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## UPDATES to the

### Rules of Procedure

(Edition of 1998)

**approved by the Radio Regulations Board**

Revision <sup>(1)</sup> (Circular No.)	Date	Part	ARS	Pages to be removed	Pages to be inserted
1 See CR/127 Corr.1	June 1999	A1 C	ARS5 –	15-18 1-3	15-18 (rev.1) 1-3 (rev.1)
2 See CR/129	October 1999	Table of Contents  A1 A1 A1  A1 A1	  ARS5 Receivability ARS9  ARS13 APS30B	  1-2  7-20 3-4 5-6 13-14 – 7-8 11-12	  1-2 (rev.2)  7-20 (rev.2) 3-4 (rev.2) 5-6bis (rev.2) 13-14 (rev.2) 1 (rev.2) 7-8ter (rev.2) 11-12 (rev.2)
3 See CR/140	March 2000	A1	ARS11	11-12	11-12 (rev.3)
4 See CR/151	October 2000	A1  A1 A3	ARS5  APS30B GE75	17-18  13-14 1-3	17-18 (rev.4)  13-14bis (rev.4) 1-2 (rev.4)
4 See CR/151*	October 2000	A1	ARS5	17-18	17-18 (rev.4)
5 See CR/156	December 2000	A1  A1 A1 A1	ARS4  ARS9 APS30 APS30A	1-2  1-4 1-2 1-2	1-2 (rev.5)  1-4 (rev.5) 1-2 bis (rev.5) 1-4 (rev.5)

(1) Refer to the relevant Circular Letter noted in column 1 regarding dates of application of new or modified Rules of Procedure included in these update pages.

\* Error in the heading of rev.4.

# UPDATES to the

## Rules of Procedure

(Edition of 1998)

**approved by the Radio Regulations Board (*cont.*)**

Revision <sup>(1)</sup> (Circular No.)	Date	Part	ARS	Pages to be removed	Pages to be inserted
6 See CR/160	March 2001	A1	ARS5	1-2	1-2 (rev.6)
		–	–	13-16	13-16 (rev.6)
		A1	ARS9	1-2	1-2 (rev.6)
		–	–	7-20	7-18 (rev.6)
		A1	ARS11	19-20	19-20 (rev.6)
		A1	ARS13	1	1 (rev.6)
		A1	APS5	1	1 (rev.6)
		A1	APS30	1-2 <i>bis</i>	1-2 <i>bis</i> (rev.6)
		–	–	13-20	13-20 (rev.6)
		A1	APS30A	1-2 <i>bis</i>	1-2 <i>bis</i> (rev.6)
7 See CR/166	June 2001	–	–	11-14	11-16 (rev.6)
		A1	RES51	1	1 (rev.6)
		A1	ARS5	1-2	1-2 (rev.7)
		–	–	9-10	9-10 <i>bis</i> (rev.7)
		–	–	15-16	15-16 (rev.7)
		A1	Receivability	1-4	1-6 (rev.7)
		A1	ARS9	7-8	7-8 (rev.7)
		–	–	11-14	11-14 (rev.7)
		A1	ARS11	3-4	3-4 (rev.7)
		–	–	11-16	11-16 <i>bis</i> (rev.7)
		–	–	21-22	21-22 <i>bis</i> (rev.7)
		A1	APS7	1 (new)	1 (rev.7)
		Part B	B1	1-9 SUP	1 (rev.7)
		–	B2	1-12 SUP	1 (rev.7)
		C	–	1-3	1-3 (rev.7)

(1) Refer to the relevant Circular Letter noted in column 1 regarding dates of application of new or modified Rules of Procedure included in these update pages.

## UPDATES to the

### Rules of Procedure

(Edition of 1998)

**approved by the Radio Regulations Board (*cont.*)**

Revision <sup>(1)</sup> (Circular No.)	Date	Part	ARS	Pages to be removed	Pages to be inserted
8 See CR/171	December 2001	A1	ARS5	3-4	3-4 (rev.8)
		–	–	9-10	9-10 <i>ter</i> (rev.8)
		–	–	19-20	19-20 (rev.8)
		A1	ARS9	5-6 <i>bis</i>	5-32 (rev.8)
		–	–	7-8	
		–	–	17-18	
		A1	ARS11	5-10	5-10 (rev.8)
		–	–	15-16	15-16 (rev.8)
		–	–	21-22 <i>bis</i>	21-22 <i>bis</i> (rev.8)
		A1–	ARS23	1-2	1-2 (rev.8)
		A1	APS4	1-2	1-3 (rev.8)
		A1	APS30	11-12 <i>bis</i>	11-12 (rev.8)
		–	–	15-16	15-16 (rev.8)
		–	–	19-20	19-20 (rev.8)
		A1	APS30A	7-10	7-19 (rev.8)
		–	–	15-16	–
		A1	APS30B	3-4	3-4 (rev.8)
		–	–	11-16	11-19 (rev.8)
		A2	ST61	1	1-2 (rev.8)
		A5	GE84	1	1 (rev.8)
		A6	GE89	1-2	1-2 (rev.8)
9 See CR/175	January 2002	A1	ARS5	10 <i>bis</i> -12	10 <i>bis</i> -12 (rev.9)
		A1	ARS9	9-18	9-18 (rev.9)
				25-32	25-33 (rev.9)
		A1	APS30	1-23	1-26 (rev.9)
		A1	APS30A	1-19	1-20 (rev.9)
		A6	GE89	1-2	1-3 (rev.9)

<sup>(1)</sup> Refer to the relevant Circular Letter noted in column 1 regarding dates of application of new or modified Rules of Procedure included in these update pages.

2           Based on the above, for the application of No. **S5.418**, to non-geostationary satellite systems in the BSS (sound) in the band 2 630-2 655 MHz, the Bureau shall, for coordination requests (Article **S9**) for the non-GSO BSS (sound) systems received as of 3 June 2000, establish the list of administrations the agreement of which is to be sought based on power flux-density thresholds included in *resolves* 2, Resolution **539 (WRC-2000)** and publish this list in the relevant Special Section of its IFIC.

3           The Board studied the relationship between the application of Resolution **539 (WRC-2000)** to coordination requests of non-GSO BSS (sound) systems in the band 2 630-2 655 MHz received as of 3 June 2000 and the procedure under No. **S9.11**. Taking account of Table S5-1 of Appendix **S5** (column threshold/conditions) under No. **S9.11**, the Board's conclusions are as follows:

- a) In relation to the non-GSO BSS (sound) systems and terrestrial stations sharing procedure, coordination requests of such systems received as of 3 June 2000 will be subject to the application of Resolution **539 (WRC-2000)** within the procedure under No. **S9.11**.
- b) For notifications (Article **S11**) of non-GSO BSS (sound) systems received as of 3 June 2000, the Bureau shall examine and establish the finding under Article **S11**.

<b>S5.418C</b>
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1           In accordance with footnote **S5.418C**, as added by WRC-2000, the use of the band 2 630-2 655 MHz by geostationary-satellite networks is now subject to the application of the provisions of No. **S9.13** with respect to non-geostationary satellite systems in the broadcasting-satellite service (sound), as of 3 June 2000. Resolution **33 (WRC-97)** resolves that for satellite networks for which the API or the request for coordination has been received by the Bureau prior to 1 January 1999, the procedure in Sections A to C in Resolution **33** shall be applied. The Board studied the applicability of No. **S9.13** coordination in the above context and understands No. **S9.13** coordination to apply as follows.

Noting however the apparent discrepancy between Resolution **33** and No. **S5.418C** and the lack of reciprocity in the coordination process between non-GSO BSS (sound) systems and

GSO BSS systems, and also the difficulty in linking No. **S5.418C** reference to «notification information» of GSO BSS systems to the No. **S22.2** application referred to in No. **S5.418A**, the Board considers the above approach as temporary and time limited to be used by the Bureau on a provisional basis until further decisions by WRC-03.

GSO satellite network	Date of receipt of coordination information	No. applicability S9.13
FSS (Region 2)	< 3.6.2000	NO
	≥ 3.6.2000	YES
BSS	< 3.6.2000	NO
	≥ 3.6.2000	YES

#### **S5.441**

1 Article **S5** defines, in the band 10.7-11.7 GHz, a bi-directional allocation for the Fixed-satellite service in Region 1. Three footnotes (**S5.441**, **S5.484** and **S5.484A**) further regulate the usage of the bands. The provisions of No. **S5.484** apply to the up-link (Earth-to-space) allocation for BSS feeder-links. Numbers **S5.441** and **S5.484A** (covering parts of the band 10.7-11.7 GHz) apply to the down-link. The following problems were noted:

1.1 the Table of Frequency Allocations defines a bi-directional allocation of the whole band 10.7-11.7 GHz for the FSS in Region 1. Number **S5.484** defines the up-link allocation for Region 1, while Nos. **S5.441** and **S5.484A** regulate the down-link use for GSO and non-GSO FSS. The sub-bands 10.7-10.95 GHz and 11.2-11.45 GHz, for the space-to-Earth direction, are, for GSO applications, covered by the provisions of Appendix No. **S30B**. The up- and down-link allocations, for GSO use, are of the same category. Non-GSO uses are under equivalent power flux-density limitations defined by Article **S22** and are subject to certain conditions as stipulated in No. **S5.484A**. The application of No. **S22.2** is described in No. **S22.5I**;

1.2 the applicable Radio Regulatory Procedures for the fixed-satellite service are as follows:

a) Earth-to-space (No. **S5.484**): 10.7-11.7 GHz (Region 1): Articles **S9** and **S11** apply;

b) Space-to-Earth:

10.7-10.95 GHz and 11.2-11.45 GHz:

- for GSO use: Appendix **S30B** (and Article **S11**) apply (No. **S5.441**);
- for non-GSO: Articles **S9**, **S11** and **S22** apply.

10.95-11.2 GHz and 11.45-11.7 GHz:

- for GSO: Articles **S9** and **S11** apply;
- for non-GSO: Articles **S9**, **S11** and **S22** apply.

2 The regulatory relationship between GSO FSS uses, namely the up-link (Region 1) and the down-link (Appendix **S30B**) utilization of the spectrum is not covered by any Radio Regulatory procedure. The Board thus considered this situation as follows. Based on the general principle that the utilization of the spectrum by two internationally recognized applications (coordinated vs. planned use), with the same status, should be mutually taken into account even if the case is not covered by specific procedures and also on the basis of the existing analogies (Article 7 of Appendix **S30**, Article 7 of Appendix **S30A**, existing systems in Part B of the Appendix **S30B** Plan), the Board considering that (1) up to now the Bureau has received only one case of the bi-directional use by GSO FSS of the bands 10.7-10.95 GHz and 11.2-11.45 GHz and (2) that the complexity of the issue does not justify the establishment of a sophisticated methodology to treat this case, and thus decided that the Bureau act as follows:

2.1 Up-link FSS applications in the bands 10.7-10.95 GHz and 11.2-11.45 GHz (Article **S9**)

The FSS up-link usage (according to No. **S5.484**) should protect the continuing rights of the Appendix **S30B** Plan as well as the entries in the Appendix **S30B** List, as evolve. To this

effect the FSS up-link networks shall apply the coordination (Article **S9**) and notification (Article **S11**) procedures not only vis-à-vis other up-link FSS networks of the same direction (Earth-to-space) but also vis-à-vis the Plan and List entries of the opposite direction (space-to-Earth). To take into account the Appendix **S30B** Plan within the Article **S9** procedure, the Plan shall be considered as a coordinated usage of the spectrum. Administrations responsible for the FSS up-link shall obtain coordination agreements from those other administrations whose systems in the Plan or assignments in the List are likely to be affected. The method and criteria for the identification of the administrations to be coordinated with shall be, similar to the case of Appendix **S30A** (where the same bi-directional problem exists between planned feeder-links and other FSS), as follows:

- a) Since in the space-to-space interference scenario a receiving space station of the up-link FSS is subject to receive interference from a transmitting space station of the Appendix **S30B** FSS Plan, and since currently an agreed method for the assessment of this interference is not available to the Bureau, assignments to receiving space stations operating in the up-link FSS submitted under Articles **S9** or **S11**, shall provisionally not undergo the examination relating to compatibility with Appendix **S30B**. Therefore a note shall be included in the relevant Special Section to reflect the situation and a symbol shall be inserted in the MIFR to indicate that such assignments shall not claim protection from Appendix **S30B**.
- b) For the compatibility assessment between Earth stations (transmitting ES of the FSS up-links and the receiving ES within the Plan allotment) the method defined in Appendix **S7 (WRC-2000)** will be used. The service areas defined in Appendix **S30B** will be extended by the coordination distance to form an “agreement area” within which a transmitting earth station of the FSS up-link has to be coordinated. For the calculation of the coordination distance the most up-to-date ITU-R Recommendation will be used.

## 2.2 Down-link FSS applications in the bands 10.7-10.95 GHz and 11.2-11.45 GHz (Appendix **S30B**, planned usage):

- a) As for the interference which is likely to be caused to FSS uplink from Appendix **S30B** downlink the same condition referred to in 2.1 a) above applies, i.e, in the examination of Appendix **S30B** Plan and List entries no account shall be taken of the FSS uplink assignments included in the MIFR with the above mentioned symbol.
- b) As for the interference which is likely to be caused to Appendix **S30B** downlink receiving earth stations from FSS uplink transmitting earth stations the same condition referred to in 2.1 b) above applies.

**TABLE S9.11A-1**  
**Applicability of the provisions of Nos. S9.11A - S9.15 to stations of space services**

1	2	3	4	5	6	7
Frequency band (MHz)	Footnote in Art. S5	Space services mentioned in a footnote referring to No. S9.11A to which Nos. S9.12 to S9.15 apply, or referring to Nos. S9.12 – S9.13, as appropriate	Other space services to which Nos. S9.12 to S9.14 apply equally	Terrestrial services in respect of which Nos. S9.14 and S9.15 apply equally, as appropriate	Date of provisional application of the allocation if later than 3.06.2000, or if different from the application date of the RR	Notes
137-137.025 137.175-137.825	S5.208	MOBILE-SATELLITE (non-GSO)	↓ SPACE OPERATION METEOROLOGICAL- SATELLITE SPACE RESEARCH	↓ FIXED (S5.204, S5.205) LAND MOBILE (S5.204, S5.205) MARITIME MOBILE (S5.204, S5.205) AERONAUTICAL MOBILE (OR) (S5.204, S5.206) BROADCASTING (S5.207)		1, 2
137.025-137.175 137.825-138	S5.208	MOBILE-SATELLITE (NON-GSO)	↓ ---	Fixed (in countries other than those listed in S5.204, S5.205) Land mobile (in countries other than those listed in S5.204, S5.205) Maritime mobile (in countries other than those listed in S5.204, S5.205) Aeronautical mobile (OR) (in countries other than those listed in S5.204, S5.206)		
148-149.9	S5.219	MOBILE-SATELLITE (non-GSO)	↑ --- (See S5.219)	--- (See S5.219)		
149.9-150.05	S5.220	MOBILE-SATELLITE (non-GSO)	↑ --- (See S5.220)	---	Limited to LMSS System until 1.1.2015 (S5.224A)	
312-315	S5.255	Mobile-Satellite (non-GSO)	↑ Mobile-Satellite (GSO)	↑ ---		
387-390	S5.255	Mobile-satellite (non-GSO)	↓ Mobile-Satellite (GSO)	↓ ---		
399.9-400.05	S5.220	MOBILE-SATELLITE (non-GSO)	↑ --- (See S5.220)	---	Limited to LMSS System until 1.1.2015 (S5.224A)	

**TABLE S9.11A-1 (*continuation*)**

1	2	3	4	5	6	7
Frequency band (MHz)	Footnote in Art. S5	Space services mentioned in a footnote referring to No. S9.11A to which Nos. S9.12 to S9.15 apply, or referring to Nos. S9.12 – S9.13, as appropriate	Other space services to which Nos. S9.12 to S9.14 apply equally	Terrestrial services in respect of which Nos. S9.14 and S9.15 apply equally, as appropriate	Date of provisional application of the allocation if later than 3.06.2000, or if different from the application date of the RR	Notes
400.15-401	S5.264	MOBILE-SATELLITE (non-GSO)	↓ METEO-SATELLITE SPACE RESEARCH	↓ FIXED (S5.262) MOBILE (S5.262) METEOROLOGICAL AIDS		1, 2
454-455	S5.286A	MOBILE-SATELLITE (non-GSO) (S5.286D, S5.286E)	↑ ---	--- (See S5.286B, S5.286C)		
455-456	S5.286A	MOBILE-SATELLITE (non-GSO) (R2, S5.286E)	↑ ---	--- (See S5.286B, S5.286C)		
459-460	S5.286A	MOBILE-SATELLITE (non-GSO) (R2, S5.286E)	↑ ---	--- (See S5.286B, S5.286C)		
1 492-1 525	S5.348	MOBILE-SATELLITE (R2, except USA (S5.344))	↓ ---	FIXED MOBILE		3
1 525-1 530	S5.354	MOBILE-SATELLITE	↓ SPACE OPERATION	↓ FIXED (R1, R3, see also S5.352A) LAND MOBILE (S5.349) MARITIME MOBILE (S5.349) AERONAUTICAL MOBILE (S5.342, S5.350)		1
1 530-1 535	S5.354	MOBILE-SATELLITE	↓ SPACE OPERATION	↓ AERONAUTICAL MOBILE (S5.342)		1
1 535-1 545	S5.354	MOBILE-SATELLITE	↓ ---	---		
1 545-1 550	S5.354	MOBILE-SATELLITE	↓ ---	AERONAUTICAL MOBILE (R) (S5.357)		4
1 550-1 555	S5.354	MOBILE-SATELLITE	↓ ---	FIXED (S5.359) AERONAUTICAL MOBILE (R) (S5.357)		4
1 555-1 559	S5.354	MOBILE-SATELLITE	↓ ---	FIXED (S5.359)		
1 610-1 626.5	S5.364	MOBILE-SATELLITE (except S), RADIODETERMINATION- SATELLITE (R2+S5.369)	↑ AERONAUTICAL MOBILE- SATELLITE (R) (S5.367)	--- (See S5.364)		
1 610-1 613.8	S5.364	Radiodetermination-satellite (R1 (S5.371), R3, VEN (S5.370))	↑ ---	Fixed (S5.355)		

**TABLE S9.11A-1 (continuation)**

1	2	3	4	5	6	7
Frequency band (MHz)	Footnote in Art. S5	Space services mentioned in a footnote referring to No. S9.11A to which Nos. S9.12 to S9.15 apply, or referring to Nos. S9.12 – S9.13, as appropriate	Other space services to which Nos. S9.12 to S9.14 apply equally	Terrestrial services in respect of which Nos. S9.14 and S9.15 apply equally, as appropriate	Date of provisional application of the allocation if later than 3.06.2000, or if different from the application date of the RR	Notes
1 613.8-1 626.5	S5.364 S5.365	Radiodetermination-satellite (R1 (S5.371), R3, VEN (S5.370)) Mobile-satellite	↑ ↓	Fixed (S5.355)		
1 613.8-1 626.5	S5.365	Mobile-satellite	↓	Fixed (S5.355)		
1 626.5-1 631.5	S5.354	MOBILE-SATELLITE	↑	Fixed (S5.359)		
1 631.5-1 634.5	S5.354	MOBILE-SATELLITE	↑	--- (See S5.374)		
1 634.5-1 645.5	S5.354	MOBILE-SATELLITE	↑	FIXED (S5.359)		
1 645.5-1 646.5	S5.354	MOBILE-SATELLITE	↑	---		
1 646.5-1 656.5	S5.354	MOBILE-SATELLITE	↑	FIXED (S5.359) AERONAUTICAL MOBILE (R) (S5.376)		
1 656.5-1 660.5	S5.354	MOBILE-SATELLITE	↑	--- (See S5.374)		
1 675-1 690	S5.377	MOBILE-SATELLITE (R2)	↑	FIXED LAND MOBILE MARITIME MOBILE		
1 690-1 700	S5.377	MOBILE-SATELLITE (R2)	↑	FIXED (R2 and R3 countries listed in S5.381 and S5.382, R1 countries listed in S5.382) LAND MOBILE (R2 and R3 countries listed in S5.381, R1 countries listed in S5.382) MARITIME MOBILE (R2 and R3 countries listed in S5.381, R1 countries listed in S5.382)		
1 700-1 710	S5.377	MOBILE-SATELLITE (R2)	↑	SPACE RESEARCH (S5.384) ↑ FIXED LAND MOBILE MARITIME MOBILE		1

**TABLE S9.11A-1 (continuation)**

1	2	3	4	5	6	7
Frequency band (MHz)	Footnote in Art. S5	Space services mentioned in a footnote referring to No. S9.11A to which Nos. S9.12 to S9.15 apply, or referring to Nos. S9.12 – S9.13, as appropriate	Other space services to which Nos. S9.12 to S9.14 apply equally	Terrestrial services in respect of which Nos. S9.14 and S9.15 apply equally, as appropriate	Date of provisional application of the allocation if later than 3.06.2000, or if different from the application date of the RR	Notes
1 980-1 990	S5.389A	MOBILE-SATELLITE	↑ ---	FIXED (except R2 countries in S5.389B) MOBILE (except R2 countries in S5.389B) (see also S5.389F)	1.1.2005 in R2	
1 990-2 010	S5.389A	MOBILE-SATELLITE	↑ ---	FIXED MOBILE (see also S5.389F)		
2 010-2 025	S5.389C	MOBILE-SATELLITE (R2)	↑ ---	FIXED (R2) MOBILE (R2) (see also S5.390 and S5.389E)	1.1.2002 (1.1.2000 in CAN, USA)	
2 160-2 170	S5.389C	MOBILE-SATELLITE (R2)	↓ SPACE RESEARCH S5.392A (RUS)	↓ FIXED (R2) MOBILE (R2) (see also S5.390, S5.392A and S5.389E)	1.1.2002 (1.1.2000 in CAN, USA)	1, 5
2 170-2 200	S5.389A	MOBILE-SATELLITE	↓ SPACE RESEARCH S5.392A (RUS)	↓ FIXED MOBILE (see also S5.389F and S5.392A)		1, 5
2 483.5-2 500	S5.402	MOBILE-SATELLITE RADIODETERMINATION- SATELLITE (R2 & R1/R3 countries in S5.400)	↓ ---	RADIOLOCATION (R2, R3, F)(S5.397, S5.399) FIXED MOBILE		7
2 483.5-2 500	S5.402	Radiodetermination-satellite (R1&R3)	↓ ---	--- (See S5.399)		
2 500-2 515	S5.414 S5.403	MOBILE-SATELLITE (except countries in S5.412)	↓ FIXED SATELLITE (R2&3), RADIODETERMINATION- SATELLITE (S5.404)	↓ FIXED LAND MOBILE MARITIME MOBILE RADIOLOCATION (F)	1.1.2005 (until 2005: S9.21: MSS (-AMSS))	1

**TABLE S9.11A-1 (continuation)**

1	2	3	4	5	6	7
Frequency band (MHz)	Footnote in Art. S5	Space services mentioned in a footnote referring to No. S9.11A to which Nos. S9.12 to S9.15 apply, or referring to Nos. S9.12 – S9.13, as appropriate	Other space services to which Nos. S9.12 to S9.14 apply equally	Terrestrial services in respect of which Nos. S9.14 and S9.15 apply equally, as appropriate	Date of provisional application of the allocation if later than 3.06.2000, or if different from the application date of the RR	Notes
2 515-2 520	<b>S5.414</b> <b>S5.403</b>	MOBILE-SATELLITE (except countries in <b>S5.412</b> )	↓ FIXED SATELLITE (R2&3), RADIODETERMINATION-SATELLITE ( <b>S5.404</b> ) AERONAUTICAL MOBILE-SATELLITE (J, IND) ( <b>S5.415A</b> )	↓ FIXED, LAND MOBILE MARITIME MOBILE RADIOLOCATION (F)	1.1.2005 (until 2005: <b>S9.21</b> : MSS (-AMSS)) 1.1.2002 (AMSS in IND)	1
2 520-2 535	<b>S5.403</b>	MOBILE-SATELLITE (except AERONAUTICAL MOBILE-SATELLITE) (except countries in <b>S5.412</b> and <b>S5.417</b> )	↓ BROADCASTING-SATELLITE, FIXED SATELLITE (R2&3) AERONAUTICAL MOBILE-SATELLITE (J, IND) ( <b>S5.415A</b> )	↓ FIXED LAND MOBILE MARITIME MOBILE RADIOLOCATION (F)	1.1.2002 (AMSS in IND)	1, 6
2 630-2 655	<b>S5.418A</b> <b>S5.418B</b> <b>S5.418C</b>	BROADCASTING-SATELLITE (Non-GSO) (sound) ( <b>S5.418</b> ) BROADCASTING-SATELLITE (GSO) FIXED-SATELLITE (R2)	↓ BROADCASTING-SATELLITE (non-GSO) (television)	↓ --- (see Res. 539 (WRC-2000))		8, 9
2 655-2 670	<b>S5.420</b>	MOBILE-SATELLITE (except AERONAUTICAL MOBILE-SATELLITE) (except countries in <b>S5.412</b> and <b>S5.417</b> )	↑ BROADCASTING-SATELLITE,  FIXED SATELLITE (R2 and R3)	↓ FIXED LAND MOBILE MARITIME MOBILE ↑ ↓		1
2 670-2 690	<b>S5.419</b> <b>S5.420</b>	MOBILE-SATELLITE (except countries in <b>S5.412</b> )	↑ FIXED SATELLITE (R2 and R3), AERONAUTICAL MOBILE-SATELLITE (J, IND) ( <b>S5.420A</b> )	↑ FIXED, LAND MOBILE MARITIME MOBILE	1.1.2005 (until 2005: <b>S9.21</b> : MSS (-AMSS)) 1.1.2002 (AMSS in IND)	1
5 091-5 150	<b>S5.444A</b>	FIXED-SATELLITE (limited to non-GSO MOBILE SATELLITE SERVICE feeder link)	↑ AERONAUTICAL-MOBILE SATELLITE (R) ( <b>S5.367</b> )	↑ --- (See <b>S5.444A</b> )		

TABLE S9.11A-1 (*continuation*)

1	2	3	4	5	6	7
Frequency band (MHz/GHz)	Footnote in Art. S5	Space services mentioned in a footnote referring to No. S9.11A to which Nos. S9.12 to S9.15 apply, or referring to Nos. S9.12 – S9.13, as appropriate	Other space services to which Nos. S9.12 to S9.14 apply equally	Terrestrial services in respect of which Nos. S9.14 and S9.15 apply equally, as appropriate	Date of provisional application of the allocation if later than 3.06.2000, or if different from the application date of the RR	Notes
5 150-5 216	S5.447B  S5.447A S5.447C	FIXED-SATELLITE (limited to non-GSO MOBILE SATELLITE SERVICE feeder link)  FIXED-SATELLITE (limited to non-GSO MOBILE SATELLITE SERVICE feeder link)	↓  ↑ RADIODETERMINATION-SATELLITE (S5.446), with date of bringing into use prior to 17.11.1995	↓  AERONAUTICAL RADIONAVIGATION, MOBILE (S5.447)		1, 13, 14
5 216-5 250	S5.447A S5.447C	FIXED-SATELLITE (limited to non-GSO MOBILE SATELLITE SERVICE feeder link)	↑	AERONAUTICAL RADIONAVIGATION, MOBILE (S5.447)		1, 13
6 700-7 075	S5.458B	FIXED-SATELLITE (limited to non-GSO MOBILE SATELLITE SERVICE feeder link)	↓ non-GSO FIXED-SATELLITE in bands 6700 – 6725 MHz and 7025 – 7075 MHz	↑ FIXED MOBILE		1, 13
10.7-11.7	S5.441 S5.484A	Non-GSO FIXED-SATELLITE	↓ Non-GSO FIXED-SATELLITE (R1)	↑ ---		10, 11
11.7-12.5	S5.484A S5.487A	Non-GSO FIXED-SATELLITE	↓ ---	---		10, 11
12.5-12.7	S5.484A S5.487A	Non-GSO FIXED-SATELLITE	↓ Non-GSO FIXED-SATELLITE (R1) Non-GSO BROADCASTING-SATELLITE (R3)	↑ ---		10, 11
12.7-12.75	S5.484A	Non-GSO FIXED-SATELLITE (R1, R3)	↓ Non-GSO FIXED-SATELLITE (R1, R2) Non-GSO BROADCASTING-SATELLITE (R3)	↑ ---		10, 11
12.75-13.25	S5.441	Non-GSO FIXED-SATELLITE	↑ ---	---		10, 11
13.75-14.5	S5.484A	Non-GSO FIXED-SATELLITE	↑ ---	---		10, 11

TABLE S9.11A-1 (continuation)

1	2	3	4	5	6	7
Frequency band (GHz)	Footnote in Art. S5	Space services mentioned in a footnote referring to No. S9.11A to which Nos. S9.12 to S9.15 apply, or referring to Nos. S9.12 – S9.13, as appropriate	Other space services to which Nos. S9.12 to S9.14 apply equally	Terrestrial services in respect of which Nos. S9.14 and S9.15 apply equally, as appropriate	Date of provisional application of the allocation if later than 3.06.2000, or if different from the application date of the RR	Notes
15.43-15.63	S5.511A	FIXED-SATELLITE (limited to non-GSO MOBILE SATELLITE SERVICE feeder link) FIXED-SATELLITE (limited to non-GSO MOBILE SATELLITE SERVICE feeder link)	↓ --- ↑	AERONAUTICAL RADIONAVIGATION		12, 14
15.63-15.65	S5.511D	Non-GSO FIXED-SATELLITE	↓ FIXED-SATELLITE	↑ AERONAUTICAL RADIONAVIGATION		1, 12
17.3-17.7	S5.516	Non-GSO FIXED-SATELLITE (R1, R3)	↑ Non-GSO BROADCASTING-SATELLITE (R2)	↓ ---		10, 11
17.7-17.8	S5.516	Non-GSO FIXED-SATELLITE (R1, R3)	↑ Non-GSO FIXED-SATELLITE Non-GSO BROADCASTING-SATELLITE (R2)	↓ ---		10, 11
17.8-18.1	S5.516 S5.484A	Non-GSO FIXED-SATELLITE	↑ --- ↓	---		10, 11
18.1-18.4	S5.484A	Non-GSO FIXED-SATELLITE	↓ ---	---		10, 11
18.4-18.6	S5.484A	Non-GSO FIXED-SATELLITE	↓ ---	---		10, 11
18.8-19.3	S5.523A	FIXED-SATELLITE	↓ ---	FIXED MOBILE		13
19.3-19.6	S5.523B  S5.523D	FIXED-SATELLITE (limited to non-GSO MOBILE SATELLITE SERVICE feeder link) FIXED-SATELLITE (GSO with coordination information received as of 18.11.1995 and non-GSO MOBILE SATELLITE SERVICE feeder link) (see also S5.523C)	↑ --- ↓	FIXED MOBILE		13, 14

**TABLE S9.11A-1 (*continuation*)**

1	2	3	4	5	6	7
Frequency band (GHz)	Footnote in Art. S5	Space services mentioned in a footnote referring to No. S9.11A to which Nos. S9.12 to S9.15 apply, or referring to Nos. S9.12 – S9.13, as appropriate	Other space services to which Nos. S9.12 to S9.14 apply equally	Terrestrial services in respect of which Nos. S9.14 and S9.15 apply equally, as appropriate	Date of provisional application of the allocation if later than 3.06.2000, or if different from the application date of the RR	Notes
19.6-19.7	<b>S5.523D</b>	FIXED-SATELLITE (GSO with coordination information received as of 22.11.1997 and non-GSO MOBILE SATELLITE SERVICE feeder link) (see also <b>S5.523E</b> )	↓ FIXED-SATELLITE (GSO with coordination information received as of 22.11.1997 and non-GSO) (see also <b>S5.523E</b> )	↑ FIXED MOBILE		13, 14
19.7-20.1	<b>S5.484A</b>	Non-GSO FIXED-SATELLITE	↓ Non-GSO MOBILE-SATELLITE (R2)	↓ ---		10, 11
20.1-20.2	<b>S5.484A</b>	Non-GSO FIXED-SATELLITE	↓ Non-GSO MOBILE-SATELLITE	↓ ---		10, 11
27.5-28.6	<b>S5.484A</b>	Non-GSO FIXED-SATELLITE	↑ Non-GSO FIXED-SATELLITE in the band 27.5-27.501 GHz ( <b>S5.538</b> )	↓ ---		10, 11
28.6-29.1	<b>S5.523A</b>	FIXED-SATELLITE	↑ ---	FIXED MOBILE		
29.1-29.5	<b>S5.535A</b>	FIXED-SATELLITE (GSO (see also <b>S5.523C</b> and <b>S5.523E</b> ) and non-GSO MOBILE SATELLITE SERVICE feeder link)	↑ ---	FIXED MOBILE		
29.5-29.9	<b>S5.484A</b>	Non-GSO FIXED-SATELLITE	↑ Non-GSO MOBILE-SATELLITE (R2)	↑ ---		10, 11
29.9-30	<b>S5.484A</b>	Non-GSO FIXED-SATELLITE	↑ Non-GSO MOBILE-SATELLITE Non-GSO FIXED-SATELLITE in the band 29.999-30.000 GHz ( <b>S5.538</b> ) ↓	↑ ---		10, 11

*Notes*

- <sup>1</sup> The coordination of non-GSO space services (Earth stations) in respect of terrestrial services is to be effected under the provisions of No. **S9.15**. For the coordination of GSO space services (Earth stations) in respect of terrestrial services columns 4 and 5 of Table **S9.11A**, the provisions of No. **S9.17** apply.
- <sup>2</sup> Coordination thresholds indicated in Annex 1 to Appendix **S5** apply only to MOBILE-SATELLITE service.
- <sup>3</sup> For AERONAUTICAL MOBILE service for telemetry, the requirement for coordination is determined by band overlap only (**S5.348**).
- <sup>4</sup> See Rule of procedure on No. **S5.357**.
- <sup>5</sup> SPACE RESEARCH service is not subject to the application of the provisions of Nos. **S9.14** and **S9.15**.
- <sup>6</sup> The coordination of BROADCASTING-SATELLITE service in respect of terrestrial services is to be effected under the provisions of No. **S9.11**.
- <sup>7</sup> RADIOLOCATION service is subject to the application of the provisions of Nos. **S9.14** and **S9.15** vis-à-vis stations in the MOBILE-SATELLITE service only.
- <sup>8</sup> The coordination of non-GSO BROADCASTING-SATELLITE service (sound) in respect of terrestrial services is subject to the provisions of Resolution **539. (WRC-2000)**.
- <sup>9</sup> The coordination of non-GSO BROADCASTING-SATELLITE service (television) (column 4) is subject to the provisions of No. **S9.12** only.
- <sup>10</sup> The coordination of space services (Earth stations) listed in columns 3 in respect of the terrestrial services to which the same band is allocated with equal rights is to be effected under the provisions of **S9.17**.
- <sup>11</sup> Subject to application of the provisions of No. **S9.12** only.
- <sup>12</sup> Non-GSO FIXED-SATELLITE service (space-to-Earth) subject to application of the provisions of No. **S9.14** in the frequency band 15.45-15.65 GHz only
- <sup>13</sup> Not subject to application of the provisions of No. **S9.14**.
- <sup>14</sup> For the coordination of GSO or non-GSO space services (specific earth station) in respect of other earth stations operating in the opposite direction of transmission, see also the provisions of No. **S9.17A**.

**TABLE S9.11A-2**

**Applicability of the provisions of No. S9.16 to stations of terrestrial services**

1	2	3	4	5	6	7
Frequency band (MHz/GHz)	Footnote in Art. S5	Terrestrial services to which No. S9.16 applies	Space services mentioned in a footnote referring to No. S9.11A in respect of which No. S9.16 applies, and other non-GSO space services in respect of which No. S9.16 applies equally		Date of provisional application of the allocation if later than 3.06.2000, or if different from the application date of the RR	Notes
137-137.025 137.175-137.825	<b>S5.208</b>	FIXED (S5.204, S5.205) LAND MOBILE (S5.204, S5.205) MARITIME MOBILE (S5.204, S5.205) AERONAUTICAL MOBILE (OR) (S5.204, S5.206) BROADCASTING (S5.207)	MOBILE-SATELLITE (non-GSO (S5.209)) SPACE OPERATION METEOROLOGICAL-SATELLITE SPACE RESEARCH	↓		1
137.025-137.175 137.825-138	<b>S5.208</b>	Fixed (in countries other than those listed in S5.204, S5.205) Land mobile (in countries other than those listed in S5.204, S5.205) Maritime mobile (in countries other than those listed in S5.204, S5.205) Aeronautical mobile (OR) (in countries other than those listed in S5.204, S5.206)	Mobile-satellite (non-GSO (S5.209))	↓		1
400.15-401	<b>S5.264</b>	FIXED (S5.262) MOBILE (S5.262) METEOROLOGICAL AIDS	MOBILE-SATELLITE (non-GSO (S5.209)) METEOROLOGICAL-SATELLITE SPACE RESEARCH	↓		1
1 492-1 525	<b>S5.348</b>	FIXED (R2) MOBILE (R2)	MOBILE-SATELLITE (R2, except USA (S5.344))	↓		1, 2
1 525-1 530	<b>S5.354</b>	FIXED (R1, R3, see also S5.352A) LAND MOBILE (S5.349) MARITIME MOBILE (S5.349) AERONAUTICAL MOBILE (S5.342, S5.350)	MOBILE-SATELLITE SPACE OPERATION	↓		1
1 530-1 535	<b>S5.354</b>	AERONAUTICAL MOBILE (S5.342)	MOBILE-SATELLITE SPACE OPERATION	↓		1
1 545-1 550	<b>S5.354</b>	AERONAUTICAL MOBILE (R)	MOBILE-SATELLITE	↓		1, 3

2.3 Based on these principles, and provided that the appropriate coordination trigger limit is exceeded, the modified part of the network will need to effect coordination with respect to space networks that are to be taken into account for coordination:

- a) with dates of receipt (DR) before the original date of submission (D1) of the subject network; and
- b) with date of receipt (DR) after the original date of submission (D1) of the modified network but before the date of the modification (D2), where the nature of the change is such as to increase the interference to or from, as the case may be, the assignments of those networks which were received in the period between D1 and D2. In case of GSO networks referred to in No. S9.7 including those to which coordination arc approach (frequency bands 1), 2) and 3) of No. S9.7 of Table S5-1 of Appendix S5) have been applied, the increase of interference will be measured in terms of  $\Delta T/T$ .

2.3.1 Where the coordination requirements of the modification involve any network under b) above, the modified assignments will have as their date of receipt (DR) the date of submission of the modification (i.e. DR = D2). Otherwise, they will retain their original date of receipt (DR) (i.e. DR = D1).

2.3.2 In case of successive modifications of the same part of the network, if the next modification (compared with the previous modification) does not increase the interference to or from a particular network not included in the coordination requirements under b) above, that particular network will not be included in the coordination requirements of that next modification.

2.3.3 If it is not possible to verify that there is no increase of interference (e.g. in absence of appropriate criteria or calculation methods), the date of receipt (DR) date of the modified assignments will be D2.

2.4 After having examined the modified network as described in § 2.3 above, the Bureau shall publish the modification, including its coordination requirements, in the appropriate Special Section for comments by administrations within the usual 4-month period. Initial characteristics are thus replaced by the published modified characteristics, and only the latter will be taken into account in subsequent applications of No. S9.36.

### 3 Modification to characteristics of an earth station

3.1 The use of another associated space station may be one of the modifications of characteristics to an earth station. In the case of examination under S9.15, S9.17 and S9.17A, a new coordination contour is drawn and compared with the previous one. Coordination is then required with any administration on the territory of which a coordination distance is increased. In the case of examination under S9.19, the pfd of the transmitting earth station with modified characteristics is calculated at the edge of the BSS service area. Coordination is then required with any administration on the territory of which the pfd at the edge of the BSS

service area is increased as the result of modification of characteristics of the transmitting earth station in fixed satellite service and is above the permissible level. However, if the initial associated space station has been cancelled or if the coordinated frequency assignments of the earth station do not cover the newly notified assignments, this notification of the assignments of the earth station will be considered as a new notice (first notification).

3.2 Generally, the Bureau uses the same approach, i.e. an increase of the coordination distance or an increase of the pfd at the edge of the BSS service area, according to the case, in order to decide if there is an increase of interference.

**S9.28,  
S9.29  
and S9.31**

1 These provisions of the Radio Regulations establish the complete responsibility of the requesting administration for effecting the coordination of the frequency assignments to stations in the terrestrial services and to Earth stations (specific or typical) of satellite networks with respect to other Earth stations and stations of terrestrial services (see Nos. **S9.15** to **S9.19**), without any involvement of the Radiocommunication Bureau, except the cases referred to in Nos. **S9.33** and/or **S9.52**. Therefore, the Board considers these provisions as being addressed to administrations, and the Bureau has no action to take in this respect.

2 See also Rules of Procedure under No. **S11.32** (§ 4).

**S9.35**

1 The Board noted Resolution 1182 of the 2001 session of the Council regarding the elimination of the backlog in the Radiocommunication Bureau's processing of satellite network filings, which *inter alia* recommends the RRB "to develop, as a matter of urgency, a set of Rules of Procedure, consistent with the Radio Regulations, intended to eliminate the backlog."(*resolves* 2.1, Resolution 1182).

2 The Board has carefully studied the different regulatory/technical steps, which apply to the processing of a coordination request and, taking into account comments from administrations, is of the opinion that simplification of the examination of requests for coordination under the provisions of No. **S9.35** is a measure that will assist in reducing processing time and consequently the backlog.

3 The Board therefore decided to instruct the Bureau, when making the examination under **S9.35**, to not examine the proposed assignments with respect to:

- i) Any power limits referred to in applicable footnotes, Resolutions or Recommendations;
- ii) The power limits for earth stations as specified in Nos. **S21.8**, **S21.10**, **S21.12** and **S21.13**;
- iii) The limits of power flux-density from space stations produced at the Earth's surface as specified in Table **S21-4** (**S21.16**), as well as in Tables **S22-1A** to **S22-1D** (**S22.5C**);

- iv) The limits of power flux-density from space stations produced at the geostationary orbit as specified in Nos. **S22.5** and **S22.5A**;
- v) The limits of power flux-density from earth stations produced at the GSO as specified in Table **S22-2 (S22.5D)**;
- vi) The limits of power flux-density from space stations produced at any point in the geostationary orbit as specified in Table **S22-3 (S22.5F)**; and
- vii) The off-axis power limits of earth station in the fixed satellite service specified in No. **S22.26** to **S22.39**.

4 The Bureau shall issue a “qualified favourable” finding with respect to **S9.35**. The Bureau will do the full regulatory examination under **S11.31**, including the review of any qualified favourable findings, at the notification stage under Article **S11**. The Board also understands that this approach does not infringe on the rights of administrations and will continue to provide the required protection to the various terrestrial services and space systems as specified in the Radio Regulations.

5 The Board considers the above as measures to respond to Council Resolution 1182 to be used on a provisional basis until further decisions by WRC-03, and to apply to those networks for which complete coordination information has been received by the Bureau on and after 1 June 1999.

### **S9.36**

1 Under this provision, the Bureau “shall identify any administrations with which coordination may need to be effected”. In applying Appendix **S5** with respect to No. **S9.21**, the Bureau uses the following calculation methods and criteria<sup>3</sup>:

- space network vs. space network: Appendix **S8**;
- earth station vs. terrestrial stations and *vice versa*: Appendix **S7**;
- transmitting terrestrial stations vs. receiving space stations: criteria of Article **S21**;
- transmitting space stations vs. terrestrial services: pfd limits defined in Article **S21**;
- between stations of terrestrial services in some specific frequency bands: Rules of Procedure B4, B5 and B6 as appropriate.

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<sup>3</sup> For cases not covered under this paragraph, the Bureau, in collaboration with the appropriate Radiocommunication Study Groups, continue to develop applicable calculation methods and criteria in the form of Rules of Procedure to be submitted to the RRB for approval.

2 For coordination requests under Nos. **S9.11** to **S9.14** and **S9.21**, it is to be noted that irrespective of the identification by the Bureau under No. **S9.36** (see footnote **S9.36.1**), any administration, even one which was not identified, may disagree with the published assignment under No. **S9.52** and any administration, including one identified by the Bureau, that has not commented on the proposed use within the regulatory time limit is considered to be unaffected by that use in accordance with No. **S9.52C**.

3 In response to Resolution 1182 of the 2001 session of the Council (see Rules of Procedure under No. **S9.35**), the Board concluded that when identifying any administration with which coordination may need to be effected under No. **S9.7**, the Bureau shall apply the coordination arc concept as described in Table **S5-1** to Appendix **S5**, No. **S9.7** (GSO/GSO) with all associated provisions to FSS, BSS and associated space operations in the frequency bands above 3 GHz, with an orbital arc threshold defined as follows:

3 400-10 950 MHz	Networks with a space station within an orbital arc of $\pm 10^\circ$ of the nominal orbital position of the proposed network
10.95-17.7 GHz	Networks with a space station within an orbital arc of $\pm 9^\circ$ of the nominal orbital position of the proposed network
Over 17.7 GHz	Networks with a space station within an orbital arc of $\pm 8^\circ$ of the nominal orbital position of the proposed network

4 The Board considers the above as measures to respond to Council Resolution 1182 to be used on a provisional basis until further decisions by WRC-03, and to apply to those networks for which complete coordination information has been received by the Bureau on and after 1 June 1999.

5 See also Rules of Procedure under No. **S9.42** (§ 1).

#### **S9.42**

1 When applying the provisions under No. **S9.42** to services other than FSS in bands listed under items 1), 2) and 3) of column 3 of Table **S5-1** (Appendix **S5**) as well as to all services allocated outside of the bands listed under the above items (see Rules of Procedure under No. **S9.36** (§ 3-5)), the Board confirmed that the calculation method given in § 2.2.1.1 and 2.2.2.1 of Appendix **S8** shall continue to be used when simple frequency-changing transponders are used on the space station on board a geostationary satellite operating frequency assignments allocated to the services listed above.

2 If the Bureau's calculations do not indicate that the requesting administration should be brought into coordination procedure, the matter is left for consideration by the administration initiating the coordination.

#### **S9.48**

The Board concluded that this provision applies only to those radiocommunication stations which were taken into consideration when the coordination request was either sent to the other administration as stipulated in No. **S9.29** or submitted to the Bureau in the case of application of Nos. **S9.30** and **S9.32**. Other existing assignments of the administration to which this provision is not applied remain entitled to protection. Assignments of the same administrations which are considered at a later date are also entitled to protection.

#### **S9.49**

The comments made in the Rules of Procedure concerning No. **S9.48** apply. This administration is deemed to have undertaken not to cause interference to those stations for which the agreement was requested.

#### **S9.50**

### **Comments relating to the exclusion of the territory of a country from the service area of a space station**

1 When an Administration B requests the Bureau to exclude its territory from the service area of a space station of an Administration A, this raises the following questions:

- should that comment have any effect on the identification of the administrations concerned in the coordination process or on the assessment of the level of harmful interference?
- what action shall the Bureau take in respect of it?

2 The question of a request concerning the exclusion of the territory of a country from the service area of a space station can be studied at two different levels:

- the compatibility between services and stations and the related status that may be derived from the application of the procedures contained in the Radio Regulations, on one hand, and
- the principles embodied in the Preamble to the Convention and the Radio Regulations as well as in Resolution 1 (**Rev.WRC-97**) in respect of the sovereign right of each country to use the frequency spectrum and the geostationary satellite orbit, on the other hand.

3 Compatibility matters are well defined in the Radio Regulations; they involve:

- power flux-density limitations which are deemed to avoid any problem of incompatibility without any recourse to coordination with terrestrial services;

- coordination between administrations using or intending to use stations of the same service or of different services sharing the same frequency band;
- examination by the Bureau of the probability of harmful interference in cases where, for one reason or another, agreement on coordination could not be reached between the administrations concerned.

4 The identification by the Bureau of administrations involved in a coordination process and the assessment of the probability of harmful interference are based on the technical characteristics notified by administrations. The extent to which a comment intended to reduce the service area of a space station may affect the application of Articles S9 and S11 should be considered on the basis of a distinction to be made between the “coverage area” and the “service area”. The coverage area results from limitations imposed by the design of the space station, and a certain degree of overlapping of territories of other countries not intending to participate in the system may be unavoidable. The Board understands that, in designing any space station, the administration concerned applies No. S15.5, which stipulates that “radiation in and reception from unnecessary directions shall be minimized by taking the maximum practical advantage of the properties of directional antennas whenever the nature of the service permits”. If an Administration B, not participating in a given satellite network, considers that the network was not designed to minimize the overlapping which resulted in an unnecessary coverage of its territory, the Bureau can only transmit such comment to Administration A without any action from its side.

5 In relation to the sovereignty of the Administration B to authorize earth stations to be installed on its territory, the Bureau assumes that, in accordance with Resolution 1 (Rev.WRC-97), an agreement existed between the two administrations. Administration B is entitled to react and indicate to the Bureau that such an agreement does not exist; however, the Bureau has no authority to modify a characteristic notified by Administration A without its agreement. If the latter refuses to modify the service area, the Bureau can only note this situation. (The licensing authority, irrespective of the application of the procedures of Article S9, remains under the responsibility of Administration B. See also comment under the Rules of Procedure concerning Resolution 1 (Rev.WRC-97).)

6 In conclusion, when Administration B makes comments intending to exclude its territory from the service area of the space station of Administration A, the Bureau:

- shall consider such comments receivable and that it is a matter to be resolved between the administrations concerned;
- shall inform Administration A of the comments received requesting consultations between the administrations concerned (Administrations A and B) and will modify the service area only if Administration A agrees;
- shall enter a remark to indicate this situation when publishing a Special Section;
- shall consider, unless it receives a subsequent notification to the contrary, that there is no agreement between Administrations A and B under Resolution 1 (Rev.WRC-97) for the use of the territory of Administration B by earth stations associated with the satellite network in question.

## **S9.50.2**

The agreement referred to in this provision is considered as a bilateral agreement not involving the Bureau or any other administration.

## **S9.52**

1 The provision No. **S9.52** states that in the case of a disagreement concerning coordination, the responding administration (Administration B) informs the administration requesting the coordination (Administration A) of the reasons for its disagreement and in particular includes in these reasons those “assignments upon which that disagreement is based.” “A copy of these comments shall also be sent to the Bureau. Where this information relates to terrestrial stations or earth stations operating in the opposite direction of transmission within the coordination area of an earth station, only that information relating to existing radiocommunication stations or those to be brought into use within the next three months for terrestrial stations, or three years for earth stations, shall be treated as notifications under No. **S11.2** or **S11.9**”. Provision No. **S9.52** does not specify what action the Bureau will take with respect to the information relating to the other type of stations which are not to be considered as notifications but with respect to which the responding administration also stated its disagreement. The Bureau will not consider them as a notification under No. **S11.2** or **S11.9** and will not publish them, considering that it is a bilateral matter which does not need to be brought to the knowledge of all administrations.

2 The information submitted to the Bureau by Administration B which, according to No. **S9.52**, shall be treated as notifications under No. **S11.2** or **S11.9** could only be so considered, if it contains complete data as required by Appendix **S4**; otherwise the notice(s) will be returned to Administration B as incomplete. It is also understood that these notices have to be in conformity with No. **S11.31**; otherwise the notice(s) will be either returned to the Administration B, or shall be recorded in the Master Register for information purposes only, if the administration indicated that the assignment(s) will be operated in accordance with No. **S4.4**. Furthermore, the relevant frequency assignments of Administration B will be examined under No. **S11.32** (with respect to its conformity with the procedures relating to coordination) and may be eventually returned to administration, under No. **S11.37**, if the Bureau finds that the procedures for obtaining coordination were not successfully applied with all concerned administrations, under No. **S9.27** with respect to their assignments recorded in MIFR. See also Rules of Procedure relating to No. **S9.29**.

3 This provision allows the responding Administration B to inform the requesting Administration A of its disagreement within four months. It is to be noted that Administration B which may not be in position, for any reason, to respond to the requesting Administration A can send its disagreement directly to the Bureau accompanied by a statement reflecting the situation. The Board decided that disagreements addressed directly to the Bureau are valid in the meaning of No. **S9.52**, and the Bureau shall communicate the disagreement to Administration A.

#### **4 Case of administrations having responded**

An Administration B may, when it accepts the proposed use, stipulate conditions of use. If such conditions are accepted by the administration requesting the agreement, the Bureau will take this as an agreement.

4.1 When an administration has responded in application of No. **S9.52** within four months and requested the assistance of the Bureau, the latter will act according to Article **S13**.

4.2 When an Administration B has responded, in application of No. **S9.52**, more than four months after the date of publication of the relevant Special Section or the date of dispatch of the coordination data under No. **S9.29**, and the Bureau has been informed of a continuing disagreement between the two administrations, the Bureau has to literally apply No. **S9.52C**; it will consider Administration B as not having responded in due time. Therefore, despite the comments expressed by Administration B, Administration A will be considered to have successfully completed the procedure.

4.3 When an Administration B has responded, in application of No. **S9.52**, more than four months after the date of publication of the Special Section in application of No. **S9.38** or the dispatch of the coordination data under No. **S9.29**, and an agreement is reached between the two administrations, the Bureau will take this situation into account.

<b>S9.52C</b>
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#### **1 Case of administrations not responding**

With respect to administration not responding, an administration having applied the procedure shall be regarded as having successfully completed the procedure of this Article for assignments for which there was no response.

#### **2 Publication of Special Sections containing the status of the coordination procedures under Nos. S9.11 to S9.14 and S9.21**

2.1 Any comment which does not explicitly express objection to the request for coordination is not considered as a disagreement under No. **S9.52**. In case of doubt concerning the nature of comments, the administration concerned should be consulted.

2.2 The appropriate Special Section shall include the following information:

- a) the names of administrations whose disagreement to the request for coordination were received within the regulatory deadline;

b) a Note, which reads:

“Pursuant to No. **S9.52C**, all administrations other than those listed above shall be regarded as unaffected, and in the case of Nos. **S9.11** to **S9.14** the provision of Nos. **S9.48** and **S9.49** shall apply.”

2.3 See also § 2.4a of the Rule of Procedure relating to No. **S9.11A**

#### **S9.53**

See comments under the Rules of Procedures concerning No. **S9.6** (§ 1 c)).

#### **S9.58**

This provision refers to changes in the characteristics which have been decided during the coordination procedure of the assignment of the network. For processing of the modification, the Bureau will apply § 2 of the Rules concerning No. **S9.27**. When publishing the modified characteristics in a modification to the Special Section containing the original coordination request, the Bureau will indicate the nature of the modification as specified in No. **S9.58**.

#### **S9.60**

In application of No. **S9.11A**, when the information on a station in the fixed service upon which an administration's disagreement is based cannot be provided as referred to in under **S9.52**, the reference parameters contained in Annex 1 to Appendix **S5** can be used to determine the need for coordination.

#### **S9.62**

With respect to an administration not responding, an administration having applied the procedure shall be regarded as having successfully completed the procedure of this Article with respect to assignments for which there was no response.

#### **S9.63**

In the absence of reply to provide the required information (to enable the Bureau to carry out the compatibility analysis), the Bureau shall use the information available to it.

#### **S9.65**

See Rules under No. **S9.6** (§ 2), Nos. **S11.32A** and **S11.33**.

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## Rules concerning

### APPENDIX S30 to the RR

(Rules are arranged by paragraph numbers of Appendix S30)

#### Art. 2

#### Frequency bands

##### 2.2

1           The Board, in reviewing § 2.2 of Article 2 of Appendices **S30/S30A (WRC-2000)**, decided to instruct the Bureau to proceed as follows:

2           Space operations functions in the guardbands of Appendices **S30/S30A** will be processed within the regulatory framework of Appendices **S30/S30A (WRC-2000)** without a need to publish an advance publication information, i.e. administration would initiate the coordination procedure under No. **S9.7** by submitting the coordination data. The regulatory time limit for bringing into use any assignments in the guardbands will be same as that for planned BSS/Feeder link assignments i.e. 8 years from the date on which the complete information is received by the Bureau for modification and/or inclusion of new assignments in the List for Regions 1 and 3 (§ 4.1.3) and/or modification to the Region 2 Plan (§ 4.2.6) of Article 4 of both Appendices **S30** and **S30A (WRC-2000)**.

3           For the use of the guardbands of the Appendices **S30/S30A** for space operations functions for the initial Plan, the 8 year regulatory time limit will apply and will be counted from the date on which the complete Appendix **S4** data is received by the Bureau for these guardbands.

4           This implies that the coordination and notification procedure for the use of the guard bands should be applied at the same time as the respective coordination and notification of the associated main BSS networks.

5           Protection Criteria and Calculation Methods to be used for the implementation of § 2.2 to Article 2 of Appendix **S30**,

5.1          WRC-2000 included in the new § 2.2 of Article 2 to Appendix **S30** the regulatory provisions to coordinate assignments intended to provide space operation functions in the guardbands of the Appendix **S30** frequency bands with other services using the same bands. However, WRC-2000 did not refer explicitly to the protection criteria and calculation methods, which shall be applied to implement these new provisions.

5.2          In view of the above and until the time that the relevant ITU-R Recommendation is available, the Board instructed the Bureau to use the protection criteria and calculation methods associated with the provisions referred to in § 2.2 of Article 2 to Appendix **S30**.

**Art. 3****Execution of the provisions and associated Plans****3.1**

For the footnote of § 3.1 see comments made under the Rules of Procedure concerning No. S5.492.

**Art. 4****Procedure for modification to the Plans****4.1.1 a)  
and 4.1.1 b)**

1 In determining those administrations of Regions 1 and 3 that may be affected, the proposed new or modified assignment to the List is examined with respect to the Regions 1 and 3 Plan and List as they exist at the date of receipt of the proposed new or modified assignment to the List, including the other proposed new or modified assignments to the List received before that date (whether the procedure of Article 4 is complete or not). The examination consists of ensuring that the limits of Section 1 of Annex 1 of Appendix S30 are not exceeded. Account is also taken of any time-limited new or modified assignments to the List in accordance with § 4.1.13.

2 Following the introduction by 1983 Conference of the grouping concept for Region 2 (Articles 9 and 10 of Appendices S30A and S30 respectively) and further to the decision of WARC Orb-88 to apply the grouping concept to the Regions 1 and 3 feeder-link Plans (Article 9A of Appendix S30A), the IFRB decided to extend this concept to the 1977 Conference BSS Plan. WRC-2000 endorsed this decision and decided to include the same grouping concept definition in Articles 11 and 9A of Appendices S30 and S30A respectively. On the other hand, the cluster concept was introduced by 1983 Conference for Region 2 for BSS and associated feeder-links (§ B of Annex 7 of Appendix S30, § 4.13 of Annex 3 of Appendix S30A) and for Regions 1 and 3 by WARC Orb-88 for feeder-links (§ 3.15 of Annex 3 of Appendix S30A). The IFRB decided that Regions 1 and 3 could also apply this concept for the BSS Plan provided that the required agreement is obtained from administrations in the cluster. See also the Rules of Procedure relating to § 3.15 of Annex 3 of Appendix S30A.

3 The Board's understanding of the group concept is that in the interference calculation to assignments that are part of the group, only the interference contribution from assignments that are not part of the same group are to be considered. On the other hand, for the interference calculation from assignments belonging to a group into assignments that are not part of the same group, only the worst interference contribution from that group is to be taken into consideration.

For the Regions 1 and 3 Plan and List, the Board did not find any regulatory basis to extend the use of multiple orbital positions for networks involving grouping beyond those cases which were accepted by WRC-2000 and included in the revised Regions 1 and 3 Plan and in the WRC-2000 List.

For the Region 2 Plan, the Board did not find any regulatory basis to extend the use of groupings involving multiple orbital positions (except for the case of 0.4° orbital separation which was allowed for clusters within the Region 2 Plan and its subsequent modifications).

#### 4.1.1 c)

In determining those administrations of Region 2 that might be affected, the proposed new or modified assignment to the Regions 1 and 3 List is examined with respect to the Region 2 Plan as it exists at the date of receipt of the proposed new or modified assignment including the proposed modifications of the Region 2 Plan received before that date (whether the procedure of Article 4 is complete or not). The examination will consider only those administrations having assignments whose necessary<sup>1</sup> bandwidth overlaps the necessary<sup>1</sup> bandwidth of the proposed new or modified assignment to the Regions 1 and 3 List. The Region 2 administration is identified as having services which are considered to be affected when the power flux-density at any test point which lies within the service area of the Region 2 assignment under examination exceeds the limits specified in Section 3 of Annex 1 to Appendix S30 (CWR-2000).

#### 4.1.1 d)

1 This paragraph is understood by the Board as being intended to protect terrestrial services in any territory or part of a territory in the three Regions where this territory or part of a territory is not covered by a broadcasting-satellite assignment in a given necessary<sup>1</sup> bandwidth. Therefore the proposed new or modified assignment to the Regions 1 and 3 List should take account of terrestrial stations in all Regions.

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<sup>1</sup> In the absence of a clear indication of the precise frequency of each carrier within the assigned frequency band, the Bureau uses in its analysis the assigned frequency band (i.e. data item C.3.a of Annex 2A of Appendix S4) instead of the necessary bandwidth (i.e. data item C.7.a of Annex 2A of Appendix S4).

2 For terrestrial stations in all Regions the limit for the power flux-density not to be exceeded by the proposed new or modified assignment to the Regions 1 and 3 List is that specified in Section 4 of Annex 1 to Appendix S30. The agreement of an administration is required when a pfd excess exists over some part of its territory, unless the necessary<sup>2</sup> bandwidth of the examined assignment is completely within the necessary<sup>2</sup> bandwidth(s) of one or more assignments<sup>3</sup> of the potentially affected administration in the Region 2 Plan or in the Regions 1 and 3 Plan or List and the area of pfd excess is inside the service area(s) of those assignments. In the absence of a defined service area contour, the area on the surface of the Earth within the -3 dB contour shall be considered as the service area of those assignments in this examination.

3 The Bureau, in applying Section 4 of Annex 1 shall, where applicable, compare the power flux density values resulting from the proposed new or modified assignments to the Regions 1 and 3 List with those values in the Regions 1 and 3 Plan or List as appropriate. If it is not possible to do so, the Bureau should use the absolute limit expressed in Section 4 of Annex 1 to that Appendix.

#### 4.1.1 e)

1 The bands 11.7-12.2 GHz in Region 2 and 12.2-12.5 GHz in Region 3 are allocated to the fixed-satellite service (FSS). See comments made under the Rules of Procedure concerning Nos. S5.488 and S5.491.

2 An administration in Region 2 is identified among those whose agreement is required under this paragraph when the following conditions are fulfilled:

- a) it has assignment to fixed-satellite service space stations in the band 11.7-12.2 GHz whose necessary<sup>2</sup> bandwidth overlaps the necessary<sup>2</sup> bandwidth of the proposed new or modified Regions 1 and 3 assignment and which is:
  - recorded in the MIFR, with a favourable Finding under No. S11.31; or
  - published or received for publication for coordination under provision S9.7; or
  - published or received for publication under § 7.1 of Article 7 of Appendix S30 and
- b) the power flux-density over any portion of the service area of the above mentioned Region 2 FSS assignment resulting from the proposed new or modified Regions 1 and 3 BSS assignment exceeds the limits prescribed in § 1 and 3 of Section 6 of Annex 1 to Appendix S30.

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<sup>2</sup> In the absence of a clear indication of the precise frequency of each carrier within the assigned frequency band, the Bureau uses in its analysis the assigned frequency band (i.e. data item C.3.a of Annex 2A of Appendix S4) instead of the necessary bandwidth (i.e. data item C.7.a of Annex 2A of Appendix S4).

<sup>3</sup> Assignments to satellite networks of international organizations should not be considered as being national assignments of administrations which notify them on behalf of international satellite organizations.

3 An administration of Region 3 is identified among those whose agreement is required under this paragraph when the following conditions are fulfilled:

- a) it has assignment to fixed-satellite service space stations in the band 12.2-12.5 GHz whose necessary<sup>4</sup> bandwidth overlaps the necessary<sup>4</sup> bandwidth of the proposed new or modified Region 1 assignment and which is:
  - recorded in the MIFR, with a favourable Finding under No. **S11.31**; or
  - published or received for publication for coordination under provision **S9.7**; or
  - published or received for publication under § 7.1 of Article 7 of Appendix **S30** and
- b) the power flux-density over any portion of the service area of the above mentioned Region 3 FSS assignment resulting from the proposed new or modified Region 1 BSS assignment exceeds the limits prescribed in § 1 and 3 of Section 6 of Annex 1 to Appendix **S30**.

4 In the case of inclusion of a new assignment in the Regions 1 and 3 List, different from the frequency assignments in the Plan or List for Regions 1 and 3 as established by WRC-2000, the limit prescribed in § 3 of Section 6 of Annex 1 shall be applied with the same conditions as those mentioned in § 2 and 3 above .

5 The Bureau, in applying Section 6 of Annex 1 shall, where applicable, compare the power flux density values resulting from the proposed new or modified assignments to the Regions 1 and 3 List with those values in the Regions 1 and 3 Plan or List as appropriate. If it is not possible to do so, the Bureau should use the absolute limit expressed in Section 6 of Annex 1 to that Appendix.

#### 4.1.3

1 Appendix **S30** contains assignment Plans with beams covering only a territory or a part of a territory, which leads one to conclude that the usual wording used in similar paragraphs “or an administration on behalf of a group of named administrations” is not necessary. However, it is to be noted that some beams have been included in both Plans or in the List for some groups of named administrations. Consequently the Board decided that the Bureau shall accept the application of the procedure of Article 4 for a modification of the Region 2 Plan or a proposed new or modified assignment in the Regions 1 and 3 List of additional uses by an administration on behalf of other named administrations<sup>5</sup>. See Rules of Procedure under No. **S23.13**.

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<sup>4</sup> In the absence of a clear indication of the precise frequency of each carrier within the assigned frequency band, the Bureau uses in its analysis the assigned frequency band (i.e. data item C.3.a of Annex 2A of Appendix **S4**) instead of the necessary bandwidth (i.e. data item C.7.a of Annex 2A of Appendix **S4**).

<sup>5</sup> Whenever, under this provision, an administration acts on behalf of a group of named administrations, all members of the group retain the right to respond in respect of their own services which could affect or be affected by the proposed assignment.

2 Paragraph 4.2.6 of Appendix S30 states that modifications to the Region 2 Plan submitted under § 4.2.1 b) shall lapse if the assignment is not brought into service by the date indicated. There is no mention about the modifications submitted under § 4.2.1 a) of Article 4 of this Appendix which should logically be treated in the same manner. The Board, therefore decided that:

2.1 Modifications to the Region 2 Plan submitted under § 4.2.1 a) and 4.2.1 b) of Article 4 of Appendix S30 shall lapse if the assignment is not brought into use within the envelope of the characteristics as coordinated and published under § 4.2.19 of this Appendix by the notified date on which they were to be brought into use.

2.2 During the 8-year regulatory period, both the initial assignment and the modified assignment submitted under § 4.2.1 a) shall be protected until the modified assignment is brought into use. In cases where a modification made under § 4.2.1 a) is consequently suppressed from the Plan, the original Plan entry which was concerned with the lapsing modification shall be maintained.

3 In the event that the Bureau cancels a frequency assignment in application of § 5.3.2 of Article 5 of this Appendix, the corresponding assignment, which has been submitted either under § 4.2.1 b) and entered in the Region 2 Plan, or under § 4.1 and entered in the Regions 1 and 3 List, shall also be removed from the Plan or the List according to the case. The Bureau does not need to recalculate the affected administration(s) as result of the above-mentioned cancellation.

4 See also Rules of Procedure concerning Receivability of the Forms of Notice.

#### 4.1.7

Any request by an administration to be included in the list of administrations to be published shall be based only on technical reasons to be verified using Annex 1 as well as other relevant Annexes. If this indicates that the requesting administration should have been included in the list, the Bureau will include it; otherwise the requesting administration will be informed that its name will not be published, it being left to the notifying administration to consider if it is appropriate to take the request into account.

#### 4.1.8

An administration which has only requested additional information in accordance with § 4.1.8 or § 4.2.12 will not be considered by the Bureau to have submitted comments in accordance with § 4.1.10 or § 4.2.14 respectively.

#### **4.1.10**

This paragraph specifies that, an administration that has not notified its comment within four months (from the publication date of the special section) shall be understood to have agreed to the proposed modifications. The Board considered the adverse effect of such missing replies and decided that the Bureau shall send reminder telegrams 30 days before the expiry of the above four month period.

#### **4.1.11**

See also comments under § 4.1.3 and 4.2.6 and Rules relating to the receivability of forms of notice.

#### **4.1.15**

The second part of these paragraphs applies only to those assignments for which the procedure of Article 4 has been successfully applied, i.e., all administrations identified by the Bureau in application of § 4.1.5 or 4.2.8 and § 4.1.7 or 4.2.10 have either given their agreement or failed to comment on the proposed new or modified assignment to the Regions 1 and 3 List or on the proposed modification to the Region 2 Plan.

The Bureau shall update the Reference Situation of the Regions 1 and 3 Plan and List or of the Region 2 Plan entries and of those networks which are the subject of requests for new or modified assignment to the Regions 1 and 3 List or for Region 2 Plan modifications which are still at the stage of application of Article 4. Nevertheless, the Bureau does not need to recalculate the affected administration(s) as result of the above-mentioned update.

#### **4.1.23**

If the assignments in question were deleted from the Regions 1 and 3 List or the Region 2 Plan, the Bureau shall update the Reference Situation of the assignments in the Regions 1 and 3 Plan and List, or in the Region 2 Plan and of the assignments under Article 4 procedure and inform all administrations of the action taken together with Special Sections published as result of cancellation of frequency assignments from the Regions 1 and 3 List or the Region 2 Plan. The Bureau does not need to recalculate the affected administration(s) as result of the above-mentioned cancellation.

#### **4.2.1 a)**

This paragraph refers to the modification in the sense of a change to “the characteristics of any of its frequency assignments to a space station in the broadcasting-satellite service which are shown in the Region 2 Plan”. The Plan as it appears in Article 10 of Appendix S30 contains only eight characteristics, while Annex 2 contains a greater number of characteristics

which were used by the RARC-SAT-R2 (Geneva, 1983) conference to establish the Plan. Among these characteristics only one, the energy dispersal (former Annex 2, § 14 *h*)), now item C.9.b.8 of Annexes 2A and 2B of Appendix S4), is referred to in the footnote of § 4.2.1. The Board considers that modifications of characteristics other than those listed in Article 10 of Appendix S30 may be considered as modifications to the Plan. These other characteristics are listed in the Rules of Procedure relating to § 5.2.1 *b*) of Article 5 of Appendix S30.

See also the last paragraph of Rules of Procedure relating to § 4.2.3 *d*) and 4.2.3 *e*).

See also Rules of Procedure relating to § 4.2.6.

#### **4.2.1 *b*)**

See Rules of Procedure relating to § 4.2.1 *a*) above.

See also Rules of Procedure relating to § 4.2.6.

#### **4.2.1 *c*)**

When an administration cancels an assignment from the Region 2 Plan under this paragraph, or when the Bureau, in applying § 4.2.6 deletes an assignment from the Plan, the Reference Situation of the Plan assignments and those in the process of modification would be updated. The Bureau does not need to recalculate the affected administration(s) as result of the above-mentioned cancellation.

#### **4.2.3 *a*) and 4.2.3 *b*)**

In determining the administrations of Region 1 that might be affected, the proposed modification of the Region 2 Plan is examined with respect to the Regions 1 and 3 Plan and List as it exists at the date of receipt of the proposed modification including all proposed new or modified assignments to the Regions 1 and 3 List received before that date (whether the procedure of Article 4 is complete or not). The examination will identify only those administrations having assignments whose necessary<sup>6</sup> bandwidth overlaps the necessary<sup>6</sup> bandwidth of the proposed modification of the Region 2 Plan. An administration of Region 1 is identified as having services which might be affected when the power flux-density at any test point which lies within the service area of the Region 1 assignment under examination exceeds the limits specified in Section 3 of Annex 1 to Appendix S30.

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<sup>6</sup> In the absence of a clear indication of the precise frequency of each carrier within the assigned frequency band, the Bureau uses in its analysis the assigned frequency band (i.e. data item C.3.a of Annex 2A of Appendix S4) instead of the necessary bandwidth (i.e. data item C.7.a of Annex 2A of Appendix S4).

#### 4.2.3 c)

1 In determining those administrations of Region 2 that may be affected, the proposed modification is examined with respect to the Region 2 Plan as it exists at the date of receipt of the request for modification including the proposed modifications received before that date (whether the procedure of Article 4 is complete or not). The examination consists of ensuring that the limits of Section 2 of Annex 1 of Appendix S30 are not exceeded. Account is also taken of any time-limited modifications to the Plans in accordance with § 4.2.17.

2 According to Resolution 42 (Rev.Orb-88), the Board decided that, when applying this paragraph, the Bureau shall not take account of the interim systems.

3 For considerations related to application of the Group concept see Rules of Procedure related to § 4.1.1 a) and 4.1.1 b).

#### 4.2.3 d)

1 As indicated in the Rules of Procedure relating to § 4.1.1 d), a modification to the Region 2 Plan should take account of terrestrial stations in all Regions.

2 For terrestrial stations in all Regions, the limit for the power flux-density not to be exceeded by the proposed modification to the Region 2 Plan is specified in Section 4 of Annex 1 to Appendix S30. The agreement of an administration is required when a pfd excess exists over some part of its territory, unless the necessary<sup>7</sup> bandwidth of the examined assignment is completely within the necessary<sup>7</sup> bandwidth(s) of one or more assignments<sup>8</sup> of the potentially affected administration in the Region 2 Plan or in the Regions 1 and 3 Plan or List and the area of pfd excess is inside the service area(s) of those assignments. In the absence of a defined service area contour, the area on the surface of the Earth within the –3 dB contour shall be considered as the service area of those assignments in this examination.

3 The Bureau, in applying Section 4 of Annex 1 shall, where applicable, compare the power flux density values resulting from the proposed modification to the Region 2 Plan with those values in the Region 2 Plan. If it is not possible to do so, the Bureau should use the absolute limit expressed in Section 4 of Annex 1 to that Appendix.

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<sup>7</sup> In the absence of a clear indication of the precise frequency of each carrier within the assigned frequency band, the Bureau uses in its analysis the assigned frequency band (i.e. data item C.3.a of Annex 2A of Appendix S4) instead of the necessary bandwidth (i.e. data item C.7.a of Annex 2A of Appendix S4).

<sup>8</sup> Assignments to satellite networks of international organizations should not be considered as being national assignments of administrations which notify them on behalf of international organizations.

#### 4.2.3 e)

- 1 See item 1 in the Rules of Procedure relating to § 4.1.1 e).
  
- 2 An administration of Regions 1 and 3 is identified among those whose agreement is required under this paragraph when the following conditions are fulfilled:
  - a) it has assignment to fixed-satellite service space stations (space-to-Earth) in the band 12.5-12.7 GHz (Region 1) or 12.2-12.7 GHz (Region 3) whose necessary<sup>9</sup> bandwidth overlaps the necessary<sup>9</sup> bandwidth of the proposed Region 2 assignment and which is:
    - recorded in the MIFR with a favourable Finding under No. **S11.31**; or
    - published or received for publication for coordination under provision **S9.7**; or
    - published or received for publication under § 7.1 of Article 7 of Appendix **S30** and
  - b) the power flux-density over any portion of the service area of the above mentioned Regions 1 and 3 FSS assignment resulting from the proposed Region 2 BSS assignment exceeds the limits prescribed in § 2 and 3 of Section 6 of Annex 1 to Appendix **S30**.
  
- 3 In the case of inclusion of a new assignment to the Region 2 Plan, the limit prescribed in § 3 of Section 6 of Annex 1 shall be applied with the same conditions as those mentioned in § 2 above .
  
- 4 An administration of Region 1 is identified among those whose agreement is required under this paragraph when the following conditions are fulfilled:
  - a) it has assignment to fixed-satellite service space stations (Earth-to-space) in the band 12.5-12.7 GHz whose necessary<sup>9</sup> bandwidth overlaps the necessary<sup>9</sup> bandwidth of the proposed Region 2 assignment and which is:
    - recorded in the MIFR with a favourable Finding under No. **S11.31**; or
    - published or received for publication for coordination under provision **S9.7**; or
    - published or received for publication under § 7.1 of Article 7 of Appendix **S30** and
  - b) the  $\Delta T/T$  resulting from the proposed modification of the Region 2 BSS assignment exceeds the limit prescribed in Section 7 of Annex 1 to Appendix **S30**.

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<sup>9</sup> In the absence of a clear indication of the precise frequency of each carrier within the assigned frequency band, the Bureau uses in its analysis the assigned frequency band (i.e. data item C.3.a of Annex 2A of Appendix **S4**) instead of the necessary bandwidth (i.e. data item C.7.a of Annex 2A of Appendix **S4**).

5 In the case of inclusion of a new assignment to the Region 2 Plan, the limit prescribed in the second indent of Section 7 of Annex 1 shall be applied with the same conditions as those mentioned in § 4 above .

6 The Bureau, in applying Sections 6 and 7 of Annex 1 shall, where applicable, compare the power flux density and  $\Delta T/T$  values, respectively, resulting from the proposed modification to the Region 2 Plan with those values in the Region 2 Plan. If it is not possible to do so, the Bureau should use the absolute limit expressed in Sections 6 and 7 of Annex 1 to that Appendix.

#### **4.2.3 f)**

1 Until there is a Plan for Region 3 for the band 12.5-12.7 GHz, administrations of Region 3 having broadcasting-satellite assignments in the MIFR or published for coordination under Resolution **33 (Rev.WRC-97)** shall be identified as possibly affected if their necessary<sup>10</sup> bandwidth overlaps the necessary<sup>10</sup> bandwidth of the proposed modification and the limits of Section 3 of Annex 1 of Appendix **S30** are exceeded.

2 See comments under No. **S5.493**.

#### **4.2.6**

See the Rules of Procedure relating to § 4.1.3.

#### **4.2.10**

See the Rules of Procedure relating to § 4.1.7.

#### **4.2.11**

The agreement referred to in this paragraph is the agreement of the administrations identified under § 4.2.3 and of those under § 4.2.10 which have been confirmed by the Bureau using the appropriate criteria.

#### **4.2.12**

See the Rules of Procedure relating to § 4.1.8.

#### **4.2.14**

See the Rules of Procedure relating to § 4.1.10.

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<sup>10</sup> In the absence of a clear indication of the precise frequency of each carrier within the assigned frequency band, the Bureau uses in its analysis the assigned frequency band (i.e. data item C.3.a of Annex 2A of Appendix S4) instead of the necessary bandwidth (i.e. data item C.7.a of Annex 2A of Appendix S4).

**4.2.15**

See the Rules of Procedure relating to § 4.1.11.

**4.2.19**

See the Rules of Procedure relating to § 4.1.15.

**4.2.24**

See the Rules of Procedure relating to § 4.1.23.

**Art. 5**

### **Notification, examination and recording**

**5.2.1 b)**

1 The Board has considered the question whether the examination with respect to conformity with the Plan means only the columns of Articles 10 and 11 of Appendix **S30**, as updated or whether it also includes an examination with respect to the technical criteria given in Annex 5 to Appendix **S30** which were used for the establishment of the Plans. The Board concluded that some of the technical criteria contained in Annex 5 need to be taken into account in this examination. Therefore, the examination from the viewpoint of conformity with the Plan is carried out in two steps:

- a) to ensure that the characteristics notified are those specified in the columns of the Plan concerned as updated (see § 3.1 of Article 3). If the characteristics are different then the examination under § 5.2.1 c) is carried out. For the items below, any characteristics for which the procedure of Article 4 has been successfully applied could be notified.
- b) to ensure that the protection criteria resulting from the Plan<sup>11</sup> are not exceeded. To this effect, the following characteristics are examined:
  - beam identification (as indicated in columns 1 and 2 of Articles 10 and 11 respectively of Appendix **S30**);
  - nominal orbital position (as indicated in columns 2 and 3 of Articles 10 and 11 respectively of Appendix **S30**);
  - channel number/frequency (as indicated in columns 3 and 4 of Articles 10 and 11 respectively of Appendix **S30**);
  - boresight coordinates (as indicated in columns 4 and 5 of Articles 10 and 11 respectively of Appendix **S30**);

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<sup>11</sup> Any time the “Plan” is referred to, this means the current version of the Plan as updated on the date of Bureau’s examination.

- in the case of an elliptical beam:
  - antenna beamwidth (as indicated in columns 5 and 6 of Articles 10 and 11 respectively of Appendix S30),
  - ellipse orientation (as indicated in column 6 of Articles 10 and 11 of Appendix S30),
  - antenna rotational accuracy (same as or better than that of § 3.14 of Annex 5 to Appendix S30);
- polarization (as indicated in columns 7 and 11 of Articles 10 and 11 respectively of Appendix S30);
- power plus co-polar antenna gain (as indicated in columns 8 and 12 of Articles 10 and 11 respectively of Appendix S30), and in the case of shaped beam the cross-polar antenna gain (as indicated in column 9 of Article 11 of Appendix S30);
- service area (test points shall be located within the service area);
- class of emission and bandwidth (as indicated in column 13 of Article 11 of Appendix S30 in the case of the Regions 1 and 3 Plan, or otherwise as indicated in § 3.1 and 3.8 of Annex 5 to Appendix S30);
- antenna characteristics (same as or better than those indicated in columns 7 or 8 as appropriate of Article 11 of Appendix S30 in the case of the Regions 1 and 3 Plan, or otherwise same as or better than Fig. 9 or 10 as appropriate of Annex 5 to Appendix S30);
- antenna pointing accuracy (same as or better than that referred to in § 3.14 of Annex 5 to Appendix S30);
- station keeping tolerance (same as or better than that mentioned in § 3.11 of Annex 5 to Appendix S30);
- modulation characteristics (same as in column 13 of Article 11 of Appendix S30 in the case of the Regions 1 and 3 Plan, or otherwise as indicated in § 3.1 of Annex 5 to Appendix S30);
- energy dispersal (same as § 3.18 of Annex 5 to Appendix S30);
- the power flux-density identified in Note 10 of the Region 2 Plan, to determine whether the limits are met or whether there is an agreement with the affected administrations.

#### **5.2.1 d)**

1 If an administration notifies any assignment with characteristics different from those listed in the Rules of Procedure related to § 5.2.1 b) of Article 5 of Appendix S30, and those allowed in § 5.2.1 d) of the same Article, a calculation is undertaken by the Bureau to determine if the proposed new characteristics would increase the interference level caused to other assignments in the appropriate Regional Plan, in the Regions 1 and 3 List, in the same service or in other service sharing the same frequency bands.

1.1 With respect to the compatibility of the proposed new characteristics with other assignments of the same Regional Plan and List, as appropriate, the increase of the interference will be checked by comparing the EPM/OEPM values of these other assignments, which are resulting from the use of the proposed new characteristics of the network in question on the one hand, and those obtained with the previous<sup>12</sup> characteristics of the network in question, on the other hand. These EPM/OEPM calculations are performed under the same technical assumptions and conditions, taking into account the orbital separation limit of  $\pm 9^\circ$  for assignments in the Regions 1 and 3 Plan and List. A more detailed analysis of the interference situation could also be required by using single entry *C/I* values in order to identify the assignments of the network in question which are causing the increase of the interference.

In addition, in the case of Regions 1 and 3, the notified assignments with new characteristics for the network in question are examined with respect to their compliance with the PFD hard-limit defined in Section 1 of Annex 1 to Appendix S30, or, as the case may be, with respect to their compliance with the PFD level of the corresponding assignments in the Plan or in the List if those assignments were adopted by WRC-2000 with PFD level(s) higher than the above-mentioned PFD hard-limit.

1.2 With respect to the compatibility with other inter-regional assignments in the same service or assignments in other service sharing the same frequency bands, as appropriate, the increase of the interference will be checked by calculating the PFD or  $\Delta T/T$  value, according to the case, produced by the proposed new characteristics at any test-point or within the service area of the other assignments, according to the case, and by comparing the resulting PFD or  $\Delta T/T$  values, according to the case, with those obtained with the previous<sup>4</sup> characteristics of the subject assignment.

1.3 Should the results of the calculations described in § 1.1 and 1.2 above indicate that the proposed new characteristics increase the interference to other assignments/services, the Bureau would reach an unfavourable finding with respect to § 5.2.1 d) of Article 5 of Appendix S30 (WRC-2000) and proceed accordingly.

2 With respect to the fifth indent of § 5.2.1 d), in the case of administrations of Region 2 the orbital position shall be examined to ensure compliance with the cluster concept (§ B of Annex 7 to Appendix S30 and § 4.13.1 of Annex 3 to Appendix S30A as follows:

- if the orbital position is identical with that shown in the Plan, no further agreements are necessary;

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<sup>12</sup> As appearing in the appropriate Plan or List, according to the case.

- however, if the orbital position is different from that contained in the Plan but it is in the same cluster, then only the agreement of administrations having assignments in the same cluster is necessary. The clusters are listed in the Attachment 1 to the present Rules of Procedure concerning Appendix S30. Appendices S30 and S30A do not contain any paragraph indicating the procedure to be followed for this agreement. The task of the Bureau in this respect is to ensure that the agreement of the administrations concerned is indicated in the notice; otherwise it considers the assignment to be not in conformity with the Plan.

3 See comments under No. S5.492.

#### 5.2.2.1

This paragraph implicitly relates to the cases where the Bureau reaches a favourable Finding with respect to § 5.2.1 *a*) and an unfavourable Finding with respect to § 5.2.1 *b*) but a favourable Finding with respect to § 5.2.1 *c*). In this event, the frequency assignment shall be recorded in the Master Register.

#### 5.2.2.2

Part of this paragraph deals with interim systems which are submitted in application of Resolution 42 (Rev.Orb-88) for Region 2.

In case of Regions 1 and 3, should the Bureau reach a favourable finding with respect to § 5.2.1 *a*) but an unfavourable Finding with respect to § 5.2.1 *b*) and 5.2.1 *c*), the assignments in question shall be returned immediately by airmail to the notifying administration with the reasons of the Bureau for this finding and with such suggestions as the Bureau may be able to offer with a view to a satisfactory solution of the problem.

#### 5.3.1

1 See item 2 in the comments under § 4.3.5 above.

2 For any notification other than that relating to the modification to the Plan, the date of bringing into use of assignments can be extended at the request of the notifying administration by no more than three years.

Nevertheless, the total period for the implementation (bringing into use) of the assignments whether or not the submission is received for both Appendices S30 and S30A shall be limited to 8 years.

See comments under § 4.3.5.

<b>An. 1</b>
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**Limits for determining whether a service of an administration is  
affected by proposed modifications to the Plan**

<b>1</b>
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*a) Test points*

1 In examining a proposed modification, all test points communicated to the Bureau by administrations are used. These test points are periodically published by the Bureau together with the updated reference situation of the Plan(s) and List(s).

*b) Implementation of the PFD Limit referred to in the first paragraph of Section 1 of Annex 1 to Appendix S30 (CWR-2000)*

1 The PFD limit of  $-103.6 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  which is indicated in the first paragraph of Section 1 of Annex 1 to Appendix S30 (CWR-2000) was established in order to protect BSS assignments from interference that may be caused by BSS networks located outside an arc of  $\pm 9^\circ$  around a wanted BSS network, under worst-case station-keeping conditions. Therefore, this PFD limit was intended to be considered as a hard-limit that shall not be exceeded.

2 In order for the Bureau to practically implement this provision in a reasonable time period, i.e. without having to capture and process the relevant Appendix S4 data, which is currently done several months after the data submission, the Board concluded that the PFD limit of  $-103.6 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  could be converted into two e.i.r.p. limits as follows:

2.1 “First e.i.r.p. limit”:

An e.i.r.p. value of 58.4 dBW, which corresponds to the maximum e.i.r.p. level below which the PFD limit is never exceeded, i.e. this e.i.r.p. value corresponds to a PFD value of  $-103.6 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  produced by a satellite pointing at its sub-satellite point (the shortest distance from the GSO to the Earth).

2.2 “Second e.i.r.p. limit”:

An e.i.r.p. value of 59.8 dBW, which corresponds to the minimum e.i.r.p. level above which the PFD limit is always exceeded, i.e. this e.i.r.p. value corresponds to a PFD value of  $-103.6 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  produced by a satellite pointing at the edge of the visible part of the Earth (the longest distance from the GSO to the earth).

3 The Board therefore decided that the PFD limit of  $-103.6 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  shall be implemented by the Bureau by checking the e.i.r.p. value of each assignment of a given network against the e.i.r.p. limits defined in § 2 above.

4 To this aim, the Board instructed the Bureau to apply the following course of action:

4.1 If the “first e.i.r.p. limit” of 58.4 dBW **is not exceeded** by any assignment of a given network, the PFD limit of  $-103.6 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  would be considered to be met.

4.2 If the e.i.r.p. value of at least one assignment of a given network exceeds the “second e.i.r.p. limit” of 59.8 dBW, the Bureau shall then consult with the Administration responsible for this network in order for it to reduce this e.i.r.p. value at least below 59.8 dBW and preferably below 58.4 dBW. This consultation would have to be carried out according to the Rules of Procedure on the Receivability of forms of notice, i.e. within the 30 + 15 days referred to in § 3.2 of these Rules.

Should the responsible Administration insist on keeping the original e.i.r.p. value(s) of the assignment(s) in question for this network, the assignment(s) would then be considered as exceeding the PFD limit referred to in the first paragraph of Section 1 of Annex 1 to Appendix S30 (CWR-2000) (i.e.  $-103.6 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$ ), and thus not being in conformity with Article 4 of Appendix S30 (CWR-2000). The assignment(s) would then be deleted from the network and the responsible Administration would be informed accordingly.

4.3 Otherwise, if the e.i.r.p. value of at least one assignment of a given network is in the range between both above-mentioned e.i.r.p. limits (i.e. 58.4 dBW and 59.8 dBW), the Bureau should proceed further with this network and study more deeply the conformity with the PFD limit of  $-103.6 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  at the time of the other regulatory and technical examinations.

Should it be found at that time that the assignment(s) in question exceed(s) the above-mentioned PFD limit, a Note would be included in the corresponding Special Section drawing the attention of the responsible administration to the need to take necessary action at the stage of Part B publication (application of § 4.1.12 of Appendix S30) to ensure that the e.i.r.p. level of the assignment(s) satisfies the PFD limit of  $-103.6 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$ , otherwise the assignment(s) shall be considered not to be in conformity with Article 4 of Appendix S30 (WRC-2000) and shall not be thus included in the List even if all other paragraphs of Article 4 were successfully applied.

5 The Board noted that considering the level of e.i.r.p. of current BSS satellite networks, this PFD limit was unlikely to be exceeded and therefore the Bureau might face a limited number of cases of this nature.

c) *Implementation of the PFD masks and EPM criterion referred to in sub-paragraphs a) and b) of Section 1 of Annex 1 to Appendix S30 (CWR-2000)*

1 In accordance sub-paragraphs a) and b) of Section 1 of Annex 1 to Appendix S30 (WRC-2000), an Administration, which has assignment(s) in the Plan, in the List or

assignment(s) for which the procedure of Article 4 of Appendix **S30** has already been initiated, is considered as affected by a proposed new or modified assignment in the List if all the following conditions are met:

- the orbital spacing between both assignments is less than 9°, under worst-case station-keeping conditions; and
- there is a frequency overlap between the bandwidths assigned to each assignment; and
- under assumed free-space propagation conditions, the PFD value derived from the appropriate PFD mask given in § a) of Section 1 of Annex 1 to Appendix **S30 (CWR-2000)** is exceeded at least at one of the test-points<sup>13</sup> of the wanted assignment; and
- the reference EPM of at least one of the test-points<sup>5</sup> of that wanted assignment falls more than 0.45 dB below 0 dB, or if already negative, more than 0.45 dB below that reference EPM value.

d) *Reference protection margin*<sup>14</sup>

1 The reference equivalent protection margin (EPM) values of:

- the assignments in the downlink or feeder-link Plans;
- the assignments in the downlink or feeder-link Lists;
- the assignments for which the procedure of Article 4 of Appendices **S30** or **S30A (CWR-2000)** has been initiated,

include the potential interference effects of the other assignments of the corresponding Plan and List, as established at WRC-2000, and those of the other assignments entered in the corresponding List after a successful application of the Article 4 procedure.

2 The reference EPM used as the basis for comparing the effect of a proposed new or modified assignment is that periodically published by the Bureau and updated once a new or modified assignment is entered in the corresponding List after a successful application of the Article 4 procedure.

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<sup>13</sup> In the case of a wanted assignment in the Plan, the test-points referred to in this paragraph are those defined in that Plan. In the case of a wanted assignment in the List or for which the procedure of Article 4 of Appendices **S30/S30A** has already been initiated, the test-points referred to in this paragraph are those provided under former Annex 2 to Appendices **S30/S30A** or under Appendix **S4**.

<sup>14</sup> An analysis carried out by the Radiocommunication Bureau has shown that the sensitivity to interference, in terms of being identified as affected, by networks received by the Bureau under Article 4 of Appendices **S30** and **S30A**, caused by subsequent proposed modifications to the Plan, decreases when those networks have a very low equivalent protection margin (EPM). In those cases where, because of the above phenomenon they are not identified as affected (the equivalent protection margin reduces by at least 0.45 dB) it is up to the administrations concerned to take necessary action, as appropriate.

7

The Board noted that the  $\Delta T/T$  criteria contained in this section which is to be used in conjunction with the calculation method of Appendix S8 is 4%. (In Appendix S8 this trigger limit is 6%.) In reviewing the footnote 3 of Appendix S8, the Board instructs the Bureau to continue to use 4% as the criteria for identification of affected administration.

**An. 4**

**Need for coordination of a transmitting space station in the fixed-satellite service or in the broadcasting-satellite service where this service is not subject to a Plan: in Region 2 (11.7-12.2 GHz) with respect to the Regions 1 and 3 Plan; in Region 1 (12.5-12.7 GHz) and in Region 3 (12.2-12.7 GHz) with respect to the Region 2 Plan**

(See Article 7)

#### **Clarification on the implementation of Annex 4 to Appendix S30**

1 The Board, in reviewing the implementation of the protection criteria and methods of Appendix S30, has identified that the text of Annex 4 to Appendix S30 (WRC-2000) requires further clarification or complementary information with regard to the implementation of the corresponding protection criteria and method for sharing between the services involved.

2 Annex 4 to Appendix S30 contains the PFD mask applicable to protect BSS receiving earth stations subject to a Plan or the List from FSS or BSS transmitting space stations not subject to a Plan nor the List. This PFD mask was not discussed thus not reviewed at WRC-2000.

3 The method described in this Annex refers to the calculation of “the power flux-density on the territory of an administration”. However, the Board is of the understanding that a BSS assignment in a Plan, in the List or for which the procedure of Article 4 of Appendices S30 has been initiated needs to be protected on the basis of its service area.

4 The Board also noted that Annex 4 to Appendix S30 (WRC-2000) does not contain a reference to the protection of Region 1 BSS assignments from Region 3 FSS assignments in the band 12.2-12.5 GHz. Therefore the Board decided that, to protect Region 1 BSS assignments from Region 3 FSS assignments in the band 12.2-12.5 GHz, the same limits already contained in this Annex shall be applied.

5 In addition to that and in order to allow the Bureau to practically verify the compliance with this PFD mask over the service area of the BSS assignments, the Board, in reviewing the subject matter in conjunction with the practices currently used by the Bureau, decided to instruct the Bureau to apply the following course of actions:

5.1 When the service area of the BSS assignment is defined by a contour, the Bureau will apply the same methodology as the one used for the protection of FSS systems, which is described in the Rule of Procedure AP30/former 4.3.1.5, paragraphs 2 *b*) and 3 *b*), i.e.:

An administration in Region 1 or Region 3 is identified among those whose agreement is required when, under assumed free-space propagation conditions, the power flux-density over any portion of the service area of the corresponding Region 1 or Region 3 BSS assignment resulting from the proposed Region 2 FSS assignment exceeds the limits prescribed in Annex 4 to Appendix S30.

An administration in Region 2 is identified among those whose agreement is required when, under assumed free-space propagation conditions, the power flux-density over any portion of the service area of the corresponding Region 2 BSS assignment resulting from the proposed Region 1 or Region 3 FSS assignment or proposed Region 3 BSS assignment not subject to a Plan or the List exceeds the limits prescribed in Annex 4 to Appendix S30.

An administration in Region 1 is identified among those whose agreement is required when, under assumed free-space propagation conditions, the power flux-density over any portion of the service area of the corresponding Region 1 BSS assignment resulting from the proposed Region 3 FSS assignment exceeds the limits prescribed in Annex 4 to Appendix S30.

5.2 In the absence of available service area contour of the BSS assignment, the methodology described in § 5.1 above will be applied but instead of verifying the power flux-density compliance over any portion of the service area, it will be verified at each of the BSS test-points associated with the service area of the corresponding BSS assignment.

<b>An. 5</b>
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**Technical data used in establishing the plan and which should  
be used for their application**

<b>3.5.1 and 3.8</b>
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These sections govern the channel spacing between the assigned frequencies of two adjacent channels and the necessary bandwidth values for systems in the Plans for Regions 1, 2 and 3. They also state that if different frequency spacing and/or bandwidths are submitted, they will be treated in accordance with applicable ITU-R Recommendations for protection masks when available. "In the absence of such Recommendations, the Bureau will use the worst-case approach as adopted by the Radio Regulations Board."

Noting that available ITU-R Recommendations provide only a method for calculation of interference between assignments using different channelling and bandwidth in the case of a digital interferer, the Board therefore decided that, as an interim measure, until the applicable ITU-R Recommendations for protection masks/calculation method are available the calculation methods shown in the Table 1 shall be applied when calculating interference between two assignments in the Plans and/or modifications to Plans:

TABLE 1

Wanted assignment	Interfering assignment	Method to be applied
"Standard" <sup>1</sup> analogue	"Standard" analogue	As defined in Annex 5 to Appendix S30
"Non-standard" analogue	"Standard" analogue	As described in the Bureau's internal Rule relating to MSPACE Manual
"Standard" analogue	"Non-standard" analogue	As described in the Bureau's internal Rule relating to MSPACE Manual
"Non-standard" analogue	"Non-standard" analogue	As described in the Bureau's internal Rule relating to MSPACE Manual
Digital	"Standard" or "non-standard" analogue	As described in the Bureau's internal Rule relating to MSPACE Manual
"Standard" or "non-standard" analogue	Digital	As defined in Recommendation ITU-R BO.1293 <sup>2</sup>
Digital	Digital	As defined in Recommendation ITU-R BO.1293 <sup>2</sup>

<sup>1</sup> Standard analogue assignments are those assignments which use the following parameters:

- For Regions 1 and 3: 27 MHz bandwidth, 19.18 MHz channel spacing and the assigned frequencies as specified in Article 11 of Appendix S30.
- For Region 2: 24 MHz bandwidth, 14.58 MHz channel spacing and the assigned frequencies as specified in Article 10 of Appendix S30.

<sup>2</sup> Although Recommendation ITU-R BO.1293-1 is referred to in § 3.4 of Annex 5 to Appendix S30 and § 3.3 of Annex 3 to Appendix S30A, Recommendation ITU-R BO.1293 continues to apply until a new version is available, which will contain the necessary elements to deal with some "new" characteristics of the assignments included in the WRC-2000 Plans.

### 3.11

Section 3.11 of Annex 5 to Appendix S30 describes the space station keeping accuracy under which the space stations operating in the broadcasting satellite services must be maintained.

In the absence of applicable ITU-R Recommendations describing how these limitations should be implemented in the compatibility analyses performed by the Bureau, the Radio Regulation Board (RRB) decided that the Bureau should develop the appropriate methodology for the application of this section.

**ATTACHMENT 1**  
**Clusters for Region 2**

Column No.	Designation
1	Cluster (degree)
2	Number of beams in the cluster
3	Administration names and orbital position

## CLUSTERS FOR REGION 2

1	2	3							
-175.00	8	ALS00003	HWA00003	HWA01003	USAPSA03	ALS00003	HWA00003	USAPSA03	HWA01003
		-175.2	-175.2	-175.2	-175.2	-174.8	-174.8	-174.8	-174.8
-166.00	8	ALS00002	HWA00002	HWA01002	USAPSA02	ALS00002	HWA00002	USAPSA02	HWA01002
		-166.2	-166.2	-166.2	-166.2	-165.8	-165.8	-165.8	-165.8
-157.00	2	USAWH102	USAWH102						
		-157.2	-156.8						
-148.00	2	USAWH101	USAWH101						
		-148.2	-147.8						
-138.00	8	CAN01101	CAN01201	CAN02101	CAN02201	CAN01101	CAN01201	CAN02101	CAN02201
		-138.2	-138.2	-138.2	-138.2	-137.8	-137.8	-137.8	-137.8
-136.00	2	MEX02NTE	MEX02NTE						
		-136.2	-135.8						
-131.00	1	CTR00201							
		-130.8							
-129.00	12	CAN01203	CAN01303	CAN01403	CAN02203	CAN02303	CAN02403	CAN01203	CAN01303
		-129.2	-129.2	-129.2	-129.2	-129.2	-129.2	-128.8	-128.8
		CAN01403	CAN02203	CAN02303	CAN02403				
		-128.8	-128.8	-128.8	-128.8				
-127.00	2	MEX02SUR	MEX02SUR						
		-127.2	-126.8						
-121.00	1	PNRIFRB2							
		-121.0							
-119.00	2	USAEH004	USAEH004						
		-119.2	-118.8						
-116.00	3	BLZ00001	CYM00001	TCA00001					
		-115.8	-115.8	-115.8					
-115.00	6	BOLAND01	CLMAND01	EQACAND1	EQAGAND1	PRUAND02	VENAND03		
		-115.2	-115.2	-115.2	-115.2	-115.2	-115.2		
-110.00	4	PTRVIR02	USAEH003	PTRVIR02	USAEH003				
		-110.02	-110.2	-109.8	-109.8				

CLUSTERS FOR REGION 2 (continuation)

1	2	3							
-107.50	4	GTMIFRB2	HNDIFRB2	NCG00003	SLVIFRB2				
		-107.3	-107.3	-107.3	-107.3				
-106.00	5	CHLCONT5	CHLPAC02	PAQPAC01	CHLCONT4	CHLCONT6			
		-106.2	-106.2	-106.2	-105.8	-105.8			
-104.00	2	VEN02VEN	VEN11VEN						
		-103.8	-103.8						
-103.00	1	CLM00001							
		-103.2							
-102.00	1	B SE911							
		-101.8							
-101.00	4	PTRVIR01	USAEH002	PTRVIR01	USAEH002				
		-101.2	-101.2	-100.8	-100.8				
-99.00	1	PRG00002							
		-99.2							
-96.00	1	BERBERMU							
		-96.2							
-95.00	2	EQAC0001	EQAG0001						
		-94.8	-94.8						
-94.00	3	ARGINSU4	ARGSUR04	ARGNORT4					
		-94.2	-94.2	-93.8					
-92.50	7	BRB00001	JMC00002	CRBBAH01	CRBBER01	CRBBLZ01	CRBEC001	CRBJMC01	
		-92.7	-92.7	-92.3	-92.3	-92.3	-92.3	-92.3	
-91.00	12	CAN01304	CAN01404	CAN01504	CAN02304	CAN02404	CAN02504	CAN01304	CAN01404
		-91.2	-91.2	-91.2	-91.2	-91.2	-91.2	-90.8	-90.8
		CAN01504	CAN02304	CAN02404	CAN02504				
		-90.8	-90.8	-90.8	-90.8				
-89.00	1	CUB00001							
		-89.2							
-87.00	2	BAHIFRB1	BOL00001						
		-87.2	-87.2						

## CLUSTERS FOR REGION 2 (continuation)

1	2	3							
-86.00	1	PRU00004							
		-85.8							
-84.50	3	GUY00201	SURINAM2	TRD00001					
		-84.7	-84.7	-84.7					
-83.50	2	DOMIFRB2	HTI00002						
		-83.3	-83.3						
-82.00	12	CAN01405	CAN01505	CAN01605	CAN02405	CAN02505	CAN02605	CAN01405	CAN01505
		-82.2	-82.2	-82.2	-82.2	-82.2	-82.2	-81.8	-81.8
		CAN01605	CAN02405	CAN02505	CAN02605				
		-81.8	-81.8	-81.8	-81.8				
-81.00	4	B SU111	B SU211	B SU111	B SU211				
		-81.2	-81.2	-80.8	-80.8				
-79.50	8	ATGSJN01	MSR00001	SCN00001	VRG00001	DMAIFRB1	GRD00003	LCAIFRB1	VCT00001
		-79.7	-79.7	-79.7	-79.7	-79.3	-79.3	-79.3	-79.3
-78.00	2	MEX01NTE	MEX01NTE						
		-78.2	-77.8						
-74.00	6	B N0611	B N0711	B N0811	B N0611	B N0711	B N0811		
		-74.2	-74.2	-74.2	-73.8	-73.8	-73.8		
-72.50	4	CAN01202	CAN02202	CAN01202	CAN02202				
		-72.7	-72.7	-72.3	-72.3				
-71.50	1	URG00001							
		-71.7							
-70.50	4	CAN01606	CAN02606	CAN01606	CAN02606				
		-70.7	-70.7	-70.3	-70.3				
-69.00	1	MEX01SUR							
		-69.2							
-64.00	6	B CE311	B CE411	B CE511	B CE311	B CE411	B CE511		
		-64.2	-64.2	-64.2	-63.8	-63.8	-63.8		
-61.50	2	USAEH001	USAEH001						
		-61.7	-61.3						

CLUSTERS FOR REGION 2 (end)

1	2	3									
-57.00	2	FLKANT01	GRD00059								
		-57.2	-57.2								
-55.00	3	ARGINSU5	ARGSUR05	ARGNORT5							
		-55.2	-55.2	-54.8							
-53.00	4	GRLDNK01	SPMFRAN3	ATNBEAM1	GUFMGG02						
		-53.2	-53.2	-52.8	-52.8						
-45.00	8	B CE312	B CE412	B SU112	B SU212	B CE312	B CE412	B SU112	B SU212		
		-45.2	-45.2	-45.2	-45.2	-44.8	-44.8	-44.8	-44.8		
-42.00	1	GRD00002									
		-42.2									
-34.00	2	GUY00302	JMC00005								
		-33.8	-33.8								
-31.00	2	BERBER02	FLKFALKS								
		-31.0	-31.0								

## **Rules concerning**

### **APPENDIX S30A to the RR**

(Rules are arranged by paragraph numbers of Appendix S30A)

#### **Art. 2**

### **Frequency bands**

#### **2.2**

1           The Board, in reviewing § 2.2 of Article 2 of Appendices **S30/S30A (WRC-2000)**, decided to instruct the Bureau to proceed as follows:

2           Space operations functions in the guardbands of Appendices **S30/S30A** will be processed within the regulatory framework of Appendices **S30/S30A (WRC-2000)** without a need to publish an advance publication information, i.e. administration would initiate the coordination procedure under No. **S9.7** by submitting the coordination data. The regulatory time limit for bringing into use any assignments in the guardbands will be same as that for planned BSS/Feeder link assignments i.e. 8 years from the date on which the complete information is received by the Bureau for modification and/or inclusion of new assignments in the List for Regions 1 and 3 (§ 4.1.3) and/or modification to the Region 2 Plan (§ 4.2.6) of Article 4 of both Appendices **S30** and **S30A (WRC-2000)**.

3           For the use of the guardbands of the Appendices **S30/S30A** for space operations functions for the initial Plan, the 8 year regulatory time limit will apply and will be counted from the date on which the complete Appendix **S4** data is received by the Bureau for these guardbands.

4           This implies that the coordination and notification procedure for the use of the guard bands should be applied at the same time as the respective coordination and notification of the associated main BSS networks.

5           Protection Criteria and Calculation Methods to be used for the implementation of § 2.2 to Article 2 of Appendix **S30A**,

5.1          WRC-2000 included in the new § 2.2 of Article 2 to Appendix **S30A** the regulatory provisions to coordinate assignments intended to provide space operation functions in the guardbands of the Appendix **S30A** frequency bands with other services using the same bands. However, WRC-2000 did not refer explicitly to the protection criteria and calculation methods, which shall be applied to implement these new provisions.

5.2 In view of the above and until the time that the relevant ITU-R Recommendation is available, the Board instructed the Bureau to use the protection criteria and calculation methods associated with the provisions referred to in § 2.2 of Article 2 to Appendix **S30A**.

<b>Art. 4</b>
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### **Procedure for modification to the Plans**

<b>4.1.1 a)</b>
<b>4.1.1 b)</b>

1 In determining those administrations of Regions 1 and 3 that may be affected, the proposed new or modified assignment to the List is examined with respect to the Regions 1 and 3 Plan and List as they exist at the date of receipt of the proposed new or modified assignment to the List, including the other proposed new or modified assignments to the List received before that date (whether the procedure of Article 4 is complete or not). The examination consists of ensuring that the limits of Section 4 of Annex 1 of Appendix **S30A** are not exceeded. Account is also taken of any time-limited new or modified assignments to the List in accordance with § 4.1.13.

2 Following the introduction by 1983 Conference of the grouping concept for Region 2 (Articles 9 and 10 of Appendices **S30A** and **S30** respectively) and further to the decision of WARC Orb-88 to apply the grouping concept to the Regions 1 and 3 feeder-link Plan (Article 9A of Appendix **S30A**), the IFRB decided to extend this concept to the 1977 Conference BSS Plan. WRC-2000 endorsed this decision and decided to include the same grouping concept definition in Articles 11 and 9A of Appendices **S30** and **S30A** respectively. On the other hand, the cluster concept was introduced by 1983 Conference for Region 2 for BSS and associated feeder-links (§ B of Annex 7 of Appendix **S30**, § 4.13 of Annex 3 of Appendix **S30A**) and for Regions 1 and 3 by WARC Orb-88 for feeder-links (§ 3.15 of Annex 3 of Appendix **S30A**). The IFRB decided that Regions 1 and 3 could also apply this concept for the BSS Plan provided that the required agreement is obtained from administrations in the cluster. See also the Rules of Procedure relating to § 3.15 of Annex 3 of Appendix **30A**.

3 The Board's understanding of the group concept is that in the interference calculation to assignments that are part of the group, only the interference contribution from assignments that are not part of the same group are to be considered. On the other hand, for the interference calculation from assignments belonging to a group into assignments that are not part of the same group, only the worst interference contribution from that group is to be taken into consideration.

For the Regions 1 and 3 feeder-link Plans and Lists, the Board did not find any regulatory basis to extend the use of multiple orbital positions for networks involving grouping beyond those cases which were accepted by WRC-2000 and included in the revised Regions 1 and 3 feeder-link Plans and in the WRC-2000 feeder-link Lists.

For the Region 2 Plan, the Board did not find any regulatory basis to extend the use of groupings involving multiple orbital positions (except for the case of 0.4° orbital separation which was allowed for clusters within the Region 2 Plan and its subsequent modifications).

#### 4.1.1 c)

In determining those administrations of Region 2 that may be affected, the proposed new or modified assignment to the 17 GHz Regions 1 and 3 List is examined with respect to the Region 2 Plan as it exists at the date of receipt of the proposed new or modified assignment including the proposed modifications of the Region 2 Plan received before that date (whether the procedure of Article 4 is complete or not). The examination will consider only those administrations having assignments whose necessary<sup>1</sup> bandwidth overlaps the necessary<sup>1</sup> bandwidth of the proposed new or modified assignment to the 17 GHz Regions 1 and 3 List. The Region 2 administration is identified as having services which are considered to be affected when the limits specified in Section 5 of Annex 1 to Appendix S30A are exceeded.

#### 4.1.3

<sup>1</sup> Appendix S30A contains assignment Plans with beams covering only a territory or a part of a territory, which leads one to conclude that the usual wording used in similar paragraphs “or an administration on behalf of a group of named administrations” is not necessary. However, it is to be noted that some beams have been included in both Plans or in the Lists for some groups of named administrations. Consequently the Board decided that the Bureau shall accept the application of the procedure of Article 4 for a modification of the Region 2 Plan or a proposed new or modified assignment in the Regions 1 and 3 feeder-link Lists of additional uses by an administration on behalf of other named administrations<sup>2</sup>.

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<sup>1</sup> In the absence of a clear indication of the precise frequency of each carrier within the assigned frequency band, the Bureau uses in its analysis the assigned frequency band (i.e. data item C.3.a of Annex 2A of Appendix S4) instead of the necessary bandwidth (i.e. data item C.7.a of Annex 2A of Appendix S4).

<sup>2</sup> Whenever, under this provision, an administration acts on behalf of a group of named administrations, all members of the group retain the right to respond in respect of their own services which could affect or be affected by the proposed assignment.

2 Paragraph 4.2.6 of Appendix S30A states that modifications to the Region 2 Plan submitted under § 4.2.1 b) shall lapse if the assignment is not brought into use by the date indicated. There is no mention about the modifications submitted under § 4.2.1 a) of Article 4 of Appendix S30A which should logically be treated in the same manner. The Board therefore decided that:

2.1 Modifications to the Region 2 Plan submitted under § 4.2.1 a) and 4.2.1 b) of Article 4 of Appendix S30A shall lapse if the assignment is not brought into use within the envelope of the characteristics as coordinated and published under § 4.2.19 of this Appendix by the notified date on which they were to be brought into use.

2.2 During the 8-year regulatory period, both the initial assignment and the modified assignment submitted under § 4.2.1 a) shall be protected until the modified assignment is brought into use. In cases where a modification made under § 4.2.1 a) is consequently suppressed from the Plan, the original Plan entry which was concerned with the lapsing modification shall be maintained.

3 In the event that the Bureau cancels a frequency assignment in application of § 5.3.2 of Article 5 of this Appendix, the corresponding assignment, which has been submitted either under § 4.2.1 b) and entered in the Region 2 Plan, or under § 4.1 and entered in the Regions 1 and 3 List(s), shall also be removed from the Plan or the List(s) according to the case. The Bureau does not need to recalculate the affected administration(s) as result of the above-mentioned cancellation.

4 See also Rules of Procedure concerning Receivability of the Forms of Notice.

#### 4.1.7

Any request by an administration to be included in the list of administrations to be published shall be based only on technical reasons to be verified using Annex 1 as well as other relevant Annexes. If this indicates that the requesting administration should have been included in the list, the Bureau will include it; otherwise the requesting administration will be informed that its name will not be published, it being left to the notifying administration to consider if it is appropriate to take the request into account.

#### 4.1.8

An administration which has only requested additional information in accordance with § 4.1.8 or § 4.2.12 will not be considered by the Bureau to have submitted comments in accordance with § 4.1.10 or § 4.2.14 respectively.

#### **4.1.10**

This paragraph specifies that, an administration that has not notified its comment within four months (from the publication date of the special section) shall be understood to have agreed to the proposed modifications. The Board considered the adverse effect of such missing replies and decided that the Bureau shall send reminder telegrams 30 days before the expiry of the above four month period.

#### **4.1.11**

See also comments under § 4.1.3 and 4.2.6 and Rules relating to the Receivability of Forms of Notice.

#### **4.1.15**

The second part of these paragraphs applies only to those assignments for which the procedure of Article 4 has been successfully applied, i.e., all administrations identified by the Bureau in application of § 4.1.5 or 4.2.8 and § 4.1.7 or 4.2.10 have either given their agreement or failed to comment on the proposed new or modified assignment to the Regions 1 and 3 feeder-link List(s) or on the proposed modification to the Region 2 Plan.

The Bureau shall update the Reference Situation of the Regions 1 and 3 feeder-link Plan(s) and List(s) or of the Region 2 Plan entries and of those networks which are the subject of requests for new or modified assignment to the Regions 1 and 3 feeder-link List(s) or for Region 2 Plan modifications which are still at the stage of application of Article 4. Nevertheless, the Bureau does not need to recalculate the affected administration(s) as result of the above-mentioned update.

#### **4.1.23**

If the assignments in question were deleted from the Regions 1 and 3 feeder-link List(s) or the Region 2 Plan, the Bureau shall update the Reference Situation of the assignments in the Regions 1 and 3 feeder-link Plan(s) and List(s) or in the Region 2 Plan and of the assignments under Article 4 procedure and inform all administrations of the action taken together with Special Sections published as result of cancellation of frequency assignments from the Regions 1 and 3 feeder-link List(s) or the Region 2 Plan. The Bureau does not need to recalculate the affected administration(s) as result of the above-mentioned cancellation.

#### **4.2.1 a)**

This paragraph refers to the modification in the sense of a change to “the characteristics of any of its frequency assignments in the fixed-satellite service which are shown in the Region 2 feeder-link Plan”. The Plan as it appears in Article 9 contains only eight characteristics, while Annex 2 contains a greater number of characteristics which were used

by the RARC-SAT-R2 (Geneva, 1983) conference to establish the Plan. The Board considers that modifications of characteristics other than those listed in Article 9 may be considered as modifications to the Plan. These other characteristics are listed in the Rules of Procedure relating to § 5.2.1 *b*) of Article 5.

See also Rules of Procedure relating to § 4.2.6.

**4.2.1 *b*)**

See Rules of Procedure relating to § 4.2.1 *a*) above.

See also Rules of Procedure relating to § 4.2.6.

**4.2.1 *c*)**

When an administration cancels an assignment from the Region 2 Plan under this paragraph, or when the Bureau, in applying § 4.2.6 deletes an assignment from the Plan, the Reference Situation of the Plan assignments and those in the process of modification would be updated. The Bureau does not need to recalculate the affected administration(s) as result of the above-mentioned cancellation.

**4.2.2 *a*)  
and 4.2.2 *b*)**

In determining the administrations of Regions 1 and 3 that might be affected, the proposed modification of the Region 2 Plan is examined with respect to the 17 GHz Regions 1 and 3 Plan and List as it exists at the date of receipt of the proposed modification including all proposed new or modified assignments to the 17 GHz Regions 1 and 3 List received before that date (whether the procedure of Article 4 is complete or not). The examination will identify only those administrations having assignments whose necessary<sup>3</sup> bandwidth overlaps the necessary<sup>3</sup> bandwidth of the proposed modification of the Region 2 Plan. An administration is identified as having services which may be affected when the limits specified in Section 5 of Annex 1 to Appendix **S30A** are exceeded.

**4.2.2 *c*)**

1 In determining those administrations of Region 2 that may be affected, the proposed modification is examined with respect to the Region 2 Plan as it exists at the date of receipt of the request for modification including the proposed modifications received before that date (whether the procedure of Article 4 is complete or not). The examination consists of ensuring that the limits of Section 3 of Annex 1 of Appendix **S30A** are not exceeded. Account is also taken of any time-limited modifications to the Plans in accordance with § 4.2.17.

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<sup>3</sup> In the absence of a clear indication of the precise frequency of each carrier within the assigned frequency band, the Bureau uses in its analysis the assigned frequency band (i.e. data item C.3.a of Annex 2A of Appendix **S4**) instead of the necessary bandwidth (i.e. data item C.7.a of Annex 2A of Appendix **S4**).

2 According to Resolution **42 (Rev.Orb-88)**, the Board decided that, when applying this paragraph, the Bureau shall not take account of the interim systems.

3 For considerations related to application of the Group concept see Rules of Procedure related to § 4.1.1 *a)* and 4.1.1 *b)*.

#### **4.2.6**

See the Rules of Procedure relating to § 4.1.3.

#### **4.2.10**

See the Rules of Procedure relating to § 4.1.7.

#### **4.2.11**

The agreement referred to in this paragraph is the agreement of the administrations identified under § 4.2.2 and of those under § 4.2.10 which have been confirmed by the Bureau using the appropriate criteria.

#### **4.2.12**

See the Rules of Procedure relating to § 4.1.8.

#### **4.2.14**

See the Rules of Procedure relating to § 4.1.10.

#### **4.2.15**

See the Rules of Procedure relating to § 4.1.11.

#### **4.2.19**

See the Rules of Procedure relating to § 4.1.15.

#### **4.2.24**

See the Rules of Procedure relating to § 4.1.23.

<b>Art. 5</b>
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## **Notification, examination and recording**

<b>Scope of application</b>
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1 In revising the Appendix **S30A** feeder-link Plans for Regions 1 and 3, WRC-2000 has excluded from the procedure of Article 4 of Appendix **S30A** the coordination of the specific or typical transmitting earth stations with respect to receiving FSS earth stations operating in the opposite direction of transmission, as well as with respect to terrestrial stations. This coordination should now be undertaken by the notifying administration directly with the other concerned administrations with respect to terrestrial stations and receiving FSS/BSS earth stations operating in the opposite direction of transmission, in accordance with the relevant/corresponding provisions of Article **S9** of the Radio Regulations.

2 In view of the above, the Board concluded that the notification procedure of Appendix **S30A** and the scope of application of Article 5 to that Appendix, shall be clarified as follows:

3 At the stage of the notification of assignments included in an appropriate Regional Plan, or of assignments included in the List(s) after a successful coordination under Article 4 of Appendix **S30A**, according to the case, the notifying administration shall request the application of Article 5 of Appendix **S30A** only for the part of these assignments related to the receiving space station and the associated typical transmitting earth station(s) with respect to other space stations of other assignments.

4 As mentioned in footnote 10 to the title of Article 5 of Appendix **S30A** (**WRC-2000**), for the notification of specific transmitting earth station(s) associated to a receiving space station, the notifying administration shall request the application of Article **S11**.

<b>5.2.1 b)</b>
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1 The Board has considered the question whether the examination with respect to conformity with the Plan means only the columns of Articles 9 and 9A of Appendix **S30A**, as updated or whether it also includes an examination with respect to the technical criteria given in Annex 3 to Appendix **S30A** which were used for the establishment of the Plans. The Board concluded that some of the technical criteria contained in Annex 3 need to be taken into account in this examination. Therefore, the examination from the viewpoint of conformity with the Plan is carried out in two steps:

a) to ensure that the characteristics notified are those specified in the columns of the Plan concerned as updated (see § 3.1 of Article 3). If the characteristics are different then the examination under § 5.2.1 c) is carried out. For the items below, any characteristics for which the procedure of Article 4 has been successfully applied could be notified.

b) to ensure that the protection criteria resulting from the Plan<sup>4</sup> are not exceeded. To this effect, the following characteristics are examined:

i) For a receiving space station:

- space station beam identification (as indicated in columns 1 and 2 of Articles 9 and 9A respectively of Appendix S30A);
- nominal orbital position (as indicated in columns 2 and 3 of Articles 9 and 9A respectively of Appendix S30A);
- channel number/frequency (as indicated in column 3 of Article 9 and columns 4 and 5 of Article 9A of Appendix S30A);
- boresight coordinates (as indicated in columns 4 and 6 of Articles 9 and 9A respectively of Appendix S30A);
- in the case of elliptical beam:
  - antenna beamwidth (as indicated in columns 5 and 7 of Articles 9 and 9A respectively of Appendix S30A);
  - ellipse orientation (as indicated in columns 6 and 7 of Articles 9 and 9A respectively of Appendix S30A);
  - antenna rotational accuracy (same as or better than § 3.7.4 (Regions 1 and 3) or 4.6.4 (Region 2) of Annex 3 to Appendix S30A);
- polarization (as indicated in columns 7 and 12 of Articles 9 and 9A respectively of Appendix S30A);
- service area (test points shall be located within the service area);
- class of emission and bandwidth (as indicated in column 15 of Article 9A in the case of Regions 1 and 3 Plan of Appendix S30A, or otherwise as indicated in § 3.1 and 3.8 of Annex 5 to Appendix S30);
- antenna characteristics (same as or better than those indicated in columns 8 or 9 as appropriate of Article 9A of Appendix S30A in the case of Regions 1 and 3 Plan, or otherwise same as or better than § 4.6 of Annex 3 to Appendix S30A);
- antenna pointing accuracy (same as or better than § 3.7.4 (Regions 1 and 3) or § 4.6.4 (Region 2) of Annex 3 to Appendix S30A);
- system noise temperature (see § 3.8 (Regions 1 and 3) and § 4.7 of Annex 3 to Appendix S30A as appropriate);
- station keeping tolerance (same as or better than that of § 3.16 of Annex 3 to Appendix S30A);
- modulation characteristics (same as in column 15 of Article 9A of Appendix S30A in the case of the Regions 1 and 3 Plan, or otherwise as indicated in § 3.1 of Annex 5 to Appendix S30);

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<sup>4</sup> Any time the “Plan” is referred to, this means the current version of the Plan as updated on the date of Bureau’s examination.

- range of automatic gain control (same as § 3.10 of Annex 3 to Appendix S30A for Regions 1 and 3, and 4.9 of the same Annex for Region 2).

ii) For a transmitting earth station:

The examination of a notice of a frequency assignment to an earth station under this paragraph use the characteristics mentioned below or those for which the Article 4 procedure was successfully applied. In regard to the rules that the Bureau shall apply in processing frequency assignments to earth stations, the uncertainties originate from the reference in several paragraphs to “the characteristics appearing in the Plan”, although the Plan contains only the earth station e.i.r.p. (Column 8 identical for all the entries) for Region 2 Plan and earth station e.i.r.p. and power control for Regions 1 and 3 Plan (Columns 13 and 14). In order to alleviate these uncertainties, the Board decided that the Bureau shall consider as “characteristics appearing in the Plan” those characteristics used for the establishment of the Plan as indicated in Annex 3 to this Appendix. As a result of the above, whenever a paragraph of Appendix S30A refers to the characteristics of earth stations appearing in the Plan, the following characteristics will be used for Regions 1 and 3 or Region 2, as appropriate:

- e.i.r.p.: Columns 8 and 13 of Articles 9 and 9A respectively of Appendix S30A;
- antenna diameter: § 3.5.1 or 4.4.1 of Annex 3 to Appendix S30A;
- reference patterns: Fig. 6 or Fig. A of Annex 3 to Appendix S30A (as indicated in Column 11 of Article 9A of Appendix S30A for the Regions 1 and 3 Plan);
- transmit power: § 3.6 or 4.5 of Annex 3 to Appendix S30A;
- in the case of a fixed feeder-link earth station:
  - its geographical coordinates within the service area,
  - elevation angle of the horizon around the earth station;
- in the case of a typical earth station:
  - the location of the earth station to be associated with test points within the service area,
  - elevation angle of the horizon around the earth station is assumed to be zero;
- energy dispersal (same as § 3.18 of Annex 5 to Appendix S30).

In relation to the transmitting power, the Board noted that according to § 3.11 and 4.10 of Annex 3 to Appendix S30A, the use of power control shall remain within the limits indicated in those paragraphs.

#### 5.2.1 d)

1 If an administration notifies any assignment with characteristics different from those listed in § 1 b) of the Rules of Procedure related to § 5.2.1 b) of Article 5 of Appendix S30A, and those allowed in § 5.2.1 d) of the same Article, a calculation is undertaken by the Bureau to determine if the proposed new characteristics would increase the interference level caused to other assignments in the appropriate Regional Plan, in the Regions 1 and 3 List(s), in the same service of an inter-regional Plan or in an other service sharing the same frequency bands.

1.1 With respect to the compatibility of the proposed new characteristics with other assignments of the same Regional Plan and List, as appropriate, the increase of the interference will be checked by comparing the EPM/OEPM values of these other assignments, which are resulting from the proposed new characteristics on the one hand, and those obtained with the previous<sup>5</sup> characteristics of the network in question on the other hand. These EPM/OEPM calculations are performed under the same technical assumptions and conditions taking into account the orbital separation limit of  $\pm 9^\circ$  for assignments in the Regions 1 and 3 Plan and List. A more detailed analysis of the interference situation could also be required by using single entry C/I values in order to identify the assignments of the network in question which are causing the increase of the interference.

In addition, in the case of Regions 1 and 3, the notified assignments with new characteristics for the network in question are examined with respect to their compliance with the PFD hard-limit defined in Section 4 of Annex 1 to Appendix S30A, or, as the case may be, with respect to their compliance with the PFD level of the corresponding assignments in the Plan(s) or in the List(s) if those assignments were adopted by WRC-2000 with PFD level(s) higher than the above-mentioned PFD hard-limit.

1.2 With respect to the compatibility with other inter-regional assignments in the same service or assignments in other service sharing the same frequency bands, as appropriate, the increase of the interference will be checked by calculating the  $\Delta T/T$  value, according to the case, produced by the proposed new characteristics at any test-point or within the service area of the other assignments, according to the case, and by comparing the resulting  $\Delta T/T$  values, according to the case, with those obtained with the previous<sup>3</sup> characteristics of the subject assignment.

1.3 Should the results of the calculations described in § 1.1 and 1.2 above indicate that the proposed new characteristics increase the interference to other assignments, the Bureau would reach an unfavourable finding with respect to § 5.2.1 d) of Article 5 of Appendix S30A (WRC-2000) and proceed accordingly.

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<sup>5</sup> As appearing in the appropriate Plan or List, according to the case.

2 With respect to the fourth indent of § 5.2.1 *d*), in the case of administrations of Region 2, the orbital position shall be examined to ensure compliance with the cluster concept (§ B of Annex 7 to Appendix S30 and § 4.13.1 of Annex 3 to Appendix S30A as follows:

- if the orbital position is identical with that shown in the Plan, no further agreements are necessary;
- however, if the orbital position is different from that contained in the Plan but it is in the same cluster, then the agreement of administrations having assignments in the same cluster is necessary. The clusters are listed in the Attachment 1 to the Rules of Procedure concerning Appendix S30. Appendices S30 and S30A do not contain any paragraph indicating the procedure to be followed for the above-mentioned agreement. The task of the Bureau in this respect is to ensure that the agreement of the administrations concerned is indicated in the notice; otherwise it considers the assignment to be not in conformity with Plan.

3 With respect to the fifth indent of § 5.2.1 *d*), in the case of administrations of Regions 1 and 3, the use of an orbital position not coincident with that appearing in the Plan(s) or the List(s) would require, as other major changes of the characteristics, to seek the agreement of the administrations having assignments identified as affected by this change (see also the comments made under the Rules of Procedure concerning Section 3.15 of Annex 3 to Appendix S30A (WRC-2000)).

4 With respect to footnote 11 to the fifth indent of § 5.2.1 *d*), see paragraph 3 above.

#### 5.2.2.1

This paragraph implicitly relates to the cases where the Bureau reaches a favourable finding with respect to § 5.2.1 *a*) and § 5.2.1 *e*) and an unfavourable finding with respect to § 5.2.1 *b*) but a favourable finding with respect to § 5.2.1 *c*). In this event the frequency assignment shall be recorded in the Master Register.

#### 5.2.2.2

Part of this paragraph deals with interim systems which are submitted in application of Resolution 42 (Rev.Orb-88) for Region 2.

In case of Regions 1 and 3, should the Bureau reach a favourable finding with respect to § 5.2.1 *a*) but an unfavourable finding with respect to § 5.2.1 *b*) and § 5.2.1 *c*), the assignments in question shall be returned immediately by airmail to the notifying administration with the reasons of the Bureau for this finding and with such suggestions as the Bureau may be able to offer with a view to a satisfactory solution of the problem.

### 5.3.1

1 See § 2 in the comments under § 4.2.5 above.

2 For any notification other than that relating to the modification to the Plan, the date of bringing into use of assignments can be extended at the request of the notifying administration by no more than three years.

Nevertheless, the total period for the implementation (bringing into use) of the assignments whether or not the submission is received for both Appendices **S30** and **S30A** shall be limited to 8 years.

See comments under § 4.2.5.

## Art. 6

### **Coordination, notification and recording of receiving terrestrial assignments when FSS feeder-links are involved**

#### 6.1

1 The paragraphs of Article 6 do not mention interim systems implemented in accordance with Resolution **42 (Rev.Orb-88)**. Such systems may be implemented in the following frequency bands shared with equal rights with terrestrial services:

- 17.7-17.8 GHz for Region 2; and
- (through application of Resolution **519 (Orb-88)** and Article 4) 14.5-14.8 GHz and 17.7-18.1 GHz for Regions 1 and 3.

Such usage may affect terrestrial stations.

2 This paragraph refers to “the closest feeder-link earth station located on the border of the territory of another administration”. This earth station is to be considered a typical earth station located at the worst location.

3 In order to evaluate the interference, an Administration A, intending to use terrestrial stations, needs to know the fixed-earth station existing or planned. In order to take them into account administrations may calculate the coordination area as indicated in § 7 of Appendix **S7** around a service area as referred to in the comments under § 4.2.1.3.

#### 6.2

1 This paragraph refers to the need for an Administration B to communicate the actual location of its feeder-link earth stations without specifying which of these earth stations should be taken into account. As no indication is given, the Board understands that the administration may communicate the locations of earth stations without any limitations.

2 The actual locations of earth stations so communicated to Administration A and to the Bureau will be examined for their conformity with the characteristics listed under comments relating to § 5.2.1 b) of this Appendix or those for which the procedure of Article 4 was successfully applied. This examination will lead to the following:

- earth stations which conform to the above characteristics will be entered in the Plan without applying the Article 4 procedure, and Administration A will be informed accordingly;
- earth stations which do not conform to the characteristics listed under the comments relating to § 5.2.1 b) and for which the Article 4 procedure was not applied will be recorded in the Plan once the procedure of Article 4 is successfully applied and in this application of Article 4 the proposed use of the terrestrial service by Administration A shall be taken into account.

3 It is concluded from this paragraph that no transportable earth station can be used in the band 17.7-17.8 GHz in Region 2.

#### **6.5**

This paragraph implies that these feeder-link earth stations will not be entered in the Plan. For this reason the Bureau shall in such cases recommend to the administration that it apply the procedure of Article 4 in order to permit its earth stations to be entered in the Plan.

#### **Art. 7**

### **Coordination, notification and recording of FSS assignments when feeder-links to BSS assignments are involved**

#### **7.6**

The comments under § 6.5 apply.

#### **An. 1**

### **Limits for determining whether a service of an administration is affected by proposed modifications to the Plan**

#### **3**

See comments made under the Rules of Procedure concerning § 2 of Annex 1 to Appendix S30.

*a) Test points*

See comments made under the Rules of Procedure concerning § *a*) of Section 1 of Annex 1 to Appendix S30 (CWR-2000).

*b) Implementation of the PFD Limit referred to in the first paragraph of Section 4 of Annex 1 to Appendix S30A (CWR-2000)*

1 The PFD limit of  $-76 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  which is indicated in the first paragraph of Section 4 of Annex 1 to Appendix S30A (CWR-2000) was established in order to protect BSS feeder-link assignments from interference which may be caused by BSS feeder-link networks located outside an arc of  $\pm 9^\circ$  around the wanted BSS feeder-link network, under worst-case station-keeping conditions. Therefore, this PFD limit was intended to be considered as a hard-limit that shall not be exceeded.

2 In order for the Bureau to practically implement this provision in a reasonable time period, i.e. without having to capture and process the relevant Appendix S4 data which is currently done several months after the data submission, the Board concluded that the PFD limit of  $-76 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  could be converted into two e.i.r.p. limits as follows:

2.1 “First e.i.r.p. limit”:

An e.i.r.p. value of 86 dBW which corresponds to the maximum e.i.r.p. level below which the PFD limit is never exceeded, i.e. this e.i.r.p. value corresponds to a PFD value of  $-76 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  produced by a transmitting earth station located at the sub-satellite point (the shortest distance from the Earth to the GSO).

2.2 “Second e.i.r.p. limit”:

An e.i.r.p. value of 87.4 dBW which corresponds to the minimum e.i.r.p. level above which the PFD limit is always exceeded, i.e. this e.i.r.p. value corresponds to a PFD value of  $-76 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  produced by a transmitting earth station located at the edge of the visible part of the Earth (the longest distance from the Earth to the GSO).

3 The Board therefore decided that the PFD limit of  $-76 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  shall be implemented by the Bureau by checking the e.i.r.p. value of each assignment of a given network against the e.i.r.p. limits defined in § 2 above, together with the compliance of the relative off-axis e.i.r.p. of the associated feeder-link antenna with Fig. A (WRC-97 curves) of Annex 3 to Appendix S30A.

4 To this aim, the Board further instructed the Bureau to apply the following course of action:

4.1 If the “first e.i.r.p. limit” of 86 dBW is **not exceeded** by any assignment of a given network and if the relative off-axis e.i.r.p. of the associated feeder-link antenna is in compliance with Fig. A (WRC-97 curves) of Annex 3 to Appendix S30A, the PFD limit of  $-76 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  would be considered to be met.

4.2 If the e.i.r.p. value of at least one assignment of a given network exceeds the “second e.i.r.p. limit” of 87.4 dBW or if the relative off-axis e.i.r.p. of the associated feeder-link antenna is not in compliance with Fig. A (WRC-97 curves) of Annex 3 to Appendix S30A, the Bureau shall then consult with the Administration responsible for this network in order for it to reduce this e.i.r.p. value at least below 87.4 dBW and preferably below 86 dBW, and/or to ensure that the relative off-axis e.i.r.p. of the associated feeder-link antenna is in conformity with Fig. A (WRC-97 curves) of Annex 3 to Appendix S30A. This consultation would have to be carried out according to the Rules of Procedure on the Receivability of forms of notice, i.e. within the 30 + 15 days referred to in § 3.2 of these Rules.

Should the responsible Administration insist on keeping the original characteristics of the assignment(s) in question for this network, the assignment(s) would then be considered as being not in conformity the first paragraph of Section 4 of Annex 1 to Appendix S30A (CWR-2000), and thus not in conformity with Article 4 of Appendix S30A. The assignment(s) would then be deleted from the network and the responsible Administration would be informed accordingly.

4.3 Otherwise, if the e.i.r.p. value of at least one assignment of a given network is in the range between both above-mentioned e.i.r.p. limits (i.e. 86 dBW and 87.4 dBW) and if the relative off-axis e.i.r.p. of the associated feeder-link antenna is in conformity with Fig. A (WRC-97 curves) of Annex 3 to Appendix S30A, the Bureau should proceed further with this network and study more deeply the conformity with the PFD limit of  $-76 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$  at the time of the other regulatory and technical examinations.

Should it be found at that time that the assignment(s) in question exceeds the above-mentioned PFD limit, a Note would be included in the corresponding Special Section drawing the attention of the responsible administration to the need to take necessary action at the stage of Part B publication (application of § 4.1.12 of Appendix S30A) to ensure that the e.i.r.p. level of the assignment(s) satisfies the PFD limit of  $-76 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$ , otherwise the assignment(s) shall be considered not to be in conformity with of Article 4 of Appendix S30A (WRC-2000) and shall not be thus included in the List even if all other paragraphs of Article 4 were successfully applied.

5 The Board noted that considering the level of feeder-link e.i.r.p. of current BSS satellite networks, this PFD limit was unlikely to be exceeded and therefore the Bureau might face a limited number of cases of this nature.

c) *Implementation of the EPM degradation criterion referred to in the third paragraph of Section 4 of Annex 1 to Appendix S30A (CWR-2000)*

1 In accordance the third paragraph of Section 4 of Annex 1 to Appendix S30A (WRC-2000), an Administration, which has assignment(s) in the 14 or 17 GHz Plan, in the 14 or 17 GHz List or assignment(s) for which the procedure of Article 4 of Appendix S30A has

already been initiated, is considered as affected by a proposed new or modified assignment in the 14 or 17 GHz List if all the following conditions are met:

- the orbital spacing between both assignments is less than 9°, under worst-case station-keeping conditions; and
- there is a frequency overlap between the bandwidths assigned to each assignment; and
- the reference EPM of at least one of the test-points<sup>6</sup> of that wanted assignment falls more than 0.45 dB below 0 dB, or if already negative, more than 0.45 dB below that reference EPM value.

*d) Reference protection margin*

See comments made under § *d*) of the Rules of Procedure relating to Section 1 of Annex 1 to Appendix S30 (CWR-2000).

**An. 3**

**Technical data used in establishing the Plan and which should be used for their application**

**1.7**

The footnote to this provision states that “in certain cases (e.g. when channel spacing and/or bandwidth are different from the values given in § 3.5 and 3.8 of Annex 5 to Appendix S30), equivalent protection margins for the second adjacent channels may be used. Appropriate protection masks included in ITU-R Recommendations should be used if available. Until a relevant ITU-R Recommendation is incorporated in this Annex by reference, the Bureau will use the worst-case approach as adopted by the Radio Regulations Board.”

Noting that ITU-R Recommendation BO.1293 (incorporated in this Annex by reference) provides only a method for calculation of interference between assignments using different channelling and bandwidth in the case of a digital interferer, the Board therefore decided that, as an interim measure, until the applicable ITU-R Recommendations for protection masks/calculation method are available the calculation methods shown in Table 1 shall be applied when calculating interference between two assignments in the Plans and/or modifications to Plans.

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<sup>6</sup> In the case of a wanted assignment in the Plan, the test-points referred to in this paragraph are those defined in that Plan. In the case of a wanted assignment in the List or for which the procedure of Article 4 of Appendices S30/S30A has already been initiated, the test-points referred to in this paragraph are those provided under former Annex 2 to Appendices S30/S30A or under Appendix S4.

TABLE 1

Wanted assignment	Interfering assignment	Method to be applied
“Standard” <sup>1</sup> analogue	“Standard” analogue	As defined in Annex 3 to Appendix S30A
“Non-standard” analogue	“Standard” analogue	As described in the Bureau’s internal Rule relating to MSPACE Manual
“Standard” analogue	“Non-standard” analogue	As described in the Bureau’s internal Rule relating to MSPACE Manual
“Non-standard” analogue	“Non-standard” analogue	As described in the Bureau’s internal Rule relating to MSPACE Manual
Digital	“Standard” or “non-standard” analogue	As described in the Bureau’s internal Rule relating to MSPACE Manual
“Standard” or “non-standard” analogue	Digital	As defined in Recommendation ITU-R BO.1293 <sup>2</sup>
Digital	Digital	As defined in Recommendation ITU-R BO.1293 <sup>2</sup>

<sup>1</sup> Standard analogue assignments are those assignments which use the following parameters:

- for Regions 1 and 3: 27 MHz bandwidth, 19.18 MHz channel spacing and the assigned frequencies as specified in Article 9A of Appendix S30A;
- for Region 2: 24 MHz bandwidth, 14.58 MHz channel spacing and the assigned frequencies as specified in Article 9 of Appendix S30A.

<sup>2</sup> Although Recommendation ITU-R BO.1293-1 is referred to in § 3.4 of Annex 5 to Appendix S30 and § 3.3 of Annex 3 to Appendix S30A, Recommendation ITU-R BO.1293 continues to apply until a new version is available, which will contain the necessary elements to deal with some “new” characteristics of the assignments included in the WRC-2000 Plans.

## Power-control

Paragraph 3.11.4 of Annex 3 to Appendix S30A states that “In the event of modifications to the Plan, the Bureau shall recalculate the value of power control for the assignment subject to modification and insert the appropriate value for assignment in the Plan. A modification to the Plan shall not require the adjustment of the values of permissible power increase of other assignments in the Plan”. Therefore, the Board decided that, the Bureau, immediately after the Regions 1 and 3 feeder link Plan (14 GHz or 17 GHz) is updated and before Part B publication is effected, shall recalculate the power control values and inform about its findings the responsible administration, as appropriate. If the values referred to in the above paragraph need to be adjusted, the responsible administration shall seek all the possible means to solve the matter with the affected administrations.

### 3.15

1 The first paragraph of this section contains a general definition of the orbital positions generally used in the Regions 1 and 3 feeder-link Plans at 14 and 17 GHz. This paragraph was not considered at WRC-2000 to reflect the new orbital positions adopted by that Conference.

In view of the above, the Board concluded that the orbital positions referred to in this paragraph should not be understood as a definition of the orbital positions of the Regions 1 and 3 feeder-link Plans, but rather as a general principle which was established at WARC Orb-88 to prepare the original Plans and which was further applied at WRC-2000 to revised these Plans, noting that the orbital positions used in the Regions 1 and 3 feeder-link Plans at 14 and 17 GHz, as adopted at WRC-2000, are indicated in column 3 of Article 9A to Appendix S30A (WRC-2000).

2 The second paragraph of this section deals with grouping of space stations in nominal orbital positions of  $\pm 0.2^\circ$  from the centre of the cluster.

In adopting the Regions 1 and 3 downlink and associated feeder-link Plans, WRC-2000 did adopt assignments in these Plans, which are located at orbital positions shifted by  $\pm 0.2^\circ$  from some nominal positions. This measure was taken as one of the tools to resolve the excess of interference identified during the re-planning studies in the feeder-link Plans at both 14 and 17 GHz<sup>7</sup>.

However, none of the assignments located on one side of a given nominal position (e.g.  $-0.2^\circ$ ) were grouped with other assignments located on the other side of that nominal position (e.g.  $+0.2^\circ$ ).

In view of the above, the Board concluded that the second paragraph of Section 3.15 of Annex 3 to Appendix S30A refers to an assumption made at WARC Orb-88, but which was no longer used at WRC-2000.

3 The third paragraph of this section provides a definition of the cluster concept in the case of the Regions 1 and 3 feeder-link Plans.

The Board noted that this paragraph could be understood as defining, in the case of the Regions 1 and 3 feeder-link Plans, a concept similar to the Region 2 cluster concept, which is defined in Section 4.13.1 of Annex 3 to Appendix S30A.

In adopting the Regions 1 and 3 downlink and associated feeder-link Plans, WRC-2000 adopted some assignments in these Plans at orbital positions shifted by  $\pm 0.2^\circ$  from some nominal positions in order to resolve the excess of interference identified during the re-planning studies in the feeder-link Plans at both 14 and 17 GHz without being associated with any cluster concept.

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<sup>7</sup> For further details, see Section 8.3 of Corrigendum 1 to Document WRC-2000/34.

In view of the above, the Board concluded that since WRC-2000 did not decide to consider assignments located at  $\pm 0.2^\circ$  from a given nominal position as being part of a cluster, the third paragraph of Section 3.15 of Annex 3 to Appendix S30A shall not be understood as allowing the application of the cluster concept in the case of the Regions 1 and 3 feeder-link Plans, contrarily to what was adopted at WARC Orb-88.

## ATTACHMENT 1

### to Rules concerning Appendix S30A

### FAST ROLL-OFF ANTENNA PATTERN

for the feeder-link Plan (Appendix S30A (Region 2))

A discontinuity was noticed in Curve A for the Region 2 feeder-link fast roll-off antenna beam (Fig. 8 of § 4 of Annex 3 to Appendix S30A). The upper limit for the plateau at  $-25.23$  dB is given for a  $\varphi/\varphi_0 = 1.413$ .

When used in the equation of  $-(22 + 20 \log (\varphi/\varphi_0))$  this value gives a relative gain of  $-25.00$  dB, which leaves a gap of  $0.23$  dB between the plateau and the next equation. For this reason, the value of  $1.413$  should be replaced by  $1.45$  as shown below:

*Curve A:* co-polar component (dB relative to main beam gain)

$$\begin{array}{ll}
 -12 (\varphi/\varphi_0)^2 & \text{for } 0 \leq \varphi/\varphi_0 \leq 0.5 \\
 -33.33 \varphi_0^2 ((\varphi/\varphi_0) - x)^2 & \text{for } 0.5 < \varphi/\varphi_0 \leq (0.87/\varphi_0) + x \\
 -25.23 & \text{for } (0.87/\varphi_0) + x < \varphi/\varphi_0 \leq 1.45 \\
 -(22 + 20 \log (\varphi/\varphi_0)) & \text{for } \varphi/\varphi_0 > 1.45
 \end{array}$$

after intersection with Curve C, as Curve C.

## **PART A6**

### **Rules concerning the Regional Agreement relating to the planning of VHF/UHF television broadcasting in the African Broadcasting Area and neighbouring countries (Geneva, 1989) (GE89)**

#### **1 Receivability of notices**

In the application of the Regional Agreement relating to the planning of VHF/UHF television broadcasting in the African Broadcasting Area and neighbouring countries (Geneva, 1989), the Bureau will apply the procedures contained in Articles 4 and 5 of the Agreement and associated technical criteria with respect to the notices from all administrations having territories in the planning area (i.e. all administrations having territories within the African Broadcasting Area as defined in Nos. S5.10 to S5.13 of the Radio Regulations and those administrations neighbouring the African Broadcasting Area as listed in No. 1.8 of Article 1 of the GE89 Agreement), provided that the station concerned is situated within the planning area.

#### **2. Execution of the Agreement**

When a notice is received for a modification under Article 4 of the Agreement, the relevant coordination distances shall equally be applied to analogue and digital systems. An appropriate symbol shall be used to identify the television standard. Calculations requested in application of § 4.3.8 and 4.3.13 of the Agreement shall, where possible, be made using the most recent ITU-R Recommendation.

#### **3 Examination of notices related to the non-planned services in the bands governed by the Regional Agreement GE89**

3.1 Sections 5.2 and 5.3 of Article 5 of the GE89 Agreement specify the procedure to be followed for the examination of the notices related to the non-planned primary services in the bands governed by the Agreement. The bands and the services concerned are summarized in the Table below.

TABLE

Frequency band (MHz)	Services and countries within the planning area	Provisions	Notes
47-68	<b>FX:</b> AFS, AGL, BOT, BDI, CME, COD, COG, IRN, LSO, MDG, MLI, MOZ, MWI, NMB, RRW, SOM, SDN, SWZ, TCD, TZA, ZWE	<b>S5.165</b> <b>S5.167</b> <b>S5.171</b>	1
	<b>MO(-AER):</b> AFS, AGL, BOT, BDI, CME, COD, COG, LSO, MDG, MLI, MOZ, MWI, NMB, RRW, SOM, SDN, SWZ, TCD, TZA, ZWE	<b>S5.165</b> <b>S5.171</b>	1
	<b>MO:</b> IRN	<b>S5.167</b>	
174-223	<b>FX:</b> IRN <b>MO:</b> IRN		
223-230	<b>FX:</b> IRN <b>MO:</b> IRN <b>AL:</b> ARS, BHR, IRN, OMA, QAT, UAE	<b>S5.247</b>	
230-238	<b>FX:</b> from all parties to the Agreement (excepting those referred to in No. <b>S5.252</b> )	<b>S5.247</b>	2
	<b>MO:</b> from all parties to the Agreement (excepting those referred to in No. <b>S5.252</b> )		
	<b>AL:</b> ARS, BHR, IRN, OMA, QAT, UAE		3
246-254	<b>FX:</b> from all parties to the Agreement (excepting those referred to in No. <b>S5.252</b> )		2
	<b>MO:</b> from all parties to the Agreement (excepting those referred to in No. <b>S5.252</b> )		
470-790	<b>FX:</b> IRN <b>MO:</b> IRN		
790-862	<b>FX:</b> from all parties to the Agreement		
	<b>MO:</b> IRN		

NOTE 1 – The additional allocations to countries referred to in No. **S5.171** are limited to the band 54-68 MHz.

NOTE 2 – In the frequency bands 230-238 MHz and 246-254 MHz, in the examinations under § 5.2 of the Agreement, account is taken of only those frequency assignments in the broadcasting service which are entered into Plan following a successful application of the procedure referred to in No. **S9.21**, as required by Resolution 1 (GE89) and No. **S5.252**.

NOTE 3 – The additional allocation to countries referred to in No. **S5.247** is limited to the band 223-235 MHz.

3.2 The frequency assignment notices related to the aeronautical radionavigation service of Nigeria, whose allocation is governed by No. **S5.251**, shall not be subject to the examinations referred to in § 5.2 of Article 5 of the Agreement, since these notices are subject to the application of the procedure of No. **S9.21**.

3.3 The frequency assignment notices related to services and countries referred to in Nos. **S5.164**, **S5.235**, **S5.243** and **S5.316** shall not be subject to the examinations requested by § 5.2 of Article 5 of the Agreement, since their allocation is subject to not causing harmful interference to, or claiming protection from, the broadcasting service. Consequently they will be recorded in the MIFR under the conditions of No. **S5.43** vis-à-vis the broadcasting service (symbol R in column 13B2).

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