

IWG-7/111 (12.26.02)  
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**Informal Working Group 7**  
**DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE**

**Agenda item 7.1** to consider and approve the Report of the Director of the Radiocommunication Bureau on the activities of the Radiocommunication Sector since WRC-2000, including on any difficulties or inconsistencies encountered in the application of the Radio Regulations, and action in response to Resolution **80 (Rev.WRC-2000)**;

**Issue:** Clarification of Resolution **77 (WRC-2000)**

**Background:**

WRC-2000 removed certain regulatory limitations (e.g., national or subregional systems only) on the operation of geostationary-satellite networks in the fixed-satellite service in Region 2 in the band 11.7-12.2 GHz. WRC-2000 also recognized the need to protect stations in the co-primary fixed service (FS) allocation in part of this band and adopted provisions to establish a technical basis for determining whether an Administration's FS stations may be affected by a GSO FSS network. These provisions are contained in Resolution 77 (WRC-2000). Specifically, Resolution 77 contains pfd thresholds to determine if coordination may be needed with terrestrial stations in Regions 1, 2 and 3 from GSO FSS systems providing service in Region 2. However, it has been highlighted by the BR that Resolution 77 may need clarification with respect to the process in Articles 9 and 11 to be applied with respect to the pfd thresholds in Resolution 77. In this regard, Section 3.1.2 of the Preliminary Report of the BR to WRC-03 (Document CPM02-2/6), addressing the application of No. **5.488** in relation to Resolution 77, states that "The conference may wish to consider the wording of Resolution 77 and to introduce appropriate clarification so as to indicate the coordination mechanism to be applied in an unambiguous manner".

The solution to clarify Resolution 77 ultimately identified should maintain the balance sought at WRC-2000—applying coordination thresholds to protect terrestrial services while not unduly constraining FSS. At WRC-2000, pfd thresholds were ultimately adopted because they provide the required flexibility for implementing GSO FSS systems, while still affording protection to fixed service systems. With the pfd thresholds adopted in Resolution 77, the BR notifies an Administration if the threshold levels are exceeded on their territory, providing the terrestrial Administration with a red flag that allows the administration to carry out additional analysis, if necessary, to

determine if the level of exceedance is enough to warrant a coordination with the satellite network. This examination by the BR significantly reduces the burden of the terrestrial administration as they do not have to examine each Special Section in detail and determine if their terrestrial services may be affected by a proposed FSS network. Additionally the pfd examination by the BR provides the GSO FSS network administration a specific list of countries that may be affected by the proposed network.

In response to this issue raised in the Director's Report, Section 6.4.3 of the CPM Report identifies two regulatory mechanisms that could be used to clarify the application of the threshold pfd levels in Resolution 77 (WRC-2000). The proposal contained herein supports the second approach, which foresees application of No. 9.14 and the provisions associated with it in Articles 9 and 11. This approach still has the BR identify which terrestrial stations of administrations may be affected, yet gives some flexibility to the notifying administration in the coordination process.

USA/7.1/xxx

**MOD**

RESOLUTION 77 (WRC-~~2000~~2003)

**Protection of terrestrial services in all Regions from geostationary-satellite networks  
in the fixed-satellite service in Region 2  
using the frequency band 11.7-12.2 GHz**

The World Radiocommunication Conference (~~Istanbul, 2000~~Geneva, 2003),

*considering*

- a) that, in Regions 1 and 3, the band 11.7-12.2 GHz is allocated on a co-primary basis to terrestrial services and to the broadcasting-satellite service (BSS);
- b) that, in Region 2, the band 11.7-12.1 GHz is allocated on a co-primary basis to terrestrial services (except in the countries listed in No. 5.486) and to the fixed-satellite service (FSS);
- c) that, in Region 2, the band 12.1-12.2 GHz is allocated on a co-primary basis to terrestrial services in Peru (see No. 5.489) and to the FSS;
- d) that protection of the BSS in Regions 1 and 3 from the FSS in Region 2 is assured by Article 7 and Annex 4 of Appendix 30;
- e) that protection of the FSS in Region 2 from the FSS in that Region is assured either by Article 9 (Nos. 9.7 or 9.12) or Article 22;

f) that protection of terrestrial services in Regions 1, 2 and 3 from non-geostationary- satellite (non-GSO) systems in the FSS in Region 2 is assured by Article 21;

g) that there is a need to protect terrestrial services in Regions 1, 2 and 3 from GSO networks in the FSS in Region 2;

h) that this Conference has modified No. 5.488 by revising the regulatory limitations on the operation of GSO networks in the FSS in Region 2 in the band 11.7-12.2 GHz,

*recognizing*

that ITU-R has developed Recommendation ITU-R SF.674-1, dealing with sharing between the FSS and the fixed service in the band 11.7-12.2 GHz in Region 2,

*resolves*

that, before an administration notifies to the Radiocommunication Bureau or brings into use, in Region 2, a frequency assignment for a GSO network in the FSS in the 11.7-12.2 GHz band, it shall, seek the agreement of using the procedures in Articles 9 and 11 associated with No. 9.14, coordinate with any administration of Regions 1, 2, and 3 having a primary allocation to terrestrial services in the same frequency band if the power flux-density (pfd) produced on its territory exceeds the following thresholds:

-124	dB(W/(m <sup>2</sup> · MHz))	for	0° ≤ θ ≤ 5°
-124 + 0.5 (θ - 5)	dB(W/(m <sup>2</sup> · MHz))	for	5° < θ ≤ 25°
-114	dB(W/(m <sup>2</sup> · MHz))	for	θ > 25°

where θ is the angle of arrival of the incident wave above the horizontal plane (degrees),<sup>1</sup>

*instructs the Radiocommunication Bureau*

in its examination of requests for coordination for any geostationary space station in the FSS operating in the band 11.7-12.2 GHz in Region 2, to determine if the pfd thresholds under *resolves* above are exceeded on the territory of any administration, other than the notifying administration, having a primary allocation to terrestrial services and, if so, to so notify both the notifying and the affected administrations.

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<sup>1</sup> These values relate to the pfd and angles of arrival which would be obtained under free-space propagation conditions.

Reason:

To clarify any ambiguities in the Resolution as to which procedures should be followed in coordinating with the affected administrations.