision of the limitations and restrictions contained in Resolution 902 (WRC-03) in light of the ESV technologies being currently deployed.

BACKGROUND: Agenda item 1.8 considers the need to review and possibly revise limitations and restrictions contained in Resolution 902 (WRC-03) in light of the current ESV technologies being currently deployed (e.g. use of spread spectrum modulation), while ensuring the continued protection of other services to which the frequency bands 5 925-6 425 MHz and 14.0-14.5 GHz are allocated.

In the United States, the 5925-6425 MHz frequency band is allocated on a primary basis to the Fixed Satellite Service (Earth-to-Space) and the Fixed Service. This band may also be used for Earth-to-Space communication of earth stations on board vessels. Similarly the 14.0-14.5 GHz frequency band is allocated on a primary basis to the Fixed Satellite Service (Earth-to-Space). This band may be used for Earth-to-Space communication of earth stations on board vessels and of Vehicle Mounted Earth Stations. Parts of this band are also allocated on a secondary basis to the Mobile Satellite Service (Earth-to-Space) and to the Space Research Service.

This issue was considered during the 2007-2012 ITU-R study cycle. It was noted in the course of these studies that, the assumptions used in Recommendations ITU-R S.1587-2 ("Technical characteristics of earth stations on board vessels communicating with FSS satellites in the frequency bands 5 925-6 425 MHz and 14-14.5 GHz which are allocated to the fixed-satellite service") and ITU-R SF.1650-1 ("The minimum distance from the baseline beyond which in-motion earth stations located on board vessels would not cause unacceptable interference to the terrestrial service in the bands 5 925-6 425 MHz and 14-14.5 GHz"), which were the basis for Resolution 902 (WRC-07), are no longer representative of current ESV technologies. For example, typical ESVs operate today with e.i.r.p. density levels that are more than 20 dB lower than those used in Recommendation ITU-R SF.1650-1. As a consequence, ESV operations are unduly restricted by constraints derived on the basis of ESV systems with much higher interference potential.

As Recommendation ITU-R SF.1650-1 was largely the basis for the ESV restrictions contained in Annex 2 of Resolution 902 (WRC-03), the earlier observations regarding unduly restrictive constraints equally apply to this Resolution.

Consistent with resolves 1 of Resolution 909 (WRC-12), studies are currently underway to investigate the use of an alternative approach, including use of a pfd criterion, that could allow more flexibility to ESV operation while protecting co-frequency terrestrial services. Within the ITU-R, the topic has already been addressed in input contributions to ITU-R meetings.

U.S. VIEW: The United States supports the continuation of studies of possible alternative approaches, including the use of a pfd criterion, as a means to allow more flexibility to ESV operation while continuing to protect co-frequency services. .