

United States of America**DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE**

Agenda Item 1.30d: to consider possible changes to the procedures for the advance publication, coordination and notification of satellite networks in response to Resolution **86** (Minneapolis, 1998)

Modification to Appendix 7 clarify that the procedure is applicable to case where the two services are allocated on an equal basis including secondary services.

BACKGROUND: Resolution **86** (Minneapolis, 1998) resolves to request WRC-2000 and subsequent WRCs to continually review and update the advance publication, coordination and notification procedures, including the associated technical characteristics, and the related Appendices of the Radio Regulations, so as to ensure that they reflect the latest technologies, as well as to achieve additional simplification and cost savings for the Radiocommunication Bureau and administrations.

A modification is needed in Article 9 and Appendix 7 to reflect the intent of the Appendix 7 procedure to apply to any case where the space service earth station operates co-frequency with another service where the allocation status is equal for the two services. See Table 10 in Appendix 7.

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9.17A m) for any specific earth station in respect of other earth stations, or typical mobile earth stations in respect of specific earth stations, operating in the opposite direction of transmission, in frequency bands allocated with equal rights to space radiocommunication services in both directions of transmission and where the coordination area of the earth station includes the territory of another country or the earth station is located within the coordination area of another earth station, with the exception of the coordination under No. **9.19**;

Reason: To include the coordination mechanism to allow coordination between typical mobile earth stations in respect of specific earth stations.

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TABLE 5-1 (continued)

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. 9.17A GSO, non-GSO/ GSO, non-GSO	A specific earth station in respect of other earth stations, <u>or typical mobile earth stations in respect of specific earth stations</u> , operating in the opposite direction of transmission in frequency bands allocated with equal rights to space radiocommunication services in both directions of transmission, where the coordination area of the earth station includes the territory of another country or the earth station is located within the coordination area of a coordinated earth station, with the exception of coordination under 9.19	Any frequency band allocated to a space service	The coordination area of the earth station covers the territory of another administration or the earth station is located within the coordination area of an earth station	Appendix 7	

Reason: Consequential to modification of No. 9.17A in Article 9.

APPENDIX 7 (WRC-2000)

Methods for the determination of the coordination area around an earth station in frequency bands between 100 MHz and 105 GHz**MOD****1.4.4 Earth stations operating in bidirectionally allocated frequency bands**

For earth stations operating in some frequency bands there may be ~~co-primary~~ with equal rights allocations to space services operating with equal rights in both the Earth-to-space and space-to-Earth directions. In this case, where two earth stations are operating in opposite directions of transmission it is only necessary to establish the coordination area for the transmitting earth station, as receiving earth stations will automatically be taken into consideration. Hence, a receiving earth station operating in a bidirectionally allocated frequency band will only be involved in coordination with a transmitting earth station if it is located within the transmitting earth station's coordination area.

For a transmitting earth station operating with either geostationary or non-geostationary satellites in a bidirectionally allocated frequency band, the coordination area is determined using the procedures described in § 3.

Reason: Brings the text in line with existing No. 9.17A and Appendix 5 provisions.

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APPENDIX 7

TABLE 10

Predetermined coordination distances

Frequency sharing situation		Coordination distance(in sharing situations involving services allocated with equal rights) (km)
Type of earth station	Type of terrestrial or <u>earth</u> station	
Ground-based in the bands below 1 GHz to which No. 9.11A applies. Ground-based mobile in the bands within the range 1-3 GHz to which No. 9.11A applies	Mobile (aircraft)	500
Aircraft (mobile) (all bands)	Ground-based	500
Aircraft (mobile) (all bands)	Mobile (aircraft)	1 000
Ground-based in the bands: 400.15-401 MHz 1 675-1 700 MHz	Station in the meteorological aids service (radiosonde)	580
Aircraft (mobile) in the bands: 400.15-401 MHz 1 675-1 700 MHz	Station in the meteorological aids service (radiosonde)	1 080
Ground-based in the radiodetermination-satellite service (RDSS) in the bands: 1 610-1 626.5 MHz 2 483.5-2 500 MHz 2 500-2 516.5 MHz	Ground-based	100
Airborne earth station in the radiodetermination-satellite service (RDSS) in the bands: 1 610-1 626.5 MHz 2 483.5-2 500 MHz 2 500-2 516.5 MHz	Ground-based	400

TABLE 10 (end)

Frequency sharing situation		Coordination distance(in sharing situations involving services allocated with equal rights) (km)
Type of earth station	Type of terrestrial station	
Receiving earth stations in the meteorological-satellite service	Station in the meteorological aids service	The coordination distance is considered to be the visibility distance as a function of the earth station horizon elevation angle for a radiosonde at an altitude of 20 km above mean sea level, assuming 4/3 Earth radius (see Note 1)
Non-GSO MSS feeder-link earth stations (all bands)	Mobile (aircraft)	500

NOTE 1 - The coordination distance, d (km), for fixed earth stations in the meteorological-satellite service vis-à-vis stations in the meteorological aids service assumes a radiosonde altitude of 20 km and is determined as a function of the physical horizon elevation angle ϵ_h (degrees) for each azimuth, as follows:

$$d = 100 \quad \text{for } \epsilon_h \geq 11$$

$$d = 582 \left(\sqrt{1 + (0.254 \epsilon_h)^2} - 0.254 \epsilon_h \right) \quad \text{for } 0 < \epsilon_h < 11,$$

$$d = 582 \quad \text{for } \epsilon_h \leq 0$$

The minimum and maximum coordination distances are 100 km and 582 km, and correspond to physical horizon angles greater than 11° and less than 0° .

Reason: Allows predetermined distances to be used in the case of typical mobile earth stations in respect of specific earth stations operating in opposite directions of transmission.