

United States of America

DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE

Agenda Item 1.12: to consider possible changes in response to Resolution **86 (Rev. Marrakesh, 2002)** of the Plenipotentiary Conference: “Advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks” in accordance with Resolution **86 (WRC-03)**;

Coordination arc in the band 17.3-17.8 GHz and other closely related proposals

Background Information: Resolution **901 (WRC-03)** invites ITU-R “to conduct studies on the applicability of the coordination arc concept for space radiocommunication services not yet covered by these Regulations” as well as “to recommend, as appropriate, the orbital separation required for triggering inter-service and intra-service coordination concerning the satellite services in frequency bands above 3.4 GHz for geostationary-satellite (GSO) networks not subject to a Plan and not already covered by the coordination arc concept specified in No. **9.7 (GSO/GSO)** of Table 5-1 (Appendix **5**), under items 1), 2) and 3) of the frequency band column, and subject to Section II of Article 9”. This Resolution further *resolves* to recommend that a future competent conference review the results of ITU-R studies on the application of the coordination arc and consider including the results of these studies in Appendix **5**. Review of such study results are considered under Resolution **86** of Agenda Item 1.12.

Pursuant to Resolution **901**, ITU-R studied the appropriate coordination arc value to trigger coordination between Broadcasting-Satellite Service (BSS) networks serving Region 2 in the band 17.3-17.8 GHz and Fixed Satellite Service (FSS) (space-to-Earth) networks serving Region 1 in the band 17.3-17.7 GHz and FSS (space-to-Earth) networks serving Regions 1, 2 and 3 in the band 17.7-17.8 GHz.

The ITU-R studies concluded that a coordination arc value of $\pm 8^\circ$ is appropriate to trigger coordination between GSO BSS networks serving Region 2 and GSO FSS (space-to-Earth) networks whose service areas are limited to Region 1 in the band 17.3-17.7 GHz and between GSO BSS networks serving Region 2 and GSO FSS (space-to-Earth) networks whose service areas are limited to Regions 1 and/or 3 in the band 17.7-17.8 GHz. As a result, specific changes are proposed to Table 5-1 of Appendix **5** to incorporate these conclusions. For the case of Region 2 FSS (space-to-Earth) with respect to Region 2 BSS in the 17.7 – 17.8 GHz band footnote No. **5.517** applies.

5.517 *In Region 2, the allocation to the broadcasting-satellite service in the band 17.3-17.8 GHz shall come into effect on 1 April 2007. After that date, use of the fixed-satellite (space-to-Earth) service in the band 17.7-17.8 GHz shall not claim protection from and shall not cause harmful interference to operating systems in the broadcasting-satellite service.*

Changes to the wording of this provision, as well as consequential changes to the Table of Allocations are proposed recognizing that the 1 April 2007 date has passed.

Finally, also for Region 2, No. **5.518** applies for the Mobile Service.

5.518 *Different category of service: in Region 2, the allocation of the band 17.7-17.8 GHz to the mobile service is on a primary basis until 31 March 2007.*

Suppression of this provision is proposed, recognizing that the 31 March 2007 date has passed.

Proposal

USA/ /01 MOD

TABLE 5-1 (Rev.WRC-037)

**Technical conditions for coordination
(see Article 9)**

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. 9.7 GSO/GSO	A station in a satellite network using the geostationary-satellite orbit (GSO), in any space radiocommunication service, in a frequency band and in a Region where this service is not subject to a Plan, in respect of any other satellite network using that orbit, in any space radio-communication service in a frequency band and in a Region where this service is not subject to a Plan, with the exception of the coordination between earth stations operating in the opposite direction of transmission	1) 3 400-4 200 MHz 5 725-5 850 MHz (Region 1) and 5 850-6 725 MHz 7 025-7 075 MHz 2) 10.95-11.2 GHz 11.45-11.7 GHz 11.7-12.2 GHz (Region 2) 12.2-12.5 GHz (Region 3) 12.5-12.75 GHz (Regions 1 and 3) 12.7-12.75 GHz (Region 2) and 13.75-14.5 GHz	i) Bandwidth overlap, and ii) any network in the fixed-satellite service (FSS) and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 10^\circ$ of the nominal orbital position of a proposed network in the FSS i) Bandwidth overlap, and ii) any network in the FSS or broadcasting-satellite service (BSS), not subject to a Plan, and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 9^\circ$ of the nominal orbital position of a proposed network in the FSS or BSS, not subject to a Plan		With respect to the space services listed in the threshold/condition column in the bands in 1), 2), 3), 4) and 5), 6) and 7) an administration may request, pursuant to No. 9.41 , to be included in requests for coordination, indicating the networks for which the value of $\Delta T/T$ calculated by the method in § 2.2.1.2 and 3.2 of Appendix 8 exceeds 6%. When the Bureau, on request by an affected administration, studies this information pursuant to No. 9.42 , the calculation method given in § 2.2.1.2 and 3.2 of Appendix 8 shall be used

TABLE 5-1 (CONTINUED) (Rev.WRC-037)

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. 9.7 GSO/GSO (<i>cont.</i>)		3) 17.7-20.2 GHz, (Regions 2 and 3), 17.3-20.2 GHz (Region 1) and 27.5-30 GHz	i) Bandwidth overlap, and ii) any network in the FSS and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 8^\circ$ of the nominal orbital position of a proposed network in the FSS		
		4) <u>17.3-17.7 GHz</u> (Regions 1 and 2) 5) <u>17.7-17.8 GHz</u>	i) <u>Bandwidth overlap, and</u> ii) a) <u>any network in the FSS and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 8^\circ$ of the nominal orbital position of a proposed network in the BSS</u> <u>or</u> b) <u>any network in the BSS and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 8^\circ$ of the nominal orbital position of a proposed network in the FSS</u> i) <u>Bandwidth overlap, and</u> ii) a) <u>any network in the FSS and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 8^\circ$ of the nominal orbital position of a</u>		

		<p>46) Bands above 17.3 GHz, except those defined in § 3)</p> <p>57) Bands above 17.3 GHz, <u>except those defined in § 4) and 5</u></p>	<p><u>proposed network in the BSS</u></p> <p><u>or</u></p> <p>b) <u>any network in the BSS and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 8^\circ$ of the nominal orbital position of a proposed network in the FSS</u></p> <p>(See also No. 5.517)</p> <p>i) Bandwidth overlap, and</p> <p>ii) any network in the FSS and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 8^\circ$ of the nominal orbital position of a proposed network in the FSS (see also Resolution 901 (WRC-03))</p> <p>i) Bandwidth overlap, and</p> <p>ii) any network in the FSS or BSS, not subject to a Plan, and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 16^\circ$ of the nominal orbital position of a proposed network in the FSS or BSS, not subject to a Plan, except in the case of a network in the FSS with respect to a network in the FSS (see also Resolution 901 (WRC-03))</p>		
--	--	--	--	--	--

TABLE 5-1 (CONTINUED) (Rev.WRC-037)

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. 9.7 GSO/GSO (cont.)		<p>68) All frequency bands, other than those in 1), 2), 3), 4), <u>5), 6)</u> and 57), allocated to a space service, and the bands in 1), 2), 3), 4), <u>5), 6)</u> and 57) where the radio service of the proposed network or affected networks is other than the space services listed in the threshold/condition column, or in the case of coordination of space stations operating in the opposite direction of transmission</p>	<p>i) Bandwidth overlap, and ii) Value of $\Delta T/T$ exceeds 6%</p>	Appendix 8	<p>In application of Article 2A of Appendix 30 for the space operation functions using the guardbands defined in § 3.9 of Annex 5 of Appendix 30, the threshold/condition specified for the FSS in the bands in 2) applies.</p> <p>In application of Article 2A of Appendix 30A for the space operation functions using the guardbands defined in § 3.1 and 4.1 of Annex 3 of Appendix 30A, the threshold/condition specified for the FSS in the bands in 4) applies</p>

Reasons: These modifications to Table 5-1 of Appendix 5 incorporate the results of ITU-R studies that conclude that a coordination arc of $\pm 8^\circ$ between Region 2 BSS and Regions 1&3 FSS in the bands 17.3-17.8 GHz is sufficient for triggering coordination between these services. These modifications also note that No. 5.517 applies in the band 17.7-17.8 GHz.

USA/ /02 NOC

Resolution 901

Reason: The study called for in this Resolution is still valid for other cases not yet addressed by the ITU-R

Other Closely Related Proposals for Modifying the Table of Allocations

USA/ /03 MOD

5.517 In Region 2, ~~the allocation to the broadcasting satellite service in the band 17.3-17.8 GHz shall come into effect on 1 April 2007. After that date,~~ use of the fixed-satellite (space-to-Earth) service in the band 17.7-17.8 GHz shall not claim protection from and shall not cause harmful interference to operating systems in the broadcasting-satellite service.

Reasons: Modifications to this footnote are consequential to the 1 April 2007 date having passed.

USA/ /04 SUP

5.518

Reasons: Suppression of this RR provision is consequential to the 31 March 2007 date having passed.

USA/ /05 MOD

17.3-17.7 FIXED-SATELLITE (Earth-to-space) 5.516 (space-to-Earth) 5.516A 5.516B Radiolocation 5.514	17.3-17.7 FIXED-SATELLITE (Earth-to-space) 5.516 BROADCASTING-SATELLITE Radiolocation 5.514 5.515 5.517	17.3-17.7 FIXED-SATELLITE (Earth-to-space) 5.516 Radiolocation 5.514
17.7-18.1 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) 5.516 MOBILE	17.7-17.8 FIXED FIXED-SATELLITE (space-to-Earth) MOD 5.517 (Earth-to-space) 5.516 BROADCASTING-SATELLITE Mobile 5.518 5.515 5.517	17.7-18.1 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) 5.516 MOBILE

Reasons: Modifications to the table are consequential to the modifications made to the wording of No. **5.517** and the suppression of No. **5.518**.