Documents of the World Radiocommunication Conference (WRC-95) (Geneva, 1995)

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 101-E
25 October 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4

Organization of the work of Committee 4

To cover the Conference agenda items assigned to Committee 4, the following Working Groups are proposed:

Working Group 4A (WG4A) - Allocations

Terms of reference:

- to review the Final Report of the VGE, in the part dealing with matters relating to the allocation of frequency bands, and to consider related proposals from administrations, in order to undertake, as appropriate, a revision of the Radio Regulations and to provide a timetable for the implementation of outstanding recommended actions;
- to review, in accordance with Resolution 94 (WARC-92), the relevant Resolutions and Recommendations of previous WARCs with a view to their possible revision, replacement or abrogation (item 5);
- to identify those items requiring priority action by the Radiocommunication Sector (item 6.3);

Documents – As shown in the attached table.

Chairman: Mr. I. Hutchings No. 315.

Secretary: Mr. T. Gavrilov No. 2022.

Working Group 4B (WG4B) - Regulatory procedures

Terms of reference:

- to review the Final Report of the VGE, in the part dealing with matters relating to the simplification of the regulatory procedure, and to consider related proposals from administrations, in order to undertake, as appropriate, a revision of the Radio Regulations and to provide a timetable for the implementation of outstanding recommended actions;
- to review Resolution 46 (in coordination with Committee 5);
- to review, in accordance with Resolution 94 (WARC-92), the relevant Resolutions and Recommendations of previous WARCs with a view to their possible revision, replacement or abrogation (item 5);
- to identify those items requiring priority action by the Radiocommunication Sector (item 6.3);

Documents – As shown in the attached table.

Chairman: Mr. P. Aboudarham No. 2.

Secretary: Mr. K. Arasteh No. 2063.

Working Group 4C (WG4C) - Operational and administrative matters

Terms of reference:

- to review the Final Report of the VGE, in the part dealing with operational and administrative matters, and to consider related proposals from administrations, in order to undertake, as appropriate, a revision of the Radio Regulations and to provide a timetable for the implementation of outstanding recommended actions;
- to review, in accordance with Resolution 94 (WARC-92), the relevant Resolutions and Recommendations of previous WARCs with a view to their possible revision, replacement or abrogation (item 5);
- to identify those items requiring priority action by the Radiocommunication Sector (item 6.3).

Documents – As shown in the attached table.

Chairman: Mr. V. Rubio Carretón No. 705.

Secretary: Mr. A. Zoudov No. 2024.

M. GODDARD
Chairman of Committee 4, No. 176
M. GIROUX
Secretary of Committee 4: No. 2021

Attachment: Allocation of documents for Working Groups.

ATTACHMENT

Allocation of documents for Committee 4

1 Proposals from administrations

Doc. #	Source	C4	WG4A	WG4B	WG4C
3	CPM	C. 1,4		C. 1,4	
4	S	S/4/1-12	S/4/1-12		
5	EUR	EUR/5/1-36,44-52	EUR/5/2-6, 10-18	EUR/5/7-8, 19-26, 44-52	EUR/5/9, 27-36
6	FIN	FIN/6/1-7	FIN/6/1-7		
7	RUS	RUS/7/1-11	RUS/7/1-5	RUS/7/6-11	p. 4 (E)
8	ARG	ARG/8/1-71	ARG/8/12-16	ARG/8/17-22	ARG/8/1-11, 15-16, 23-71
9	USA	USA/9/1-144	USA/9/3-13	USA/9/14-132	USA/9/1-2, 133-144
10	MKD	MKD/10/1-14	MKD/10/1-14		
11	D	D/11/1-43	D/11/1-43		
12	ZWE	ZWE/12/1-5	ZWE/12/1-5		
13	HOL	HOL/13/1-7	HOL/13/1-7		
14	HRV	HRV/14/1-10	HRV/14/1-10		
15 (Rev. 1)	BR	Entire document			Entire document
16	BR	Entire document			Entire document
17	B	B/17/1-108, 121,194, 195	B/17/1-17, 108	B/17/18-104, 107J, 194, 195	B/17/105-107I
18	CAN	CAN/18/1A-6, 54	CAN/18/1A-6, 54		
19	AUS	AUS/19/1,3-6F	AUS/19/1, 4, 5A, 5B, 6A-6F	AUS/19/3	
21 + corr.1	BR	para. 1, att. 1-3, att. 7	para. 1.1, att. 1,2	para. 1.2, att. 7	para. 1.3
22	J	J/22/4-94		J/22/4-94	
23	ALG	ALG/23/1-3	ALG/23/1	ALG/23/2	ALG/23/3
25	IRN	IRN/25/1-6	IRN/25/2-6		IRN/25/1
26	PRG	PRG/26/1		PRG/26/1	
28	KEN	KEN/28/1-42, 45-55B	KEN/28/1-20	para. 1.2, KEN/28/45-55B	KEN/28/21-42
29	NZL	NZL/29/1-3, 10-21	NZL/29/10-18		NZL/29/19-20
30	MLI	MLI/30/2-4	MLI/30/2-3	MLI/30/4	

31	SVK-CZE	SVK-CZE/31/1-49	SVK-CZE/31/1-49		
32	CZE	CZE/32/1-2	CZE/32/1-2		
34	*	*/34/1-3			
39	SEN	SEN/39/1, 2, 3, 14	SEN/39/2, 3, 14	SEN/39/1	
40	LTU	LTU/40/1-52	LTU/40/1-52		
41	IND	IND/41/1-141	IND/41/3-8	IND/41/9-141	IND/41/1,2
44	KOR	KOR/44/8-27, 29-43		KOR/44/8-27, 29-43	para. 1.3.1
51	SVN	SVN/51/1-16	SVN/51/1-16		
52	EST	EST/52/1-10	EST/52/1-10		
53	TZA	para. 1	para. 1.1.1-1.1.5	para. 1.2.1-1.2.3	para. 1.3.1-1.3.6
54	F	Doc. 54		Doc. 54	
55	CME	para. 2	para. 2		
56	INS	INS/56/11-28	INS/56/11-16	INS/56/17-28	
57	THA	THA/57/1, 2A-2T	THA/57/1, 2A-2T		
58	UZB	para. 1-8	para. 1-8		
62	CHN	Annex 1-4		Annex 1-4	
63	CUB	CUB/63/1-10	CUB/63/1-10		
67	LVA	LVA/67/1-52	LVA/67/1-52		
68	UGA	UGA/68/1-9	UGA/68/1-3	UGA/68/4-7	UGA/68/8-9
69	EQA	para. 2.1	para. 2.1		

2 Contributions by observers

24	ICAO	para. 3	para. 3.2.1-3.2.23	para. 3.2.24-3.2.33	para. 3.2.34-3.2.52
45	Intelsat	An. 2		An. 2	
46	IMO	An. 2	An. 2 sect. 1	An. 2sect. 2	An. 2 sect. 3-5

* ARS/EGY/UAE/KWT/LBN/MRC/OMA/QAT/SYR/TUN/YEM

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 1 to Document 102-E
1 November 1995
Original: French

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 5

SUMMARY RECORD

OF THE

FIRST MEETING OF COMMITTEE 5

(MSS AND OTHER MATTERS)

Please replace paragraph 5.4 by the following text:

5.4 With respect to proposal EUR/5/65C to modify RR 2613, the **delegate of the United States** said that the question concerning the non-geostationary fixed-satellite service and modification of RR 2613 was being considered in Plenary. The United States reserved the right to revisit the EUR proposal, EUR/5/65C, and the forum for its consideration once the Plenary has addressed non-GSO FSS.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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26 October 1995
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COMMITTEE 5

SUMMARY RECORD

OF THE

FIRST MEETING OF COMMITTEE 5

(MSS AND OTHER MATTERS)

Tuesday, 24 October 1995, at 0935 hours

Chairman: Mr. G.F. JENKINSON (Australia)

Subjects discussed		**Documents**
1	Opening of the meeting	–
2	Terms of reference of the Committee	1, 88
3	Organization of work	DT/6
4	Allocation of documents to working groups	87, DT/6
5	Introduction of documents	3, 5 + Corr.1 + Add.1, 7, 8, 9(Add.7 to 14), 12, 17

1 Opening of the meeting

1.1 The **Chairman** welcomed participants and said he would be assisted by the Vice-Chairman, Mr. George, and by the Secretary, Mr. Kovacs. Most of the Committee's work would be done by the working groups, which, he hoped, should have finished work by the end of the third week of the Conference.

2 Terms of reference of the Committee (Documents 1, 88)

2.1 The **Chairman** commented on the magnitude of the task awaiting the Committee, which was responsible in particular for considering items 2.1a), 2.1b), 2.1c), 2.2, 2.3, 3d), 4, 5 and 6.3 of the Conference agenda.

2.2 The terms of reference of Committee 5 were **noted**.

3 Organization of work (Document DT/6)

3.1 The **Chairman** said that any proposals likely to give rise to long discussion would be considered by the working groups and that matters which were not controversial would be studied by the full Committee, for the sake of efficiency. For the consideration of proposals, it was proposed that three working groups be set up. Working Group 5A would be in charge of matters concerning mobile-satellite services below 1 GHz and related issues. Working Group 5B would be in charge of matters concerning mobile-satellite services in the 1 - 3 GHz band, paying particular attention to the various proposals concerning frequency allocations and reviewing the date of entry into force of frequency allocations for mobile-satellite services. The same working group would be examining proposals concerning sharing of the 1 - 3 GHz band with the fixed service, including some inputs from ITU-R Study Group 2. Working Group 5C would consider the matter of allocations to mobile-satellite service feeder links above 3 GHz. In respect of allocations to non-geostationary fixed-satellite service systems, Committee 5 would await the Plenary Meeting's decision on the subject. Any non-controversial matters, such as the choice of power limits for earth stations in the earth exploration-satellite, space research and space operation services and the review of Resolution 112 (WARC-92), would be dealt with by Committee 5 as a whole.

3.2 The question of Resolution 46 (WARC-92), concerning interim procedures for the coordination and notification of frequency assignments of non-geostationary-satellite networks in certain space services and other services to which the bands were allocated, would be left to Committee 4, since many aspects of the Resolution concerned that Committee directly; Committee 5 would be called upon to provide technical inputs to facilitate Committee 4's work. By the end of the Conference, it would be desirable to have a revised version of Resolution 46 which reflected all the decisions taken.

3.3 He concluded by saying that consultations were still being held regarding the chairmanships of the working groups, which would be announced in due course.

3.4 The organization of work of Committee 5, as proposed in Document DT/6, was **approved**.

4 Allocation of documents to working groups (Documents 87; DT/6)

4.1 The **Chairman** invited delegates to review briefly the list of documents or parts of documents allocated to Committee 5; a detailed allocation of the documents among the working groups was set out in Document DT/6.

4.2 In response to a comment by the **delegate of Brazil**, the **Chairman** said that in Document 87 proposals B/17/194 and 195 should be deleted, since they concerned Resolution 46 (WARC-92) assigned to Committee 4, and that proposal B/17/196 should be added.

4.3 The **delegate of Japan** said that in Document 22 his Administration had submitted proposals concerning Resolution 46. Some of the proposals on Resolution 46 also concerned No. 2613 of the Radio Regulations. He thus reserved the right to revert to his delegation's contribution for a discussion in Committee 5.

4.4 The **Chairman** confirmed that consideration of No. 2613 of the Radio Regulations was part of Committee 5's work programme. The Japanese Administration's proposal could be taken up in Committee 5, since it affected the Committee's work.

4.5 The **delegate of Mexico** said that he hoped the Committee would take account of a contribution which his delegation had handed in to the Secretariat.

4.6 The **observer from INTELSAT** said that Document 45 in its entirety should be allocated to Working Group 5C rather than Working Group 5B.

4.7 In reply to the **delegate of Syria**, who expressed surprise that the same proposal should be assigned to Working Group 5B under two different headings, the **Chairman** said that the Committee had deemed that Document 36 contained only one proposal.

4.8 The **delegate of France** said that Document 66 dealing with SCP methodology would be submitted for information only; it was intended for Working Group 5B rather than Working Group 5A.

4.9 The **Chairman** said that a revised version of Document DT/6 incorporating all the proposed amendments would be issued shortly.

5 Introduction of documents (Documents 3, 5 and Corr.1 and Add.1, 7, 8, 9(Add.7 to 14), 12, 17)

5.1 The **Chairman** invited delegates briefly to introduce their administrations' documents, which would be examined in detail by the working groups as of the following day. He suggested that documents might be considered in the numerical order given in Document DT/6 and that countries which were introducing several documents on the same subject should take them together.

Document 3

5.2 The **Chairman** said that Document 3 (CPM Report) would be used as appropriate by the working groups.

Document 5 and Corrigendum 1 and Addendum 1

5.3 The **delegate of Germany**, introducing Document 5 on behalf of the European countries, said that Addendum 1 contained the list of coordinators appointed for each agenda item of the Conference and Corrigendum 1 showed the countries to be added to the list of countries co-sponsoring the different proposals in Document 5. With regard to the parts of the document that were of concern to Committee 5, Part 2 related to the technical constraints associated with the frequency bands allocated below 3 GHz to mobile-satellite services and associated provisions, resolutions and recommendations of WARC-92. The European countries were proposing that certain power flux-density limits should be modified, since they were not sufficient to ensure protection of mobile service stations. They were also proposing that certain power flux-density limits applicable outside national borders be replaced by the results of the studies of the ITU-R study groups, i.e. a coordination distance/threshold. Part 2 also contained several proposals to facilitate utilization of the spectrum by the MSS. Part 3, relating to the date of entry into force of MSS allocations in the 2 GHz band, contained proposals aimed at modifying the conclusions of WARC-92, which were unsatisfactory to the European countries, who wished to bring forward the date of entry into force of MSS allocations at 2 GHz while at the same time ensuring protection of the fixed services in those bands. With respect to Part 4, relating to feeder links, the Conference must allocate frequencies for feeder links for the MSS; in that respect, the European countries had made a specific proposal with respect to the 4 - 8 GHz band, to the effect that frequencies could be allocated for MSS feeder links in the vicinity of 5 and 7 GHz. Moreover, although they had made no proposal to that effect, the European countries nevertheless considered that frequencies could be allocated for feeder links above 10 GHz. The European countries had not made any proposals in respect of agenda item 3d) since they did not see the necessity of allocating frequencies for MSS service links; the WARC-92 allocations were sufficient. Regarding Part 5 of the document, the European proposal was based on the conclusions of the CPM Report. As for Part 6, which concerned footnote 855A, since the given values had been confirmed by an ITU-R task group it was no longer necessary to include any reference to Resolution 112 (WARC-92), and the Resolution itself could also be deleted. Part 9 contained a proposal to delete Resolution 208 (MOB-87) which imposed constraints on the MSS.

5.4 With respect to proposal EUR/5/65C, the **delegate of the United States** said that a question concerning the non-geostationary fixed-satellite service still remained pending and that his delegation reserved the right to revert to that proposal once the matter had been settled.

5.5 At the request of the **delegate of Morocco**, the **delegate of Germany** explained that the frequency band mentioned in proposal EUR/5/61 would be used for feeder links and that Working Group 5C would amend the wording of the proposal in order to dispel any ambiguity on that point.

Document 7

5.6 The **delegate of Russia** said that the development of services in the 2 GHz band must not take place at the expense of the services already existing in that band. In view of the very uneven population distribution on its territory, Russia was keen to develop the services provided in the 1 - 3 GHz band. Russia was working on the development of a global navigation system which would require appropriate protection. Finally, in the event of any inconsistencies between the information in Document DT/1 and in Document 7, the latter takes precedence.

Document 8

5.7 The **delegate of Argentina** said that her delegation would introduce the document in detail in the working groups.

Document 9 (Addenda 7 to 14)

5.8 The **delegate of the United States** said that in Addendum 7 to Document 9, the United States was proposing allocations in the 1.5/1.6 GHz range including all categories of MSS service under a general MSS allocation while preserving, through footnotes, the integrity of the global maritime distress and safety system and the aeronautical mobile-satellite service. It was also proposing the modification of a footnote concerning the allocation of frequencies to mobile satellites in the 2 GHz band. In Addendum 8, the United States was proposing that the frequency bands allocated for MSS should be expanded, since they were currently insufficient. The United States delegation was ready to discuss the dates of entry into force of those allocations and of the allocations made by WARC-92 in the 2 GHz band in the relevant working group. Regarding Addendum 9, the frequency bands that the United States proposed be designated for MSS feeder links between 4 and 30 GHz were intended to support the immediate and actual needs of the MSS in conformity with the CPM-95 recommendations. In Addendum 10 concerning feeder links for the mobile-satellite services, the modifications in maximum power flux-density that the United States proposed in Articles [28] S21 and [29] S22 of the Radio Regulations were intended to support the needs of the mobile-satellite service and, in particular, to protect the geostationary-satellite orbit. Addenda 11 and 12 would be introduced in detail in the working groups. Addendum 13 listed the reasons why it was difficult to use the 13.75 - 14 GHz band for mobile-satellite service feeder links for space-to-Earth transmissions, there being a danger of impairing smooth operation of the radiolocation and radionavigation services. With respect to Addendum 14, the modifications proposed by the United States to the current MSS allocations below 1 GHz aimed at improving coordination between administrations in that band and meeting the needs of the MSS.

5.9 The **delegate of Syria** having queried why the United States Administration was proposing the frequency bands indicated in the table on page 2 of Addendum 9, the **delegate of the United States** said that he would willingly address that question in the appropriate working groups.

Document 12

5.10 The **delegate of Zimbabwe** asked that the working group concerned should give due consideration to his country's needs with respect to the allocation of frequency bands for the MSS.

Document 17

5.11 The **delegate of Brazil** stressed the need to find new frequency bands for mobile-satellite services below 1 GHz, but recognized that the task was not an easy one. It was essential to make available frequencies in the 1 - 3 GHz range to cater for the surge in demand for personal communications. The Brazilian delegation considered that if existing allocations were used efficiently and if the various constraints were removed, demand could be met without having to resort to new allocations. It would be wiser to discontinue certain allocations, in particular those pertaining to the radiodetermination-satellite service that would never be used, since radiodetermination operations could be accommodated more economically in the mobile-satellite

service. Brazil was proposing a draft resolution aimed at using the 1 - 3 GHz frequency bands more rationally and harmoniously. Finally, Brazil had drawn up proposals concerning feeder links for mobile-satellite services, scientific services operating in the 2 GHz band and Resolution 112 (WARC-92).

5.12 The various comments and questions were **noted**.

The meeting rose at 1050 hours.

The Secretary:
G. KOVACS

The Chairman:
G.F. JENKINSON

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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25 October 1995
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COMMITTEE 4

SUMMARY RECORD

OF THE

FIRST MEETING OF COMMITTEE 4

(VGE REPORT ON THE SIMPLIFICATION OF THE RADIO REGULATIONS)

Tuesday, 24 October 1995, at 1100 hours

Chairman: Mr. M. GODDARD (United Kingdom)

Subjects discussed		**Documents**
1	Opening of the meeting	-
2	Terms of reference of the Committee	88
3	Organization of work	DT/5
4	Allocation of documents to working groups	87, DT/5
5	Introduction of documents	5, 7, 9, 17, 18, 19, 22, 28, 30, 31, 32, 34, 39, 41, 44, 56
6	Appointment of working group Chairmen	-

1 Opening of the meeting

1.1 The **Chairman** welcomed participants and informed them that Committee 4 should have completed its work by Friday, 10 November. He felt confident that participants would do their utmost to achieve that objective. Questions of substance should as far as possible be dealt with at working group meetings.

2 Terms of reference of the Committee (Document 88)

2.1 The terms of reference of Committee 4, as set out in Document 88, were **noted.**

3 Organization of work (Document DT/5)

3.1 The draft organization of the work of Committee 4, contained in Document DT/5, and in particular the establishment of Working Groups 4A, 4B and 4C, was **approved**.

4 Allocation of documents to working groups (Documents 87 and DT/5)

4.1 The preliminary allocation of documents to Committee 4 working groups, as set out in the annex to Document DT/5, was **approved**, subject to corrections and amendments made by some delegations and on the understanding that other corrections or amendments might be submitted directly to the Secretary of the Committee.

5 Introduction of documents (Documents 5, 7, 9, 17, 18, 19, 22, 28, 30, 31, 32, 34, 39, 41, 44 and 56)

5.1 The **Chairman of the Voluntary Group of Experts**, who had given a detailed presentation on the VGE's work at a specially organized information meeting just before the first meeting of Committee 4, gave a brief explanation of the VGE Report's structure.

5.2 The **Chairman** invited delegations wishing to do so to make general comments on their proposals which concerned Committee 4, on the understanding that the proposals would be introduced and discussed in detail in the working groups.

Document 17

5.3 The **delegate of Brazil** said that the VGE had achieved the main objective which had been set for it by the Nice Plenipotentiary Conference, namely the simplification of the Radio Regulations, thus completing the restructuring of the ITU, which the 1992 Plenipotentiary Conference had carried out in the area of working methods and procedures. The VGE had managed in particular to tidy up Articles 11 to 17, many provisions of which were confused and repetitive. It had also simplified the arrangement of appendices and had drafted a new appendix identifying cases where coordination was required between services and where the agreement of other administrations had to be obtained. On operational and administrative matters, Brazil was in favour of deleting provisions which did not belong in an international treaty, so as to rid the Regulations of technical, operational and administrative details, which would be better placed in other documents. In that respect, Brazil was in favour of the method of incorporation by reference. ITU-R Study Groups 1 and 8 had drafted Recommendations to replace the texts in the Annexes to the simplified

Radio Regulations, many of which had been approved by the Radiocommunication Assembly. If WRC-95 elected not to incorporate those Recommendations, it might decide to annex the provisions in question to the Radio Regulations, until such time as a future WRC formally incorporated the new or revised texts. In conclusion, he expressed appreciation for the VGE's work and considered that the WRC should be able to adopt a considerably simplified new version of the Radio Regulations.

Document 5

5.4 The **delegate of France** explained that the European common proposals for the work of the conference were derived from the consideration of the VGE Report by the European Conference of Postal and Telecommunications Administrations (CEPT). On the whole, CEPT supported most of the recommendations in Part A of the Report, and the European proposals, based as requested on Part C, were intended to correct errors and omissions, to propose more simplifications, or to advocate maintaining provisions which were earmarked for deletion. Generally speaking, the purpose of the simplification of the Radio Regulations should be to produce a more comprehensible text; any savings in the number of pages being considered as a bonus rather than the principal aim.

Document 9

5.5 The **delegate of the United States** said that his country's proposals were intended mainly to extend the simplification process a little further.

Documents 18 and 19

5.6 The **delegates of Australia** and **Canada** said that they generally supported the VGE's work.

Document 34

5.7 The **delegate of Saudi Arabia** said that the Arab Group had submitted three common proposals. The first was explained in greater detail in Document 33, which would be considered in Plenary. The second consisted in improving the VGE proposals, which the Arab group supported in general terms, in one important aspect concerning the protection of all parties involved in the coordination procedure, particularly administrations which did not have the means to produce rapidly the comments or replies prescribed by the procedure. The third proposal explained the reasons for opposing the method of incorporation by reference.

Document 22

5.8 The **delegate of Japan** supported the fundamental principle of simplification underlying the VGE Report. The proposals formulated by Japan related to Resolution 46 and Article S9 and were aimed primarily at improving the regulatory procedures by simplifying identification of the administrations concerned in coordination, the procedures for transmitting the required data and the procedure to be adopted in the event of there being no response to a request for coordination.

Document 7

5.9 The **delegate of Russia** was of the view that the VGE recommendations would undoubtedly contribute to simplifying the Radio Regulations. His country's proposals were founded on a number of concerns. With regard to Task 1, it was a matter of protecting existing services that were important, in particular, for aircraft flight safety. In the case of Task 2, it was regulatory procedures that constituted the most complex part of the Radio Regulations, and for each procedural problem there must be a full set of texts which should not be adopted in a fragmentary manner. Finally, with regard to Task 3, incorporation by reference was indeed a means of achieving simplification, but it raised at least two problems, namely that of keeping track of texts thus "removed" from the Radio Regulations and the difficulties that the legal experts would experience in getting the Final Acts of the Conference adopted by the competent national authorities.

Document 41

5.10 The **delegate of India** expressed appreciation for the efficient, thorough and comprehensive work carried out by the VGE. The modifications proposed by India related primarily to Appendix S4, Article S9 and Resolution 46 and were aimed at consolidating the broad consensus to which those matters had given rise during the Conference Preparatory Meeting. India had, moreover, reviewed the recommendations in Section 3 of Part A of the VGE Report in order to draw the broad principles together into a global recommendation for adoption by WRC-95 which would serve as a beacon for future conferences.

Document 39

5.11 The **delegate of Senegal**, while expressing general approval for the proposals by the VGE, wished to point out a number of the concerns registered by his country in Document 39. Senegal feared that incorporation by reference could lead to the inclusion in a treaty of references which might distort the rights and obligations of the membership. With regard to the aeronautical mobile service, allocations should remain exclusive in order to meet safety demands. Finally, Senegal was against the grouping together of radionavigation and radiolocation within a single radiodetermination service.

Document 28

5.12 The **delegate of Kenya** applauded the remarkable work accomplished by the VGE. Most of Kenya's proposals were more a matter of form than of substance; however, its proposal relating to Resolution 46 was aimed at coordinating that text with the provisions of Article 11 with a view to the possible elaboration, in due course, of a new Article 11.

Document 44

5.13 The **delegate of the Republic of Korea** found the general guidelines adopted by the VGE and its recommendations with respect to Tasks 1 and 2 acceptable, subject to a number of minor modifications set out in Document 44 with regard to Article S9 and Resolution 46 and aimed at clarifying the coordination procedures.

Document 56

5.14 The **delegate of Indonesia** considered that the VGE had done an excellent job of simplification. His country's proposals related to Articles S5 and S9, to Appendix S4 and to the Annex to Resolution 46.

Documents 31 and 32

5.15 The **delegate of the Czech Republic** expressed appreciation for the work accomplished by the VGE and explained that Document 31 was common to the Slovak Republic and the Czech Republic, responding as it did to a request by the BR concerning reference to the two countries in the Radio Regulations. As to Document 32, it concerned the situation in the Czech Republic following the cessation of the sound broadcasting service in the band 66 - 73 MHz.

Document 30

5.16 The **delegate of Mali** welcomed the work accomplished by the VGE, but considered that although simplification was indeed a good thing it should not go too far. His country therefore proposed, in Document 30, that a number of provisions be maintained, particularly footnotes relating to Mali in the Table of Frequency Allocations, and that worldwide allocations should not be systematically applied, in view of the diversity of the geographical regions of the ITU in terms of propagation and climatic conditions. Mali also urged that the developing countries, and the least developed countries in particular, should receive increased assistance from the BR and the BDT with a view to enabling them to follow all the procedures.

5.17 The **Chairman** said that the significant work accomplished by the VGE had received enthusiastic praise during the course of the debate. The Group's recommendations had met with broad approval in principle, as had the idea that its proposals should constitute the basis for the work of the Conference. Administrations had nevertheless raised a number of important issues for discussion, which might call for some amendment of the VGE's proposals. Also very clearly expressed had been the wish to see Resolution 46 revised and improved, with the revised version entering into force at the end of the Conference, pending possible integration of the procedures in question, within the framework of the simplified Radio Regulations, when those come into effect at a date yet to be determined.

6 Appointment of working group Chairmen

6.1 The **Chairman** proposed that Mr. Hutchings (New Zealand) be appointed Chairman of Working Group 4A and that Mr. Aboudarham (France) be appointed Chairman of Working Group 4B, with the name of the person proposed to chair Working Group 4C to be announced at a subsequent meeting.

6.2 The proposed appointments were **approved.**

The meeting rose at 1225 hours.

The Secretary:
M. GIROUX

The Chairman:
M. GODDARD

E

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-95 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 23 OCTOBRE – 17 NOVEMBRE 1995

Corrigendum 1 au Document 104-F/E/S 26 octobre 1995

Original: français

GROUPE DE TRAVAIL DE LA PLÉNIÈRE

République du Cameroun, République de Côte d'Ivoire, République gabonaise, République de Guinée, République du Mali, République de Mauritanie, République de l'Ouganda, République du Sénégal, République du Tchad, République togolaise

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Ajouter **"Burkina Faso"** dans la liste des pays signataires de ce document.

*Add **"Burkina Faso"** in the list of countries cosponsoring this document.*

Añádase **"Burkina Faso"** a la lista de países firmantes de este documento.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 104-E
25 October 1995
Original: French

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

PLENARY MEETING

Cameroon (Republic of), Côte d'Ivoire (Republic of), Gabonese Republic, Guinea (Republic of), Mali (Republic of), Mauritania (Islamic Republic of), Uganda (Republic of), Senegal (Republic of), Chad (Republic of), Togolese Republic

PROPOSALS FOR THE WORK OF THE CONFERENCE

AVAILABILITY OF THE NEWLY ALLOCATED HFBC BANDS (WRC-95 AGENDA ITEM 3c))

The WARC (HFBC-87) considered the HFBC planning system developed by the former IFRB on the basis of the conclusions reached at the first session in 1984. Inadequate progress was achieved in carrying out planning exercises and procedures; however, compliance with the relevant guidelines indicated below would have made it possible to deal with the situation more effectively:

- Resolution 508 (WARC-92) relating to the convening of a world administrative radio conference for the planning of the HF bands allocated to the broadcasting service;
- Resolution 511 (HFBC-87) inviting the ITU Council to take whatever action is necessary for convening a WARC-HFBC not later than 1992;
- Resolution 515 (HFBC-87) relating to improvements to the HFBC planning system procedures;
- Resolution 523 (WARC-92) relating to the steps to be taken for the purpose of convening a WARC-HFBC;

Having regard to the foregoing, the above-mentioned administrations request WRC-95, when adopting decisions on item 3c) of the agenda, to take account of the fundamental principle of guaranteed equitable access to the radio-frequency spectrum for all Members. This guarantee can be effected only by planning the new HF bands (WARC-79 and 92).

Hence a competent conference, which should be held as soon as possible, to consider the use of the HFBC bands in the light of the radical changes that have taken place in broadcasting would serve to prevent disorganized use of the newly allocated bands.

Such a conference would take account of the highly encouraging results achieved by Task Group 10/5.

WRC-95 should be reminded that Resolution 20 of the Plenipotentiary Conference stipulates quite clearly "that broadcasting stations in the bands referred to above shall not be operated until planning is completed and the conditions stipulated in the Radio Regulations are fulfilled".

Furthermore, WRC-95 should have regard to the economic difficulties encountered by the developing countries in switching over from DSB to SSB equipment.

Thus the date of 31 December 2015 set for the discontinuance of DSB emissions should not be re-examined by WRC-95.

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 105(Rev.1)-E
30 October 1995
Original: English

COMMITTEE 4

SUMMARY RECORD

OF THE

SECOND MEETING OF COMMITTEE 4

(VGE REPORT ON THE SIMPLICATION OF THE RADIO REGULATIONS)

Tuesday, 24 October 1995, at 1435 hours

Chairman: Mr. M. GODDARD (United Kingdom)

Subject discussed		**Documents**
1	Appointment of Working Group Chairmen (continued)	-

1 Appointment of Working Group Chairmen (continued)

1.1 The **Chairman** noted that there were, as yet, no candidates for the post of Chairman of Working Group 4C. In order to enable the Working Groups to pursue their work without further delay and to avoid holding a further meeting of Committee 4 simply for the purpose of appointing a Chairman of Working Group 4C, he suggested that, as soon as he had a nomination to put forward, he would seek delegates' approval through Working Group 4A or 4B. In that way, Working Group 4C might commence its work no later than the afternoon of the following day.

1.2 The **delegate of the United States** endorsed that suggestion.

1.3 The Committee **agreed** to follow the course suggested by the Chairman.

The meeting rose at 1440 hours.

The Secretary:
M. GIROUX

The Chairman:
M. GODDARD

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 105-E
26 October 1995
Original: English

COMMITTEE 4

SUMMARY RECORD

OF THE

SECOND MEETING OF COMMITTEE 4

(VGE REPORT ON THE SIMPLICATION OF THE RADIO REGULATIONS)

Tuesday, 24 October 1995, at 1435 hours

Chairman: Mr. M. GODDARD (United Kingdom)

Subject discussed		**Documents**
1	Appointment of Working Group Chairmen (continued)	-

1 Appointment of Working Group Chairmen (continued)

1.1 The **Chairman** noted that there was, as yet, no candidates for the post of Chairman of Working Group 4C. In order to enable the Working Groups to pursue their work without further delay and to avoid holding a further meeting of Committee 4 simply for the purpose of appointing a Chairman of Working Group 4C, he suggested that, as soon as he had a nomination to put forward, he would seek delegates' approval through Working Group 4A or 4B. In that way, Working Group 4C might commence its work no later than the afternoon of the following day.

1.2 The **delegate of the United States** endorsed that suggestion.

1.3 The Committee **agreed** to follow the course suggest by the Chairman.

The meeting rose at 1440 hours.

The Secretary:
M. GIROUX

The Chairman:
M. GODDARD

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Corrigendum 1 to Document 106-E
1 November 1995
Original: Spanish

COMMITTEE 5

SUMMARY RECORD

OF THE

SECOND MEETING OF COMMITTEE 5

Replace paragraph 2.27 by the following text:

Document 69

2.27 The **delegate of Ecuador** said that the proposals in Document 69 covered four basic issues relevant to the work of the Committee. First, under EQA/69/5, it was proposed that any modification or replacement of the constraints on the mobile-satellite service in the frequency bands below 1 GHz allocated by WARC-92 should be backed up by ITU studies on the feasibility of sharing in those bands. Second, it was proposed that the allocation of the bands below 1 GHz listed in proposals EQA/69/6 to 13 should be maintained, owing to their high occupancy by systems in the fixed and land mobile services. Third, as indicated in proposal EQA/69/15, Ecuador was in favour of maintaining the original date of 1 January 2005 for the entry into force of allocations in the 2 GHz band, in order to safeguard the interests and investments of administrations with major telecommunication systems in operation, pending the availability of alternative bands. Fourth, proposal EQA/69/15 concerning the application of Resolution 70 (WARC-92) was covered by the contribution from the Arab countries (Document 35) to be taken up by the Plenary. If possible, Ecuador would also like to submit a delayed contribution concerning the allocation of bands in the 1 - 3 GHz range, which came within the purview of Working Group 5B.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 106-E
26 October 1995
Original: English

COMMITTEE 5

SUMMARY RECORD

OF THE

SECOND MEETING OF COMMITTEE 5

(MSS AND OTHER MATTERS)

Tuesday, 24 October 1995, at 1605 hours

Chairman: Mr. G.F. JENKINSON (Australia)

	Subjects discussed	**Documents**
1	Appointment of Working Group Chairmen	–
2	Introduction of documents (continued)	18 + Add.1, 19 + Corr.1, 21, 22, 23, 24, 25, 28, 29, 30, 36, 39, 41, 44, 45, 46, 53, 56, 57, 58, 59, 62, 63, 66, 68, 69, 73, 80; DT/6

1 Appointment of Working Group Chairmen

1.1 The **Chairman** observed that the Committee had to elect Chairmen for Working Groups 5A, 5B, and 5C. Details of the work to be undertaken by those Groups could be found in Document DT/6. As no consensus had been reached on the nominations, a compromise solution should perhaps be adopted so that no further time would be lost in debate. He proposed, therefore, that Mr. Levin (United States), Mr. Kisrawi (Syria) and Mr. Ito (Japan) should be appointed as Chairmen of Working Groups 5A, 5B and 5C respectively.

1.2 It was so **agreed**.

2 Introduction of documents (continued) (Documents 18 and Addendum 1, 19 and Corrigendum 1, 21, 22, 23, 24, 25, 28, 29, 30, 36, 39, 41, 44, 45, 46, 53, 56, 57, 58, 59, 62, 63, 66, 68, 69, 73, 80; DT/6)

Document 18 and Addendum 1

2.1 The **delegate of Canada**, after drawing attention to Documents 64 and 65, which were to be issued shortly for information only, said that in formulating its proposals, Canada had sought to ensure that there was sufficient spectrum to accommodate the many mobile-satellite systems proposed and to develop the necessary technical and regulatory conditions which would allow for their orderly growth. Canada therefore proposed removal of constraints from the MSS feeder-link allocations and the allocation of a modest amount of additional spectrum which would bring some stability to the 1 - 3 GHz band and permit other services sharing the band to develop long-term plans. In order to ease the sharing constraints affecting MSS allocations at 2 GHz, it was proposed to shift the allocations made at WARC-92. Discussions on that issue should take place concurrently with those on the date of entry into force of MSS allocations. There was a need to achieve a balance of interest between existing users, such as the fixed service, and new and innovative applications.

Document 19 and Corrigendum 1

2.2 The **delegate of Australia** said that his delegation's proposals for agenda item 2.1a) examined ways to achieve greater flexibility in some MSS bands. His Administration continued to be concerned by the constraints arising from specific service allocations, such as the land mobile-satellite, maritime mobile-satellite and aeronautical mobile-satellite bands. The conversion of MSS bands to generic MSS was dealt with in proposals AUS/19/7A to 7L. Subject to the protection of existing terrestrial services, it was proposed to bring forward the date of entry into force of allocations in some bands in the 2 GHz range. Those proposals, submitted under agenda item 2.1b), were numbered in AUS/19/8 and AUS/19/9. Suggestions for transitional arrangements were contained in proposal AUS/19/11. Proposals for MSS feeder links pertaining to agenda item 2.1c) had been drawn up in response to the CPM Report and appeared in proposals AUS/19/12A to 12D, AUS/19/13A, AUS/19/14, AUS/19/15, AUS/19/16A to 16C, AUS/19/17A and 17B. With respect to the protection of other services, and with particular reference to RR 2613, Australia had made proposals to ensure the ongoing protection of the Appendix 30B Allotment Plan and also for the protection of GSO FSS satellite receivers (AUS/19/18). The proposal for agenda item 3d) picks up on the lack of an uplink allocation as noted in the CPM Report. The proposal for agenda item 5 contained suggestions for reconsideration of the date for advance notification and coordination

procedures as set down in Resolution 46 (WARC-92) and RR 1042. Finally, proposal AUS/19/22 sought to modify Resolution 212 (WARC-92).

Document 21

2.3 The **representative of the Radiocommunication Bureau** said that Section 2.1 of Document 21 provided information relating to the current provisions of the Radio Regulations as well as the Rules of Procedure and practices applicable to the 2 GHz MSS allocations with respect to agenda item 2.1b), while Attachment 6 contained particulars of the systems in the 2 GHz band received for advance publication and coordination which were being dealt with by the Radiocommunication Bureau. Further information on the systems would be made available in the working groups.

Document 22

2.4 The **delegate of Japan** said that major proposals submitted by Japan to Committee 5 included those under agenda item 2.1b) on bringing forward the date of entry into force of allocations in the 2 GHz MSS bands. Priority use of those bands, however, should be given to existing services to ensure their protection. Agenda item 2.1c) concerned frequency allocations to non-GSO/MSS feeder links in the C-, Ka- and Ku-bands, and the Japanese proposal for the Ku-band was numbered J/22/1. Proposals J/22/2 and J/22/3, listed under agenda item 3d), concerned the non-allocation of the new frequency band to MSS service links.

Document 23

2.5 The **delegate of Algeria** said that the aim of the draft Resolution submitted under item 2.1 of the agenda and contained in proposal ALG/23/4 was to protect existing and planned services in the 1 - 3 GHz frequency band and to postpone the putting into service of mobile-satellite service systems beyond the year 2005.

Document 24

2.6 The **observer for ICAO** drew attention to ICAO's view that the exclusive allocations to the AMS (R)S in the bands 1 545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz should remain unchanged (Document 24, § 2.5.3.1). He also stressed the need to protect the bands between 1 559 and 1 610 MHz for the operation of satellite-based navigation systems such as GPS and GLONASS. More detailed information would be provided to Working Group 5B, if necessary.

Document 25

2.7 The **delegate of the Islamic Republic of Iran** drew attention to proposal IRN/25/12 proposing a stricter power flux-density limit (-140 dB(W/m^2/4 kHz)) to protect terrestrial services. He also noted proposals IRN/25/13 indicating that his Administration would like the revised version of Resolution 46 (WARC-92) to take into account the method for coordinating mobile earth stations, and IRN/25/14 which proposed a modification to take into account the work of ITU-R Task Group 2/2. His delegation was in favour of setting the year 2005 as the date of entry into force for MSS allocations.

Document 28

2.8 The **delegate of Kenya**, drawing particular attention to proposal KEN/28/43, said that as the Kenyan Administration had an extensive terrestrial fixed network in the bands 1 980 - 2 010 MHz and 2 170 - 2 200 MHz - a network which also extended throughout East Africa - it was not in favour of advancing the date of entry into force of the MSS allocations in those bands.

Document 29

2.9 The **delegate of New Zealand** said that his delegation had no proposal which concerned Working Group 5A. With regard to Working Group 5B, he drew attention to Sections 3.2 and 3.8 of Document 29 relating to the 1 - 3 GHz MSS issues. Under Section 3.3 on the date of entry into force of MSS spectrum, his Administration indicated its preference for the present date of 2005. Sections 3.4 and 3.8 on MSS feeder links concerned Working Group 5C, and comments on the review of Resolution 112 (WARC-92) would be found on pages 5 and 7 of the document.

Document 30

2.10 The **delegate of Mali**, referring to proposal MLI/30/5 on the use of bands below 3 GHz by the MSS, stressed the need to increase protection for those bands, in which his country was developing all its terrestrial systems. His Administration was in favour of maintaining the year 2005 or beyond for the date of entry into force of the MSS allocations. He also referred to proposals MLI/30/8 and MLI/30/12 to the effect that no modification should be made to allocations in the band 5 000 - 5 150 MHz, in order to protect the aeronautical radionavigation service, which was a safety service, nor to the bands between 1 559 and 1 610 MHz, so as to protect future satellite navigation systems such as GPS and GLONASS.

Document 36

2.11 The **delegate of Tunisia**, speaking on behalf of the group of Arab countries which had submitted the document, drew attention to proposal ARS/EGY/UAE/KWT/LBN/MRC/OMA/QAT/SYR/TUN/YEM/36/1, indicating that the Administrations of those countries wished to maintain the year 2005 as the date of entry into force of the MSS allocations.

Document 39

2.12 The **delegate of Senegal**, introducing the document, said that his country had invested extensively in the fixed services in the bands in question and hoped that the Conference, in making MSS allocations, would ensure protection of the existing systems. The solution recommended in proposal SEN/39/5 was to favour bilateral coordination so that each administration could opt to protect its existing services, to transfer them on the basis of agreements reached, or to pursue a project which would enable it to serve all localities rapidly. In view of the economic impact which the transfer of fixed service systems could have on the implementation of projects that had been the subject of advance publication, bilateral agreements should also be used to take account of the amortization periods of the investments made, which varied from one country to another (proposal SEN/39/6). He also referred to proposal SEN/39/7, to the effect that the MSS allocations in the 5 000 - 5 150 MHz band should not be modified, so as to protect the specific characteristics of the aeronautical navigation service.

Document 41

2.13 The **delegate of India** introduced his country's proposals, emphasizing that his country supported the removal of technical and regulatory constraints in the use of frequency bands allocated to the MSS. Radio astronomy observations required protection from harmful interference caused by the MSS, particularly the LEO MSS systems. Certain regulatory provisions should be modified in order to facilitate protection of radio astronomy observations from out-of-band emissions. His delegation supported the views expressed in the CPM report in favour of earlier access to the 2 GHz MSS allocations to meet projected MSS demands around the year 2000, with appropriate protection for the fixed service and space service operation in the 2 GHz band. His Administration had also submitted a proposal regarding feeder links for non-geostationary satellite networks, with appropriate regulatory provisions. It was also in agreement with the conclusions of the CPM regarding agenda items 2.2 and 2.3.

Document 44

2.14 The **delegate of the Republic of Korea**, introducing the document, said that his Administration had no plan for additional MSS allocations in the band below 1 GHz, which was already used for terrestrial fixed and mobile services. It was proposed to modify certain allocations in order to facilitate the timely introduction of the worldwide MSS.

Document 45

2.15 The **observer for INTELSAT** drew attention to the parts of Document 45 which concerned Committee 5. The related proposals, including the draft Recommendation in Annex 1, concerned studies which might lead to the development of power flux-density and e.i.r.p. limits that would have to be met by non-GSO/MSS feeder links, in order to guarantee the protection of GSO/FSS networks in accordance with the provisions of RR 2613. If those limits could be successfully developed, several difficulties presently encountered with respect to the application of RR 2613 would be mitigated.

Document 46

2.16 The **Chairman**, speaking in the absence of a representative of the International Maritime Organization (IMO), drew attention to § 8 of Annex 1 to the document, which would be relevant to the work of Working Group 5B.

Document 53

2.17 The **delegate of Tanzania** drew attention to proposal TZA/53/9, indicating that his Administration wished to retain the name of Tanzania in footnote 608C to protect systems operating in the 148 - 149.9 MHz band, and to proposal TZA/53/10 indicating that his Administration did not concur with the advancement before the year 2000 of the date for entry into force of the MSS allocations in frequencies around 2 GHz.

Document 56

2.18 The **delegate of Indonesia** drew attention to proposals INS/56/1 to INS/56/7B which concerned Committee 5 and were intended: to ensure smooth migration of the fixed services regarding the MSS band requirements; to ensure that appropriate practical preparations were made prior to the date of entry into force of the 2 GHz MSS allocations, whatever the actual date; to support the CPM Recommendations concerning non-GSO satellite power flux-density limits and the avoidance of harmful interference from non-GSO/MSS feeder links to FS stations; to propose that under the 6 - 7 GHz band there was a primary allocation for MSS feeder links and that RR 2613 should not be applied in that case; and to propose the deletion of Resolution 112 (WARC-92) and the modification of RR 855A.

Document 57

2.19 The **delegate of Thailand** said that his Administration, recognizing the urgent need to develop the MSS, proposed in THA/57/4 that the date of entry into force for the worldwide allocations to that service be changed from the year 2005 to 2000, subject to protection of existing services. It was also proposed that the bands 5 150 - 5 250 MHz and 6 975 - 7 075 MHz in the C-band as well the bands 19.3 - 19.7 GHz and 29.1 - 29.5 GHz in the Ka-band should be allocated to the non-GSO/MSS feeder links from among the bands described in the CPM Report (proposals THA/57/5 and THA/57/7).

Document 58

2.20 The **Chairman**, speaking in the absence of the delegation of Uzbekistan, drew attention to proposal UZB/58/12, to the effect that the date of entry into force of the allocations referred to in agenda item 2.1b) should be set between the years 2000 and 2005.

Document 59

2.21 The **delegate of France** said that his Administration's proposals, which concerned the allocation of frequencies in the 5 GHz band, was in process of publication and would be introduced directly in Working Group 5C.

Document 62

2.22 The **delegate of China**, after observing that Annexes 5 to 9 of Document 62 concerned Committee 5, said that his Administration's proposals were aimed at relaxing some of the constraints in the 2 GHz band, to take into account technical developments and requirements. It was also considered that the date of entry into force of MSS allocations in the bands 1 980 - 2 010 MHz and 2 170 - 2 200 MHz should be advanced to the year 2000, subject to protection of existing fixed service systems in those bands.

Document 63

2.23 The **delegate of Cuba**, introducing Document 63, said that proposals CUB/63/11 to 14 were summarized in proposal CUB/63/15, which sought to modify footnote 599A by establishing a power flux-density of -140 dB(W/m^2/4 kHz) as a coordination threshold which would offer greater

protection for aeronautical mobile service systems operating in the bands concerned. Proposals CUB/63/18 and CUB/63/19 both dealt with restrictions imposed by Resolution 46 (WARC-92). It was worth noting, however, that different solutions had been put forward for the two footnotes concerned: in the case of footnote 608A, it had been considered necessary to maintain a reference to the power flux-density level of -150 dB(W/m^2/4 kHz) so as to ensure protection for the fixed and mobile services on the territory of the countries mentioned in footnote 608C, which stipulated that such services had priority over the mobile-satellite service. Lastly, he drew attention to proposal CUB/63/24 regarding the proposal to bring forward to the year 2000 use of the frequency bands 1 980 - 2 010 MHz and 2 170 - 2 200 MHz by the mobile-satellite service. Cuba had prepared a draft resolution on the subject with the intent that a procedure should be applied for the gradual transfer of the frequency assignments to fixed and mobile service stations operating in the bands in question. It was further proposed that the ITU should look into the possibility of providing assistance to developing countries, on request, for the introduction of specific modifications to their radiocommunication networks that would facilitate their access to new technologies being developed in the 2 GHz band.

Document 66

2.24 The **delegate of France** said that Document 66, which had not yet been issued, provided information on the progress of the group of experts in CEPT responsible for developing the Standard Computation Program (SCP). The software was to be used in assessing the need for coordination between the fixed and non-GSO MSS systems (space-to-Earth) in the 1 - 3 GHz range. The document would be found useful by Working Group 5B.

2.25 The **Chairman** confirmed that Document 66 would be forwarded to Working Group 5B.

Document 68

2.26 The **delegate of Uganda** drew attention to the proposals set out in the latter part of Document 68. He stressed that Uganda, like its neighbouring countries, was still operating an extensive network in the 2 GHz band and was therefore not in favour of the use of the bands 1 980 - 2 010 MHz and 2 170 - 2 200 MHz by the mobile-satellite service before the year 2005.

Document 69

2.27 The **delegate of Ecuador** said that the proposals in Document 69 covered four basic issues relevant to the work of the Committee. First, under EQA/69/5, it was proposed that any modification or replacement of the constraints on the mobile-satellite service in the frequency bands below 1 GHz allocated by WARC-92 should be backed up by ITU studies on the feasibility of sharing in those bands. Second, it was proposed that the allocation of the bands below 1 GHz listed in proposals EQA/69/6 to 13 should be maintained, owing to their high occupancy by the mobile-satellite service. Third, as indicated in proposal EQA/69/15, Ecuador was in favour of maintaining the original date of 1 January 2005 for the entry into force of allocations in the 2 GHz band, in order to safeguard the interests and investments of administrations with major telecommunication systems in operation, pending the availability of alternative bands. Fourth, proposal EQA/69/15 concerning the application of Resolution 70 (WARC-92) was covered by the contribution from the Arab countries (Document 35) to be taken up by the Plenary. If possible, Ecuador would also like to

submit a delayed contribution concerning the allocation of bands in the 1 - 3 GHz range, which came within the purview of Working Group 5B.

2.28 The **Chairman**, having requested the delegation of Ecuador to submit the contribution to the Conference secretariat without delay for processing, invited other delegations which had submitted proposals for the work of the Committee that had not yet been published to provide further information.

Document 80

2.29 The **delegate of Mexico** introduced his country's main proposals for the work of the Conference, which would be the subject of Document 80. First, it was proposed to lift restrictions on the power flux-density limits outside national boundaries in the 148 - 150 MHz band and to apply the coordination procedures laid down by the relevant ITU recommendations instead. Second, more spectrum was required for LEOs operating in the range below 1 GHz. Mexico would prefer allocations to be made, as far as possible, in adjacent blocks of 2.5 to 4.0 MHz, thereby allowing all concerned to take advantage of economic benefits in the development of such systems. Third, Mexico sought a number of primary allocations in the bands 312 - 315 MHz and 387 - 390 MHz for the mobile-satellite service. As to the proposal to bring forward the entry into force of allocations to the MSS in the 2 GHz band, Mexico had prepared a draft Recommendation that would allow for the sharing of bands between the MSS and fixed services from the year 2000 to 2005. Lastly, it had submitted proposals which highlighted the need for spectrum to be allocated to feeder links for the MSS in the 5 and 6 - 7 GHz range.

Document 73

2.30 The **delegate of Cameroon** said that his country's proposals, which would be issued as Document 73, concerned the non-GSO/MSS systems in the 2 GHz band. They were relevant to agenda items 2.1a), 2.1b) and 2.1c) and should therefore be taken up by Working Group 5B.

2.31 The **Chairman** thanked delegations for their comments. The Committee had thus completed its general consideration of documents and their allocation to the relevant Working Groups.

The meeting rose at 1725 hours.

The Secretary:
G. KOVACS

The Chairman:
G.F. JENKINSON

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 107-E
26 October 1995
Original: French

PLENARY MEETING

Note by the Secretary-General

TRANSFER OF POWERS

MICRONESIA - UNITED STATES

The Government of the Federated States of Micronesia has informed me that it cannot send a delegation to the Conference.

In pursuance to No. 335 of the Geneva Convention (1992), it has given the delegation of the United States of America powers to represent it.

The instrument for the transfer of powers has been deposited with the Secretariat of the Credentials Committee. Committee 2, at its first meeting, has examined this instrument and has found it to be in order.

Pekka TARJANNE
Secretary-General

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 108(Rev.1)-E
13 November 1995
Original: English

WORKING GROUP OF THE PLENARY

ORGANIZATION OF THE WORK OF THE WORKING GROUP OF THE PLENARY

To cover the Conference agenda items assigned to the Working Group of the Plenary, the following topics will be considered:

Topic 1 (agenda item 3a))

Taking into account the work carried out by the study groups and the Conference Preparatory Meeting of the Radiocommunication Sector, with a view to WRC-97 taking action as appropriate:

"Appendices 30 and 30A for Regions 1 and 3 in response to Resolution 524 (WARC-92), and taking particular account of resolves 2 of that Resolution and with due regard to the advantage of taking into account, where practicable, the orbital arcs of Appendix 30B".

Documents: As shown in attached Table

Topic 2 (agenda item 3b))

"Resolution 712 (WARC-92)", taking into account the work carried out by the study groups and the Conference Preparatory Meeting of the Radiocommunication Sector, with a view to WRC-97 taking action, as appropriate.

Documents: As shown in attached Table

Topic 3 (agenda item 3c))

"the availability of the newly allocated HFBC bands", taking into account the work carried out by the study groups and the Conference Preparatory Meeting of the Radiocommunication Sector, with a view to WRC-97 taking action, as appropriate.

Documents: As shown in attached Table

Topic 4 (agenda item 6.2)

The draft agenda for the 1997 World Radiocommunication Conference.

Documents: As shown in attached Table

Topic 5 (agenda item 6.2)

The preliminary draft agenda for the 1999 World Radiocommunication Conference and possible agenda items for future conferences.

Documents: As shown in attached Table

The Working Group of the Plenary shall also identify those items within the purview of its terms of reference which may require priority action by the ITU-R study groups (agenda item 6.3).

R. TAYLOR
Chairman of GT PLEN, No. 529

A. NALBANDIAN
Secretary of GT PLEN, No. 2025

Attachment: Allocation of documents by topic

ATTACHMENT

Allocation of documents by topic

Doc.	Origin	Topic				
		WRC-95 Agenda item 3 a)	WRC-95 Agenda item 3 b)	WRC-95 Agenda item 3 c)	WRC-97 Agenda	WRC-99 Agenda
1	SG	Agenda item 3 a)	Agenda item 3 b)	Agenda item 3 c)	Agenda item 6.2	Agenda item 6.2
3	BR	Chapter 3, Part A Chapter 4, § 4.3	Chapter 3, Part B	Chapter 3, Part C Chapter 4, § 4.5		
5	EUR	Part 7		Part 8	Part 10	
7	RUS	RUS/7/ 48-54	item 3 b)	RUS/7/55		
8	ARG	ARG/8/86	ARG/8/87	ARG/8/88-90		
9	USA				Add.16 USA/9/237	
12	ZWE			ZWE/12/10		
17 + Corr.1	B			B/17/193	B/17 /165	B/17/166
18 (Add.1)	CAN				CAN/18/55(MOD)	
19	AUS	Agenda item 3a)			Agenda item 6.2	
21	BR	§ 2.6	§ 2.2; § 3.2	§ 3.1	§ 2.3	
22	J		J/22/1 and J/22/113			
25	IRN.	Agenda item 3a) IRN/25/7-10	Agenda item 3b) IRN/25/11			
28	KEN		KEN/28/56	Part 3	KEN/28/56	
29	NZL	Agenda item 3a) § 3.6	Agenda item 3b)	Agenda item 3c) § 3.7	Agenda item 6.2 § 3.11	§ 3.10
30	MLI	MLI/30/9		MLI/30/10	MLI/30/15	MLI/30/15
37	SYR			Agenda item 3c)		
38	EGY	Agenda item 3 a)				
39	SEN	SEN/39/10	SEN/39/11	SEN/39/12		
41	IND	§ 3.6	§ 3.7	§ 3.8		
44	KOR	Part 7	Part 8	Part 9		
45	Intelsat				Annex 2	
46	IMO				items 1), 3), 8) of Annex 1	
53	TZA			TZA/53/12	Part 6	
55	CME			CME/55/2 and 3		
56	INS	INS/56/8 and 9		INS/56/10		
57	THA	Agenda item 3 a)	Agenda item 3 b)	Agenda item 3 c)		
58	UZB	UZB/58/13 and 14				
60	S				S/60/1 and 2	
61	CVA			Agenda item 3c)	Agenda item 6.2	
62	CHN	Annex 3 CHN/62/28		Annex 4 CHN/62/29 and 30		
63	CUB			CUB/63/25		
71	HRV	HRV/71/1		CUB/63/25		

Doc.	Origin	Topic				
		WRC-95 Agenda item 3 a)	WRC-95 Agenda item 3 b)	WRC-95 Agenda item 3 c)	WRC-97 Agenda	WRC-99 Agenda
75	PHL	PHL/75/11-15	PHL/75/16	PHL/75/17-18		
90	BRU et al.	BRU/90/6	Agenda item 3 b)	BRU/90/7		
99	UKR		UKR/99/1			
104	CME et al.			Agenda item 3 c)		
121	J				J/121/3	J/121/3
128 + Corr.1	ISR	ISR/128/1-10				
134	HOL		HOL/134/1			
135	AUS et al.	AUS/135/1				
167	PAK	PAK/167/1				
170	AUS et al.			AUS/170/1		
171	AFG			Agenda item 3 c)		
199	IND, USA				IND/USA/199/1	
203	COM5				B/17/165	B/17/165
216	GUI et al.			GUI/216/4	GUI/216/6	
229	AGL et al.				AGL/229/1	

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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26 October 1995
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WORKING GROUP OF THE PLENARY

ORGANIZATION OF THE WORK OF THE WORKING GROUP OF THE PLENARY

To cover the Conference agenda items assigned to the Working Group of the Plenary, the following topics will be considered:

Topic 1 (agenda item 3a))

Taking into account the work carried out by the study groups and the Conference Preparatory Meeting of the Radiocommunication Sector, with a view to WRC-97 taking action as appropriate:

"Appendices 30 and 30A for Regions 1 and 3 in response to Resolution 524 (WARC-92), and taking particular account of resolves 2 of that Resolution and with due regard to the advantage of taking into account, where practicable, the orbital arcs of Appendix 30B".

Documents: As shown in attached Table

Topic 2 (agenda item 3b))

"Resolution 712 (WARC-92)", taking into account the work carried out by the study groups and the Conference Preparatory Meeting of the Radiocommunication Sector, with a view to WRC-97 taking action, as appropriate.

Documents: As shown in attached Table

Topic 3 (agenda item 3c))

"the availability of the newly allocated HFBC bands", taking into account the work carried out by the study groups and the Conference Preparatory Meeting of the Radiocommunication Sector, with a view to WRC-97 taking action, as appropriate.

Documents: As shown in attached Table

Topic 4 (agenda item 6.2)

The draft agenda for the 1997 World Radiocommunication Conference.

Documents: As shown in attached Table

Topic 5 (agenda item 6.2)

The preliminary draft agenda for the 1999 World Radiocommunication Conference and possible agenda items for future conferences.

Documents: As shown in attached Table

The Working Group of the Plenary shall also identify those items within the purview of its terms of reference which may require priority action by the ITU-R study groups (agenda item 6.3).

R. TAYLOR
Chairman of GT PLEN, No. 692

A. NALBANDIAN
Secretary of GT PLEN, No. 2025

Attachment: Allocation of documents by topic

ATTACHMENT

Allocation of documents by topic

Doc.	Origin	Topic				
		WRC-95 Agenda item 3 a)	WRC-95 Agenda item 3 b)	WRC-95 Agenda item 3 c)	WRC-97 Agenda	WRC-99 Agenda
1	SG	Item 3 a)	Item 3 b)	Item 3 c)	Item 6.2	Item 6.2
3	BR	Chapter 3, Part A Chapter 4, § 4.3	Chapter 3, Part B	Chapter 3, Part C Chapter 4, § 4.5		
5	EUR	Part 7		Part 8	Part 10	
7	RUS	RUS/7/ 48-54	item 3 b)	RUS/7/55		
8	ARG	ARG/8/86	ARG/8/87	ARG/8/88-90		
9	USA				Add.16 USA/9/237	
12	ZWE			ZWE/12/10		
17	B			B/17/193	B/17 /165	B/17/166
18 (Add.1)	CAN				CAN/18/55(MOD)	
19	AUS	Agenda item 3a)				
21	BR	§ 2.6	§ 2.2; § 3.2	§ 3.1	§ 2.3	
22	J		J/22/1 and J/22/113			
25	IRN	Agenda item 3a) IRN/25/7-10	Agenda item 3b) IRN/25/11			
28	KEN		KEN/28/56	Part 3	KEN/28/56	
29	NZL	Agenda item 3a) § 3.6	Agenda item 3b)	Agenda item 3c) § 3.7	Agenda item 6.2 § 3.11	§ 3.10
30	MLI	MLI/30/9		MLI/30/10	MLI/30/15	MLI/30/15
37	SYR			Agenda item 3c)		
38	EGY	Agenda item 3 a)				
39	SEN	SEN/39/10	SEN/39/11	SEN/39/12		
41	IND	§ 3.6	§ 3.7	§ 3.8		
44	KOR	Part 7	Part 8	Part 9		
45	Intelsat				Annex 2	
46	IMO				items 1), 3), 8) of Annex 1	
53	TZA			TZA/53/12	Part 6	
55	CME			CME/55/2 and 3		
56	INS	INS/56/8 and 9		INS/56/10		
57	THA	Agenda item 3 a)	Agenda item 3 b)	Agenda item 3 c)		
58	UZB	UZB/58/13 and 14				
60	S				S/60/1 and 2	
61	CVA			Agenda item 3c)	Agenda item 6.2	
62	CHN	Annex 3 CHN/62/28		Annex 4 CHN/62/29 and 30		
63	CUB			CUB/63/25		
71	HRV	HRV/71/1		CUB/63/25		

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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COMMITTEE 2

SUMMARY RECORD

OF THE

FIRST MEETING OF COMMITTEE 2

(CREDENTIALS)

Thursday, 26 October 1995, at 1030 hours

Chairman: Mr. W. TALLAH (Cameroon)

Subjects discussed		**Documents**
1	Terms of reference of the Committee	88
2	Organization of work	
3	Transfer of powers	
4	Depositing of credentials	

1 Terms of reference of the Committee (Document 88)

1.1 The **Chairman** read out the terms of reference of the Committee, approved by the First Plenary Meeting, as defined in Document 88, and observed that the Committee was due to submit its report on Tuesday, 14 November 1995.

1.2 The Committee **took note** of its terms of reference.

2 Organization of work

2.1 The **Chairman** suggested that, for the purpose of examining the credentials received so far, a small working group should be set up comprising himself, the Vice-Chairman and a few volunteers. He noted that the working group would be open and called upon the delegations present to communicate to the Secretary of the Committee the names of the delegates that wished to participate.

2.2 The proposal was **approved**.

3 Transfer of powers

3.1 The **Secretary of the Committee** pointed out that the Federated States of Micronesia, unable to send their own delegation to the Conference, had given the Delegation of the United States powers to vote and sign on their behalf, in conformity with Article 31 (No. 335) of the Convention of the International Telecommunication Union (Geneva, 1992). He read out the document addressed to the Secretary-General in which the Federated States of Micronesia gave the said powers to the United States.

3.2 The **Chairman** added that the transfer of powers would be published in a document to be distributed to all participants.

3.3 The transfer of powers was **approved**.

4 Depositing of credentials

4.1 The **Secretary of the Committee** announced that the Secretariat had so far received the credentials of 65 of the 117 Members of the Union currently present at the Conference.

4.2 The **Chairman** called upon the other Member States to deposit their credentials as soon as possible so that the Committee could submit a report to the Plenary Meeting within the required deadline.

The meeting rose at 1045 hours.

The Secretary:
X. ESCOFET

The Chairman:
W. TALLAH

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COMMITTEES 4, 5
WORKING GROUP
OF THE PLENARY

NOTE BY THE CHAIRMAN OF COMMITTEE 3 TO THE CHAIRMEN OF COMMITTEES 4, 5 AND WORKING GROUP OF THE PLENARY

Under its terms of reference, the Budget Control Committee is requested to present a report to the Plenary Meeting showing, as accurately as possible, the estimated total expenditure of the conference, as well as an estimate of the costs that may be entailed by the execution of the decisions taken by such conference in accordance with Article 32 of the Convention of the International Telecommunication Union (Geneva, 1992).

To enable me to provide the plenary meeting with the necessary information, I should be grateful if you would supply me, as soon as possible but not later than Tuesday, 7 November 1995, an estimate of the costs that may be entailed by the execution of the decisions taken by the World Radiocommunication Conference (WRC-95).

L. N. CHEHAB
Chairman, Committee 3

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 5

SUMMARY RECORD

OF THE

THIRD MEETING OF COMMITTEE 5

(MSS AND OTHER MATTERS)

Wednesday, 25 October 1995, at 0930 hours

Chairman: Mr. G.F. JENKINSON (Australia)

Subjects discussed		**Documents**
1	Consideration of WRC-95 agenda item 2.2	3, 5, 7, Add.11 to 9, 17, 18, 22, 39, 41, 57, 62, 95
2	Consideration of WRC-95 agenda item 2.3	3, 5, 7, Add.12 to 9, 17, 18, 22, 28, 29, 39, 41, 53, 56, 57, 62, 95

1 Consideration of WRC-95 agenda item 2.2 (Documents 3, 5, 7, Addendum 11 to 9, 17, 18, 22, 39, 41, 57, 62, 95)

1.1 The **Chairman** introduced Document 95 and, having noted that Chapter 2, Section II, of the CPM Report (Document 3) dealt with conference agenda item 2.2, invited delegations to introduce their proposals on it, as listed in the relevant column in the attachment to Document 95.

1.2 The **delegates of the United Kingdom, Russia, the United States, Brazil, Canada, Japan, Senegal, India, Thailand** and **China** introduced and commented briefly on proposals EUR/5/67, RUS/7/43, USA/9/210 and 211, B/17/189, CAN/18/43 and 44, J/22/109, SEN/39/8, IND/41/154, THA/57/8 and CHN/62/41, respectively.

1.3 The **Chairman** noted that, as several speakers had observed, all the proposals concurred substantively with one another, as well as with the conclusions in Chapter 2, Section II, of the CPM Report. He therefore suggested that they should be approved *en bloc* and consolidated in a single document, which the Committee would subsequently approve and submit to Committee 6.

1.4 It was so **agreed**.

1.5 The **delegate of France** noted that the purpose of the proposals just approved was to protect terrestrial services. Studies were currently under way within the ITU on potential interference to space services by new terrestrial services, a subject that should possibly be placed on the agenda of a future WRC.

1.6 The **Chairman** said that the suggestion by the previous speaker might usefully be brought to the attention of the Working Group of the Plenary.

2 Consideration of WRC-95 agenda item 2.3 (Documents 3, 5, 7, Addendum 12 to 9, 17, 18, 22, 28, 29, 39, 41, 53, 56, 57, 62, 95)

2.1 The **Chairman**, after drawing attention to Chapter 2, Section III of the CPM Report (Document 3), invited delegations to introduce their proposals on agenda item 2.3, as listed in the last column of the attachment to Document 95.

Document 5

2.2 The **delegate of Germany** said that proposal EUR/5/68 sought to delete the last sentence of footnote 855A as the values applied by the former CCIR had been confirmed by the studies of ITU-R Task Group 4/4, so that no change was required to the sharing criteria. Proposal EUR/5/69 sought to delete Resolution 112 (WARC-92), which was no longer required.

Document 7

2.3 The **delegate of Russia** introduced proposals RUS/7/44-47, which sought to delete Resolution 112 and the last sentence of footnote 855A, and to add to footnotes 855A and 855B a sentence to the effect that the sharing criteria should be determined by the latest ITU-R Recommendations.

2.4 The **Chairman** observed that the addition of such wording raised the question of incorporation of ITU-R Recommendations by reference, which was being considered by Committee 4.

Addendum 12 to Document 9

2.5 The **delegate of the United States** said that proposals USA/9/212, 213 and 214 were designed to avoid the issue of incorporation by reference, by identifying specific elements of Recommendations ITU-R S.1068, S.1069 and SA.1071 which were of a regulatory nature. His delegation agreed that the last sentence of footnote 855A should be deleted together with Resolution 112.

Document 17

2.6 The **delegate of Brazil** introduced proposals B/17/190, 191 and 192, which were based on the work of the ITU-R, involving the deletion of Resolution 112 and amendments to footnotes 855A and 855B so as to make specific reference to existing Recommendations ITU-R S.1068, S.1069 and SA.1071.

2.7 The **delegate of Indonesia** asked for the views of the delegates of the United States, Russia and Brazil on the incorporation by reference of ITU-R Recommendations. He wondered why specific Recommendations should be included in the Radio Regulations, since if the Recommendations changed it would be necessary to change the Radio Regulations. Why could reference not simply be made to the ITU-R Recommendations in force?

2.8 The **delegate of the United States** said that the problem with incorporation by reference was that much of the material contained in the Recommendations was not regulatory. Only the specific regulatory elements of Recommendations should be incorporated by reference, in order not to tie the hands of the ITU-R study groups.

2.9 The **delegate of Brazil** observed that there were not many differences between the proposals introduced thus far; however, the final version of footnotes 855A and 855B could not be decided on until a policy decision had been taken on incorporation by reference.

2.10 The **delegate of Russia** said that his delegation's proposals were intended to avoid future problems by referring simply to "the latest ITU-R Recommendations".

Document 18

2.11 The **delegate of Canada** said that proposals CAN/18/29, 30 and 53 were in line with the Recommendations of the ITU-R and the CPM Report, in that they sought the deletion of the last sentence of footnote 855A as well as of Resolution 112 because the work to which it referred had been completed.

Document 22

2.12 The **delegate of Japan**, referring to proposals J/22/110, 111 and 112, said that since the sharing criteria for the FSS and other services had been satisfactorily identified, the relevant ITU-R Recommendations could be incorporated by reference in footnotes 855A and 855B, and Resolution 112 could be deleted.

Document 28

2.13 The **delegate of Kenya**, after drawing attention to a typographical error in the last paragraph of proposal K/28/43 concerning the incorporation by reference of ITU-R Recommendations S.1068, S.1069 and SA.1071 in footnotes 855A and 855B, agreed that Resolution 112 could be deleted since the relevant studies had been completed (proposal K/28/44).

Document 29

2.14 The **delegate of New Zealand** said that agenda item 2.3 was dealt with in § 3.5 of Document 29, which included proposals NZL/29/6 and 7. After agreeing that Resolution 112 should be deleted, he endorsed the Chairman's view that the final text of the footnotes concerned might be left in abeyance until guidance had been received from Committee 4 on the question of incorporation by reference.

Documents 39, 41, 53, 56, 57 and 62

2.15 The **delegates of Senegal, India, Tanzania, Indonesia, Thailand** and **China** introduced, respectively, proposals SEN/39/9A and 9B, IND/41/152 and 153, TZA/53/11, INS/56/7A and 7B, THA/57/9 and CHN/62/42, all of which called for the deletion of Resolution 112 and amendment of the related footnote 855A.

2.16 The **Chairman** said there seemed to be a large measure of agreement to delete Resolution 112 and make the relevant modification to footnote 855A. He suggested, therefore, that Committee 5 should establish an informal ad hoc Group to draft two alternative texts, one based on incorporation by reference and the other on the provision of specific parameters. First of all, however, he invited general comments on the various proposals.

2.17 The **delegate of the United States**, referring to the process of incorporation by reference, said that the Committee would clearly need specific guidance in that regard, possibly from Working Group 4B.

2.18 The **delegate of Brazil** said that his Administration's proposal could perhaps be viewed as a compromise, in that references to the relevant existing ITU-R Recommendations would be inserted in the footnotes, any subsequent modifications being for future conferences to consider and approve as appropriate.

2.19 The **delegate of Turkey** and the **observer for ARABSAT** supported the Brazilian proposal.

2.20 The **delegate of Mexico** said that he could support the Brazilian proposal in the present instance but doubted whether the procedure it involved would necessarily be the correct one to follow in every case.

2.21 The **delegate of Zambia** said that in the present case he was in favour of automatic updating of the references, since the latest ITU-R Recommendations should always be followed. The **delegate of Canada**, on the other hand, said that his Administration would have difficulty in accepting automatic updating. The **Chairman** observed that the Brazilian proposal was not for automatic updating but for use of the latest version of the relevant Recommendations, it being left to future conferences to consider subsequent modifications.

2.22 The **delegate of the Netherlands** observed that, under proposal EUR/5/68, the reference inserted would be to a known and published Recommendation; it would be up to future conferences either to adopt subsequent revised versions or to retain the original ones. As ITU-R Recommendations did not have treaty force, the references must be to specific existing texts, a requirement met by the Brazilian proposal which he could therefore support.

2.23 The **delegate of Germany** said he shared the concern voiced by the previous speaker, and warned against adopting any revised text without due regard to all the possible legal consequences. A suitable mechanism would have to be worked out for incorporation by reference, and that was a matter on which the Committee would need a prior opinion from Committee 4.

2.24 The **delegate of the United States** said that only those parts of a Recommendation which related to the pertinent regulatory aspects should be incorporated, rather than the entire text. In the case of ITU-R Recommendation S.1068, for example, the relevant part was section 2 of the Annex, which had regulatory implications.

2.25 At the suggestion of the **Chairman**, it was **agreed** to set up an informal ad hoc Group (Working Group 5 ad hoc 1), under the chairmanship of Mr. W.G. Long (United States), to consider the matter and suggest a course of action.

2.26 The **observer for INTELSAT** said that in proposal USA/9/214 for a new footnote 855C relating to the prevention of harmful interference, the cut-off date given for the protection of space-borne precipitation radars was 1 January 2001, which amounted to a very substantial change in relation to Recommendation S.1069.

2.27 The **delegate of France** said that the previous speaker had raised a valid point. The problem was that texts relating to power limits always used the word "should" instead of "shall", and the resultant ambiguity was a matter which the ad hoc Group should discuss.

2.28 The **Vice-Chairman** said that the use of the words "shall" and "should" had been debated at the Radiocommunication Assembly held the previous week, particularly in the context of Study Group 8. In his view the Committee did not need to trouble itself about the matter, which could be dealt with by means of a clear linking provision in the appropriate place; rather, it should focus on the technical aspects.

2.29 The **Chairman** said that the ad hoc Group would be free to discuss all the points raised during the current meeting, with a view to preparing a document for the Committee's attention, in the hope that the latter would then be able to reach a consensus.

The meeting rose at 1050 hours.

The Secretary:
G. KOVACS

The Chairman:
G.F. JENKINSON

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COMMITTEE 4

Democratic Socialist Republic of Sri Lanka

PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda item 1

1 The Sri Lankan Administration supports in principle the recommendations of the VGE and the adoption by WRC-95 of the simplified Radio Regulations contained in Part C of the VGE Report, noting that further refinements as suggested in the CPM Report and in the proposals from administrations should be taken into consideration in arriving at the final text.

2 Sri Lanka supports VGE Recommendations 1/1 through 1/3 to maintain the existing allocation system.

3 Sri Lanka has no difficulty in agreeing to the deletion of the "PERMITTED" category of service in Article 8 of the Radio Regulations as per VGE Recommendation 1/5.

4 Sri Lanka supports VGE Recommendations 1/7 and 1/8 which deal with frequency band allocations to broadly defined services, and allocation on a worldwide basis, respectively.

5 Sri Lanka is in agreement with VGE Recommendations 1/9 through 1/12 relating to the use of footnotes to the Table of Frequency Allocations, and also with VGE Recommendations 1/15 and 1/16 which provide for the periodical review of footnotes.

6 Sri Lanka can support VGE Recommendation 1/18 which seeks to delete the definitions of the aeronautical fixed service and aeronautical fixed station from Article 1 of the Radio Regulations.

7 Sri Lanka commends the method of "incorporation by reference" recommended by the VGE, which will ensure that the Radio Regulations will contain only the material appropriate for inclusion in an international treaty. However, we would prefer that all referenced texts be annexed in a single volume to avoid difficulties with a multiplicity of document references.

8 The Sri Lankan Administration would like to propose the following modifications which require the deletion of the country name "Sri Lanka" from the footnotes in Article 8 of the Radio Regulations as it is considered to be no longer necessary.

CLN/112/1

MOD 737
S5.378

Different category of service: in Afghanistan, Saudi Arabia, Bahrain, Benin, Bulgaria, Cameroon, the Central African Republic, the Congo, Cuba, Egypt, the United Arab Emirates, Ethiopia, Hungary, India, Indonesia, Iran, Israel, Kenya, Kuwait, the Lebanon, Malaysia, Mongolia, Oman, Uganda, Pakistan, Poland, Qatar, Syria, the German Democratic Republic, Singapore, Somalia~~, Sri Lanka~~, Chad, Czechoslovakia, Thailand, Tunisia, the U.S.S.R., Yemen A.R., Yemen (P.D.R. of) and Yugoslavia, the allocation of the band 1 660.5 - 1 668.4 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis until 1 January 1990 (see No. **S5.33**).

CLN/112/2

MOD 738
S5.379

Additional allocation: in Bangladesh, India, Indonesia, Nigeria, Pakistan~~, Sri Lanka~~ and Thailand, the band 1 660.5 - 1 668.4 MHz is also allocated to the meteorological aids service on a secondary basis.

CLN/112/3

MOD 769
S5.422

Additional allocation: in Afghanistan, Saudi Arabia, Bahrain, Brunei Darussalam, Bulgaria, Cameroon, the Central African Republic, the Congo, Côte d'Ivoire, Cuba, Egypt, the United Arab Emirates, Ethiopia, Gabon, Guinea, Guinea-Bissau, Iran, Iraq, Israel, Jordan, the Lebanon, Malaysia, Malawi, Mali, Morocco, Mauritania, Mongolia, Nigeria, Oman, Pakistan, the Philippines, Poland, Qatar, Syria, the German Democratic Republic, Romania, Singapore, Somalia~~, Sri Lanka~~, Czechoslovakia, Thailand, Tunisia, the U.S.S.R., Yemen, Yugoslavia, Zaire and Zambia, the band 2 690 - 2 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985.

CLN/112/4

MOD 779
S5.429

Additional allocation: in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, the Congo, the United Arab Emirates, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kuwait, the Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Dem. People's Rep. of Korea, Syria, Singapore~~, Sri Lanka~~, Thailand and Yemen, the band 3 300 - 3 400 MHz is also allocated to the fixed and mobile services on a primary basis. The countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service.

CLN/112/5

MOD 790
S5.439

Additional allocation: in China, Iran, Libya~~,~~ and the Philippines ~~and Sri Lanka~~, the band 4 200 - 4 400 MHz is also allocated to the fixed service on a secondary basis.

CLN/112/6

MOD 803
S5.453

Additional allocation: in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Central African Republic, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kuwait, the Lebanon, Libya, Madagascar, Malaysia, Malawi, Niger, Nigeria, Oman,

Pakistan, the Philippines, Qatar, Dem. People's Rep. of Korea, Syria, Singapore~~,~~ ~~Sri Lanka~~, Swaziland, Tanzania, Chad, Thailand and Yemen, the band 5650 - 5850 MHz is also allocated to the fixed and mobile services on a primary basis.

CLN/112/7

MOD 819
S5.468

Additional allocation: in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guinea, Guyana, Indonesia, Iran, Iraq, Israel, Jamaica, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, Qatar, Dem. People's Rep. of Korea, Syria, Senegal, Singapore, Somalia~~, Sri Lanka~~, Swaziland, Tanzania, Chad, Thailand, Togo, Tunisia and Yemen, the band 8500 - 8750 MHz is also allocated to the fixed and mobile services on a primary basis.

CLN/112/8

MOD 826
S5.477

Different category of service: in Afghanistan, Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Ethiopia, Guyana, India, Indonesia, Iran, Iraq, Israel, Jamaica, Japan, Jordan, Kuwait, the Lebanon, Liberia, Malaysia, Nigeria, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan~~, Sri Lanka~~, Sweden, Thailand, Trinidad and Tobago, and Yemen, the allocation of the band 9800 - 10000 MHz to the fixed service is on a primary basis (see No. **S5.33**).

CLN/112/9

MOD 854
S5.500

Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Finland, Gabon, Guinea, Indonesia, Iran, Iraq, Israel, Jordan, Kuwait, the Lebanon, Madagascar, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Niger, Nigeria, Pakistan, Qatar, Syria, Senegal, Singapore, Sudan~~, Sri Lanka~~, Sweden, Chad, Thailand and Tunisia, the band 13.4 - 14 GHz is also allocated to the fixed and mobile services on a primary basis.

CLN/112/10

MOD 857
S5.505

Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Australia, Bahrain, Bangladesh, Botswana, Brunei Darussalam, Cameroon, China, the Congo. the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kenya, Kuwait, Lesotho, the Lebanon, Malaysia, Malawi, Mali, Morocco, Mauritania, Niger, Oman, Pakistan, the Philippines, Qatar, Dem. People's Rep. of Korea, Syria, Senegal, Singapore, Somalia, Sudan~~, Sri Lanka~~, Swaziland, Tanzania, Chad, Thailand and Yemen, the band 14 - 14.3 GHz is also allocated to the fixed service on a primary basis.

CLN/112/11

MOD 866
S5.512

Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Congo, Costa Rica, Egypt, El Salvador, the United Arab Emirates, Finland, Guatemala, India, Indonesia, Iran, Jordan, Kuwait, Libya, Malaysia, Malawi,

Morocco, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan~~, Sri Lanka~~, Sweden, Swaziland, Tanzania, Chad, Thailand, Yemen and Yugoslavia, the band 15.7 - 17.3 GHz is also allocated to the fixed and mobile services on a primary basis.

CLN/112/12

MOD 868 **S5.514**

Additional allocation: in Afghanistan, Algeria, the Federal Republic of Germany, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Cameroon, Costa Rica, El Salvador, the United Arab Emirates, Finland, Guatemala, Honduras, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Libya, Nepal, Nicaragua, Oman, Pakistan, Qatar, Sudan~~, Sri Lanka~~, Sweden, Thailand and Yugoslavia, the band 17.3 - 17.7 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits given in Nos. **S21.3** and **S21.5** shall apply.

CLN/112/13

MOD 873 **S5.524**

Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Brazil, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kenya, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Singapore, Somalia, Sudan~~, Sri Lanka~~, Tanzania, Chad, Thailand, Togo, Tunisia and Zaire, the band 19.7 - 21.2 GHz is also allocated to the fixed and mobile services on a primary basis. This additional use shall not impose any limitation on the power flux-density of space stations in the fixed-satellite service in the band 19.7 - 21.2 GHz and of space stations in the mobile-satellite service in the band 19.7 - 20.2 GHz where such allocation to the mobile-satellite service is on a primary basis in the latter band.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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27 October 1995
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COMMITTEE 3

SUMMARY RECORD

OF THE

FIRST MEETING OF COMMITTEE 3

(BUDGET CONTROL)

Thursday, 26 October 1995, at 0940 hours

Chairman: Mr. L.N. CHEHAB (Brazil)

Subjects discussed		**Documents**
1	Terms of reference of the Budget Control Committee	88
2	Financial responsibilities of conferences	43
3	Budget of the World Radiocommunication Conference	42
4	Contributions of entities and organizations to the expenses of the Conference	93
5	Situation of the accounts of the World Radiocommunication Conference (WRC-95) as at 24 October 1995	94

1 Terms of reference of the Budget Control Committee (Document 88)

1.1 The **Chairman** read out the paragraph in Document 88 concerning the Committee's terms of reference.

1.2 The **Secretary of the Committee** said that, under its terms of reference, Committee 3 was required to request the Chairmen of Committees 4 and 5 and the Chairman of the Working Group of the Plenary to inform it of the financial implications of the decisions taken by those Committees and that Group. Committee 3 was also required to set out those financial implications in its report to the Plenary.

1.3 The Committee **took note** of its terms of reference.

2 Financial responsibilities of conferences (Document 43)

2.1 The **Chairman** read out Article 34 of the Convention (Geneva, 1992) regarding the financial responsibilities of conferences.

2.2 The Committee **took note** of the financial responsibilities of the Conference, as set out in Document 43.

3 Budget of the World Radiocommunication Conference (Document 42)

3.1 The **Secretary of the Committee**, introducing Document 42, said that the budget of the Conference had been approved by the Council at its meeting of 28 October 1994. Direct costs, invoiced costs and the total cost of the Conference came to 2 026 000, 1 957 000 and 3 983 000 Swiss francs, respectively.

3.2 The **delegate of the United Kingdom**, noting that interpretation costs came to 994 000 Swiss francs and that provision had been made for three teams of 18 interpreters in six languages for 26 days, wondered whether that amount could be reduced if, in line with the Plenary's expressed wish, there were no weekend meetings.

3.3 The **Secretary of the Committee** said that interpretation costs had been calculated on the basis of 26 days in the light of experience gained during previous conferences.

3.4 The **Chairman** said that the budgeted amount did not take into account extra hours which interpreters might be called upon to work if the Conference went on for longer than expected on account of the complexity of the subjects discussed. It might therefore be possible to envisage sending to the Secretary-General or to the Chairman of the Conference a recommendation that work be organized in such a way as to optimize the use of the amounts earmarked for interpretation.

3.5 The Committee **took note** of Document 42.

4 Contributions of entities and organizations to the expenses of the Conference (Document 93)

4.1 The **Secretary of the Committee** reminded the meeting that any entity or organization which was authorized to participate in a radiocommunication conference was required to contribute to the expenses of that conference. In the case of the present Conference, the contributory unit for

entities or organizations which were not exempted amounted to 10 600 Swiss francs. The list of organizations which had actually participated in the Conference and which would therefore be required to pay their contributions would be published at a later stage.

4.2 The **delegate of Australia** asked whether the amount of those contributions would be reduced if the total cost of the Conference was less than estimated.

4.3 The **Secretary of the Committee** said that the amount of the contributory unit depended on the expenses listed in the budget and not on those actually incurred.

4.4 The Committee **took note** of Document 93.

5 Situation of the accounts of the World Radiocommunication Conference (WRC-95) as at 24 October 1995 (Document 94)

5.1 The **Secretary of the Committee** said that, taking account of expenditure and commitments as at 24 October 1995 and of the adjustment to the budget due to the increase in costs in the common system since 1 January 1994, the amount of credits available was estimated, as at 24 October 1995, at approximately 500 000 Swiss francs. The final situation of the accounts would not be known exactly until after the Conference, when all the work had been completed and all the documents published.

5.2 The **delegate of Spain** wished to know for what purpose the 40 000 Swiss francs earmarked for travel on duty were intended.

5.3 The **Secretary of the Committee** said that that amount, which had not been provided for in the initial budget, corresponded to the daily subsistence allowances which the Union was required, under the Convention, to pay to members of the RRB who were participating in the Conference.

5.4 The **Chairman** pointed out that the breakdown of amounts under the different headings could be modified provided that the amount of the budget appropriations fixed by the Council was not exceeded.

5.5 The Committee **took note** of Document 94.

The meeting rose at 1015 hours.

The Secretary:
A. TAZI-RIFFI

The Chairman:
L.N. CHEHAB

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 6

SUMMARY RECORD

OF THE

FIRST MEETING OF COMMITTEE 6

(EDITORIAL)

Thursday, 26 October 1995, at 1130 hours

Chairman: Ms. A.-M. NEBES (France)

Subjects discussed		**Documents**
1	Terms of reference of the Editorial Committee	DT/2
2	Organization of work	-

1 Terms of reference of the Editorial Committee (Document DT/2)

1.1 The **Chairman** read out Nos. 362 and 363 of the Convention of the International Telecommunication Union (Geneva, 1992), giving the terms of reference of the Editorial Committee and stipulating in essence that the three language versions should each be unambiguous and consistent and that all three should have the same meaning, regardless of the different phraseology used.

1.2 The Committee's terms of reference were **noted**.

2 Organization of work

2.1 The **Chairman**, after circulating a questionnaire for the purpose of drawing up a list of participants, said that, in view of the amount of work the Committee would have to cope with, she intended to set up two working teams as soon as possible.

2.2 In reply to comments by the **delegates of the United Kingdom** and **France**, the **Secretary of the Committee** said that the second team could be set up as soon as required by the workload, since the necessary arrangements were ready. He added that the two teams would be working independently and that coordination would be provided by the Secretariat, under the Chairman's authority. It might not always be possible, for instance, to channel all Committee 4 texts to one team and all Committee 5 drafts to another. In any event, a substantial effort would be demanded of all participants, according to requirements.

2.3 The **Chairman of Committee 4** said that, since the Council had asked the Conference to base its work on the Report of the Voluntary Group of Experts, Committee 4, whose task it was to study that Report, would be sending a large number of drafts to the Editorial Committee. He would do his best to ensure that they were forwarded quickly, as soon as they were adopted, article by article, in order to avoid an excess of work at the end of the Conference. It might be necessary, however, to amend certain articles in the light of the adoption of other articles. In his view, in the case of such articles which were not "self-contained", the Editorial Committee should go through the text, but forward it to Plenary only when it had considered all other connected texts, in order to avoid Plenary having to decide on provisions which might subsequently need to be amended. Committee 4 would always indicate which texts were affected. The documentary output of the Conference would be not only quantitatively considerable, but also qualitatively diverse and complex, since it would include resolutions coming into effect immediately, amendments to the Regulations required by individual services, the complete revision of the Regulations based on the VGE Report, and texts related to the preparatory work for WRC-97.

2.4 The **Secretary of the Committee** pointed out that, for the revision of the Radio Regulations, while some texts would be amended, others would simply be moved from one part of the Regulations to another. The Editorial Committee should remember that it would not need to deal with the latter kind.

2.5 It was so **decided**.

2.6 The **delegate of Spain** proposed asking Committee 5 to adopt the same arrangements as Committee 4 for the transmission of texts to the Editorial Committee.

2.7 The **Chairman** said that she would pass on the request to the Chairman of Committee 5 at a meeting of the Steering Committee.

The meeting rose at 1155 hours.

The Secretary:
F. LAGRANA

The Chairman:
A.-M. NEBES

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

AD HOC GROUP OF THE PLENARY

Japan

PROPOSALS FOR THE WORK OF THE CONFERENCE

1 Introduction

A proposal for frequency allocation and regulatory provisions for non-geostationary fixed-satellite service (non-GSO/FSS) which plan to operate in the Ka band was submitted to WRC-95 without a technical study in the relevant study groups in ITU-R. Since the frequency spectrum use by the satellite system is of a global nature, the selection of frequency bands for the satellite system requires careful consideration including the following points in the case of Ka band.

1) In many countries, the frequency bands 17.7 - 20.1 GHz and 27.5 - 30.5 GHz are used or planned for GSO/FSS and terrestrial fixed systems.
2) In the future, it is expected that large capacity transmission systems by GSO/FSS will be realized in the frequency band indicated above. Therefore, it is necessary to have a certain continuous frequency band.
3) It is pointed out that frequency sharing between non-GSO/FSS and GSO/FSS may be difficult although this subject has not been thoroughly studied.

2 Proposal

J/115/1

For the reasons stated above, Japan proposes that the frequency allocation for non-GSO/FSS shall be considered in the frequency range 20.7 - 21.2 GHz and 30.5 - 31.0 GHz as the minimum necessary bandwidth for this service or at the next WRC-97.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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PLENARY MEETING

MINUTES

OF THE

SECOND PLENARY MEETING

Thursday, 26 October 1995, at 1435 hours

Chairman: Mr. S. AL-BASHEER (Saudi Arabia)

Subjects discussed		**Documents**
1	Oral reports by the Chairmen of Committees and the Working Group of the Plenary	–
2	Allocation of documents to Committees (continued)	9/Add.15 + Corr.1, 56; DT/9
3	Status of the Radio Regulations revised by WRC-95	33
4	Licensing of global systems	35 + Corr.1
5	Report on the activities of the Radiocommunication Sector	20
6	Organization of work	–

1 Oral reports by the Chairmen of Committees and the Working Group of the Plenary

1.1 The **Chairman of Committee 2** said that the Committee had held its first meeting that morning. After noting its terms of reference, it had studied the conditions under which the transfer of powers should be carried out. Thus far, Micronesia had transferred its powers to the United States. In order to expedite the work a small working group had been created, which volunteers would be welcome to join.

1.2 The **Chairman of Committee 3** said that the Committee had met for the first time that morning. It had taken note of its terms of reference and had discussed the financial responsibilities of the Conference in respect of the budget for WRC-95 as approved by the Council. Special attention had been given to the estimate of expenditure for the Conference, by far the largest item of which was the cost of interpretation. In order to contain expenditure, he recommended that every possible effort should be made to avoid night and weekend meetings.

1.3 The **Chairman** said that the Steering Committee would take due account of Committee 3's appeal.

1.4 The **Chairman of Committee 4** said that the Committee had held one meeting at which considerable appreciation had been expressed for the VGE's work and recommendations, which had received wide support, at least in principle. Three working groups had been set up, corresponding broadly to the VGE's three tasks, and those groups had already set up a number of subgroups. In view of the volume of material to be dealt with by Committee 4, it was hoped to reach agreement on the texts of complete articles of the simplified Regulations as quickly as possible, so that they could be submitted to Committee 6. He suggested that Committee 6 should not submit texts to the Plenary for first reading until any related articles had been considered by Committee 4, so as to avoid the need for making consequential changes in Plenary and at the same time enable Committee 6 to work more efficiently. The concept of incorporation by reference was to be discussed by the Committee as a whole early the following week. The Committee would also be working towards a revision of Resolution 46 with the intention that it would come into effect at the end of the Conference.

1.5 The **delegate of Saudi Arabia** was concerned that if, as the Chairman of Committee 4 had suggested, the Editorial Committee was to collate all revised articles of the Regulations, there would be insufficient time for them to be issued as documents and studied by delegates before their submission to the Plenary.

1.6 The **delegate of Morocco** said that the principle of incorporation by reference had been the subject of a large number of proposals, all of which were based on the assumption that the Conference would accept that principle. He emphasized that no decision could be taken on that point until agreement had been reached on it by Committee 4.

1.7 The **Chairman of Committee 4** said that as soon as the Committee had agreed on the text of an article that appeared to be self-contained, it would be submitted to the Editorial Committee and the Plenary with all possible speed. Nevertheless, it would be advisable for interrelated articles to be studied as a group rather than for them to be submitted individually, perhaps at too early a stage, thus running the risk of significant changes being made to them subsequently. However, it would not be in the interests of the Conference to delay the submission of texts until the last days, and it was not his intention to do so.

1.8 The **delegate of Indonesia** sought clarification on the points raised by the delegate of Morocco and the Chairman of Committee 4. Was Committee 5, for instance, to await Committee 4's decisions on incorporation by reference before proceeding with its work? The **Chairman** explained

that the Committee Chairmen would coordinate their work programmes, taking into account the impact that each would have on the others. The **delegate of Morocco**, illustrating his point, gave the example of the proposed modification to footnote 608B: although Committee 5 might agree on the technical requirements involved, if Committee 4 did not recommend its incorporation, then a coordination mechanism would have to be developed before the end of the Conference in order to resolve the matter.

1.9 The **Chairman of Committee 5** said that his Committee had already held three meetings and had established Working Groups 5A, 5B and 5C which were to study, respectively MSS below 1 GHz, MSS from 1 to 3 GHz, and MSS feeder links and related issues above 3 GHz. All three Working Groups had met at least once and had established subgroups or ad hoc groups to facilitate their work. Thus far, satisfactory progress had been made. Issues relating to power limits and the modification of Resolutions adopted by previous conferences were being addressed directly by Committee 5.

1.10 The **Chairman of Committee 6** said that the first meeting of the Committee had been held that morning. After taking note of its terms of reference, the Committee had begun to organize its work. The procedure suggested by the Chairman of Committee 4 was to be recommended, and would, she hoped, be taken up by Committee 5. She also proposed that those parts of the Radio Regulations which had not been modified by either the VGE or the Conference should be published as they stood in the final document of the Conference.

1.11 The **Chairman of the Working Group of the Plenary** said that the Group had held two meetings and had divided its work into five topic areas which were detailed in Document DT/7. At the first meeting discussion of agenda item 3a) had been postponed, as the related document had not been available at the time, and agenda item 3b) had been taken up in its stead. A number of proposals had been submitted by administrations in respect of agenda item 6.2, and a drafting group had been set up to coordinate and consolidate them. Agenda item 3c) had been examined and further informal discussion on the matter was being coordinated by a member of the Italian delegation.

1.12 The **delegate of Morocco** expressed concern that the work of the Conference was being divided among many more working groups and subgroups than had originally been anticipated. Decisions should not be taken by a limited number of administrations, in a subgroup, but in the working groups themselves, where all delegates had the opportunity to participate in the discussions. He appealed to the Chairmen of the Working Groups to take account of smaller delegations when organizing their work.

1.13 The **Chairman** agreed that smaller delegations found it difficult to attend all the meetings and he called on the Committee Chairmen to avoid creating too many subgroups. It should be recognized, however, that ad hoc groups were sometimes necessary to resolve specific problems. He assured the delegate of Morocco that the matter would be discussed by the Steering Committee.

2 Allocation of documents to Committees (continued) (Documents 9/Addendum 15 and Corrigendum 1, 56; DT/9)

2.1 The **Chairman** recalled that opposing views had been voiced at the previous Plenary Meeting regarding the treatment of Addendum 15 to Document 9 and proposal INS/56/6. After lengthy discussion with representatives of both parties in the presence of the Secretary-General and the Director of the Radiocommunication Bureau, he was able to propose the setting up of an ad hoc Group of the Plenary to study the matter, as detailed in Document DT/9. He appealed to all delegates to support the solution proposed.

2.2 The **delegate of Germany** said that Document DT/9 set out an appropriate procedure for dealing with a difficult issue; however, it was not clear whether Corrigendum 1 to Addendum 15 to Document 9, which had not been part of the original proposal, was to be taken into account by the ad hoc Group. The **Chairman** confirmed that the corrigendum was to be included in the discussion.

2.3 The **delegate of Japan** endorsed the Chairman's proposals and indicated his delegation's intention of contributing to the ad hoc Group. The **delegates of Colombia, India, Senegal, Russia, Mexico, Brazil** and **Syria** commended the Chairman's efforts and assured him of their wholehearted support for his proposals.

2.4 The **Chairman** said that if he heard no objection he would take it that the establishment of an ad hoc Group of the Plenary, with the terms of reference set out in Document DT/9, was acceptable to the meeting.

2.5 It was so **agreed**.

2.6 The **Chairman** said that, in view of the complex nature of the task at hand, a small number of participants in the ad hoc Group would be advisable, and he therefore suggested that the regional groups might each wish to put forward one representative to participate in the discussion. It had been suggested that he himself should act as Chairman of the Group and he assured delegates that he would endeavour to reach a balanced solution and to report the result to the Plenary as soon as possible.

2.7 It was so **agreed**.

3 Status of the Radio Regulations revised by WRC-95 (Document 33)

3.1 The **delegate of Morocco**, explaining the rationale behind Document 33 on behalf of its sponsors, said that prior to the Nice Plenipotentiary Conference, the ITU had had a Convention which had been abrogated by each Plenipotentiary Conference and replaced by a new instrument. When ratifying the new instrument, Members had also ratified its annexes containing the Administrative Regulations, namely, the Radio Regulations and International Telecommunication Regulations. The fact that the Union now had permanent basic instruments gave rise to a problem regarding the status of the Administrative Regulations. However, the proposals contained in Document 33 dealt exclusively with the Radio Regulations.

3.2 Prior to the Nice Plenipotentiary Conference, any revision of the Radio Regulations between two Plenipotentiary Conferences had been governed by a provision of the Convention which allowed for the provisional application of the revised regulation/s pending its/their inclusion in the annex to the Convention to be adopted at the subsequent Plenipotentiary Conference. With the adoption of a permanent Constitution and Convention, the Nice Conference had developed a procedure, set out in the Constitution, providing for a period of provisional application, so as to allow administrations to take the necessary steps to declare their consent (or non-consent) to be bound by the revised Radio Regulations. In 1992 it had been decided that Plenipotentiary Conferences should be held every four years and world radiocommunication conferences every two years; however, the provisions relating to the procedure in question, which had subsequently been incorporated in the new Constitution, were based on a longer interval between conferences. In other words, the period of provisional application was no longer commensurate with the interval between conferences. Drawing attention to the relevant provisions of the Constitution reproduced in paragraph 3b) of the document, he observed that they allowed for a country to decide on the basis of its national legislation not to apply the revised Regulations provisionally, without informing other

Members of its decision. That would only become apparent 36 months after the commencement of provisional application. The situation which remained unclear was that in which a country had stated that it would not apply the revised Regulations provisionally and had not informed the Secretary-General that it accepted to be bound by them. Furthermore, the convening of world radiocommunication conferences every two years might lead to a situation in which there could be no certainty that a country accepted the binding nature of a revised Regulation which had been the subject of arduous negotiations two years previously.

3.3 For those reasons, and because the VGE Report would lead to the total revision of some parts of the Radio Regulations, the sponsors had prepared a draft Resolution which was set out in the Annex to Document 33. It recommended that the 1998 Plenipotentiary Conference should be requested to consider the problem. It also recommended that any revision of the Radio Regulations as a result of the VGE Report should only enter into force after the Plenipotentiary Conference had reviewed the relevant provisions of the Constitution as listed in Document 33. It was also worth noting that deferring the entry into force of the simplified Radio Regulations until 1998 need not entail any delay in implementing the decisions of the present Conference since, according to the Constitution and the Convention, the Conference could adopt different dates for the implementation of its decisions. The sponsors would therefore be willing to consider an earlier date of entry into force for the revised Table of Frequency Allocations and other parts of the Radio Regulations.

3.4 A further problem that had not been taken up in Document 33, but would certainly have to be considered by the Conference, was the date of entry into force of its Final Acts. No provision was made for the latter in the current Constitution, which merely referred to the commencement of provisional application. The fact that the commencement of provisional application was apparently considered to be the last day of the Conference was a matter of serious concern for, in his view, delegates should have the opportunity to return home and report to their Ministries on the outcome of the Conference before making any commitment to the provisional application of decisions.

3.5 The **Chairman of the VGE** said that Document 33 raised a very serious problem which required careful consideration. The VGE had never been intended to be a long-term project; indeed, Resolution No. 8 adopted by the Additional Plenipotentiary Conference (Geneva, 1992) called for the completion of the Group's work by 1994 and the convening of the present Conference to take decisions, thereby ensuring the speedy implementation of the simplified Radio Regulations. He knew that some delegations would be in favour of such decisions taking effect the day after the closure of the Conference. He had no difficulty with the proposed draft Resolution which sought to revise the relevant provisions of the Constitution, but stressed that the Conference must investigate every possible means of providing for the simplified Radio Regulations to enter into force within a reasonably short time-frame. Furthermore, he observed that any decision which would result in some Conference decisions entering into force before others might create confusion as to which regulations were still valid.

3.6 The **delegate of Bangladesh** said that better use of frequencies and hence better service to customers depended on an improved frequency Plan. Furthermore, power flux-density and power limits of equipment should be standardized so as to avoid unnecessary interference. Such goals could not be achieved without effective and simplified Radio Regulations. The Radio Regulations should be service-oriented rather than commercially oriented so as to ensure access to modern technology for developing countries and encourage the development of telecommunication facilities in the least developed countries. Easily applicable Radio Regulations could also help to bring telecommunication facilities to remote rural areas.

3.7 The **delegate of the United Kingdom** agreed that there was a need for the next Plenipotentiary Conference to review the provisions of Article 54 of the Constitution, which had been adopted prior to the decision to convene WRCs every two years. In principle, he supported the draft Resolution in Document 33; however, on the assumption that the Conference would agree on a satisfactory set of simplified Radio Regulations, he endorsed the remarks by the Chairman of the VGE on the need for appropriate machinery to ensure their earliest possible application.

3.8 The **delegate of Japan**, referring to the relevant provisions of the Constitution and Convention, did not consider it appropriate to defer the date of the provisional application of the simplified Radio Regulations solely on the basis of technical difficulties deriving from those instruments. Certain points should be borne in mind when considering the issue. First, acceptance of the Arab countries' proposal at such a late stage in the work on the simplification of the Radio Regulations would undermine the efforts deployed so far by radiocommunication experts worldwide, not to mention the momentum for future activities in the area. Second, he was not certain that there was no other way of resolving the technical difficulty presented by Article 54 of the Constitution. Delegates should look into the matter very carefully so as not to jeopardize the work of the Conference and ensure the earliest possible entry into force of the simplified Radio Regulations.

3.9 The **delegate of Germany**, while agreeing on the very real need for early implementation of the simplified Radio Regulations, acknowledged that the Arab countries' proposal raised extremely difficult legal problems which might be beyond the scope of the delegates present. Perhaps legal advice on the problem could be provided.

3.10 The **delegate of Australia** shared the views expressed by the Chairman of the VGE and the delegates of the United Kingdom, Germany and Japan. He was much concerned at the prospect of delaying the entry into force of the simplified Radio Regulations until after the 1998 Plenipotentiary Conference, and even more so at what might happen if that Conference failed to make the necessary amendments to Article 54 of the Constitution. Although every effort should be made to resolve the problem during the current Conference, a Plenary Meeting was certainly not the most appropriate place to deal with such matters. Proper legal advice should be sought. Perhaps a small group could hold consultations with the Legal Adviser and report back to a subsequent Plenary Meeting on the outcome of their work.

3.11 The **delegate of Morocco** assured the Chairman of the VGE and other speakers who had expressed concern that the sponsors of the proposal shared their desire for the earliest possible entry into force of the revised Radio Regulations. The problem was that the notion of entry into force no longer existed, having been replaced by a mechanism whereby countries were not bound by the revised Radio Regulations until 36 months after the starting date of provisional application of the texts adopted by the present Conference. The sponsors would consider any legally acceptable solution that would allow for the entry into force of the revised Radio Regulations as soon as possible.

3.12 The **delegate of Brazil** said that his delegation could not accept a solution which might jeopardize the years of work put into the simplification of the Radio Regulations, and endorsed the Japanese delegate's remarks about the importance of not losing momentum. An acceptable solution must be sought by drawing on all the legal expertise available.

3.13 The **delegate of Uganda** said that the technical work on the simplification of the Radio Regulations having been completed, a number of legal issues remained to be resolved. There was no escaping the fact that the earliest possible implementation of the revised text was desirable, and a solution to the problem must therefore be found without further delay. The task should be entrusted to legal experts from either the ITU or Member countries.

3.14 The **delegate of Syria** recalled that the proposal under discussion had been submitted to the Kyoto Plenipotentiary Conference, which had decided not to take action on it. That decision had been the subject of a reservation by the delegation of Morocco, which Syria had endorsed in recognition of the legal considerations involved. Although his country had not participated directly in the work of the VGE, it was in favour of the earliest possible entry into force of the simplified Radio Regulations. There had been no intention of submitting Document 33 to the present Conference until it had been discovered that one Member planned to defer implementation of the revised Radio Regulations by approximately five years. Syria would consider any acceptable solution put forward, although it would have been preferable if the situation could have been avoided.

3.15 The **delegate of Saudi Arabia** endorsed the Syrian delegate's remarks. Document 33 provided for the earliest possible entry into force of the simplified Radio Regulations, but also took into account the need to review the relevant articles of the Constitution and the Convention so as to remove existing ambiguities.

3.16 The **delegate of Mexico** said that he shared the concerns expressed by previous speakers. The matter called for careful reflection at the present Conference. It was not only legal advice that was needed; delegations must demonstrate their willingness to reach agreement so that the issue could be resolved once and for all at the forthcoming Plenipotentiary Conference.

3.17 The **Chairman**, acknowledging the wish of the Plenary and the proposal's sponsors to tackle the legal issue at the present Conference, invited the Secretary-General as legal representative of the Union to provide clarifications.

3.18 The **Secretary-General** welcomed the consensus that had emerged during the discussion on the complexity of the issue at stake as well as on the need to find a solution which would ensure the early implementation of the simplified Radio Regulations and, more importantly, be legally faultless. Following consultations held outside the meeting with some of the parties concerned and officials of the ITU Legal Affairs Unit, he suggested the following course of action in order to expedite the proceedings. As Secretary of the Conference, he would be entrusted with the task of tackling the problem, in consultation with the sponsors of Document 33, the Legal Affairs Unit and any other administrations willing to assist, with a view to working out a solution, if possible in time for the next Plenary Meeting.

3.19 The **delegate of Morocco** supported the suggested course of action and expressed his delegation's willingness to cooperate in the endeavours to resolve the issue.

3.20 The **Chairman** thanked the delegate of Morocco and the proposal's other sponsors for their understanding. If he heard no objection he would take it that the Plenary wished to accept the Secretary-General's suggestion.

3.21 It was so **agreed**.

4 Licensing of global systems (Document 35 and Corrigendum 1)

4.1 The **delegate of Syria**, introducing Document 35 and Corrigendum 1 on behalf of the sponsors, drew attention to the draft Resolution in that document entitled "Operation of satellite global systems for personal communications", which was intended to ensure that the use of such systems was subject to regulatory provisions protecting the interests of all parties and to licensing regulations in conformity with national laws.

4.2 The **delegate of Colombia** expressed his Administration's ongoing concern at the lack of regulation for such systems, pointing out that Resolution 70 (WARC-92) had not yet been adequately implemented. He therefore fully supported the draft Resolution, in particular the operative paragraphs which laid emphasis on the need to ensure that agreement was sought from those developing countries from whose territory such systems would operate, so as to take into account the loss of revenue that they might suffer from a possible reduction of their international traffic. That view was shared by the **delegates of Egypt** and **Indonesia**.

4.3 The **Chairman**, after calling for an indicative show of cards, noted that the draft Resolution was supported by the following delegations: Tanzania, Cuba, Bangladesh, Ecuador, France, Zimbabwe, Benin, Papua New Guinea, Switzerland, Germany, Saudi Arabia, Bahrain, United Arab Emirates, Cameroon, United States, Guinea, Kuwait, Ghana, Iran, Pakistan, Senegal, Japan, Mauritania, Gabon and Mali. The names of those delegations would be added to the list of sponsors.

4.4 The **delegate of Mexico**, while approving the draft Resolution in principle, expressed concern that certain factors had not been included. For example, if a country granted a world licence it must be willing to accept that any other system having received a licence from another country could operate on its territory. That principle of reciprocity was of fundamental importance.

4.5 The **delegate of New Zealand** also considered that further thought should be given to the text, in particular with regard to the question of application of Resolution 46 raised in *recognizing* b), the fact that the *resolves* section seemed to be covered by existing telecommunication regulations and the absence of any reference to technical compatibility between mobile systems and systems already existing on the administrations' territories.

4.6 The **delegate of Morocco** said that it had not been the author's intention to cover all aspects of the use of global communications. He agreed with the delegate of Mexico on the importance of reciprocity, drawing a parallel with the principle of "right to access" to global systems addressed in a recent symposium on the changing role of governments in regulating telecommunications. With regard to the comments by the delegate of New Zealand, he said that *recognizing* b) should be read in conjunction with *recognizing* a) which stated that the spectrum allocated was such that it could be used by only a few systems. With respect to "big" LEOs, for example, there were only six or seven systems and only two licensing administrations. Because of their limited number, the administrations involved in licensing such systems on behalf of other countries were being asked to assume a certain degree of responsibility. It would be necessary to maintain the *resolves* section of the draft Resolution, because the relevant provisions of the Radio Regulations made no mention of the licensing administration's responsibility. The sponsors would, however, welcome any proposals which might improve the text of the draft Resolution.

4.7 The **delegate of the United Kingdom**, while supporting the draft Resolution in principle, agreed on the need to make certain adjustments to the text and suggested that an ad hoc group might be set up for that purpose. The **delegate of Kuwait** proposed setting up a drafting group rather than

an ad hoc group. The **Chairman** suggested that Document 35 should be approved in principle and that a drafting group should be set up to make improvements to the text for endorsement by a future Plenary Meeting.

4.8 It was so **agreed.**

4.9 At the suggestion of the **Chairman**, it was **agreed** that the Drafting Group would be chaired by Mr. Johnson (United Kingdom) and would have the following composition: Morocco, Syria, Mexico, New Zealand, Canada, United States, Japan, France, Republic of Korea, India, Russia, Italy, Iran, Kuwait, Senegal, INMARSAT and any other interested participants.

5 Report on the activities of the Radiocommunication Sector (Document 20)

5.1 The **Director of the Radiocommunication Bureau** briefly introduced the report in Document 20, which was submitted under item 6.1 of the agenda in pursuance of No. 180 of the Convention. A similar report had been submitted to the Radiocommunication Assembly the previous week. The report, which covered 1994 and the first half of 1995, concerned all units of the Radiocommunication Sector and provided information on conferences and meetings, as well as statistical and financial data. Work had progressed satisfactorily since the restructuring of the Sector, although an increasing workload and decreasing resources placed great strain on the staff. Cooperation with ITU-D and ITU-T had proved particularly fruitful.

5.2 The **delegate of Senegal**, reiterating the view that he had expressed in the Radiocommunication Assembly, stressed the crucial importance of the basic automated spectrum management system (BASMS) for the developing countries and the need to ensure production of software for the system in all working languages as well as provide the related training by December 1996.

5.3 The **Director of the Radiocommunication Bureau** said that, in consultation with the Director of the BDT, he would endeavour to find ways of accelerating the software production and training process for the BASMS system.

5.4 The report on the activities of the Radiocommunication Sector (Document 20) was **approved**.

6 Organization of work

6.1 The **Chairman**, responding to a request by the **delegate of Indonesia**, said that every effort would be made to advance the publication of the agendas for all meetings, in order to give delegates more time for preparation.

The meeting rose at 1735 hours.

The Secretary:
Pekka TARJANNE

The Chairman:
S. AL-BASHEER

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COMMITTEE 4

Albania (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

The Republic of Albania proposes the following updates of the footnotes:

ALB/117/1

MOD 578 *Alternative allocation:* in Albania, the band 81 - ~~87.5~~88 MHz is
S5.187 allocated to the broadcasting service (television) on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference, Geneva, 1960.

Reasons: To reflect properly the current use of the spectrum.

The Republic of Albania proposes the inclusion of its name in the following footnotes:

ALB/117/2

MOD 608C Stations of the mobile-satellite service in the band 148 - 149.9 MHz
S5.221 shall not cause harmful interference to, or claim protection from stations of the fixed or mobile services in the following countries: Albania, Algeria, the Federal Republic of Germany, Saudi Arabia, Australia, Austria, Bangladesh, Belarus, Belgium, Brunei Darussalam, Bulgaria, Cameroon, Canada, Cyprus, Colombia, Congo, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Spain, Ethiopia, the Russian Federation, Finland, France, Ghana, Greece, Honduras, Hungary, Iran, Ireland, Iceland, Israel, Italy, Japan, Jordan, Kenya, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Mozambique, Namibia, Norway, New Zealand, Oman, Pakistan, Panama, Papua New Guinea, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Romania, the United Kingdom, Singapore, Sri Lanka, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, the Czech and Slovak Federal Republic, Thailand, Tunisia, Turkey, Ukraine, Yemen and Yugoslavia that operate in accordance with the Table of Frequency Allocations.

ALB/117/3

MOD 658
S5.276

Additional allocation: in Afghanistan, Albania, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burkina Faso, Burundi, Egypt, the United Arab Emirates, Ecuador, Ethiopia, Greece, Guinea, India, Indonesia, Iran, Iraq, Israel, Italy, Jordan, Kenya, Kuwait, the Lebanon, Libya, Liechtenstein, Malaysia, Malta, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Singapore, Somalia, Switzerland, Tanzania, Thailand, Togo, Turkey and Yemen, the band 430 - 440 MHz is also allocated to the fixed service on a primary basis and the bands 430 - 435 MHz and 438 - 440 MHz are also allocated to the mobile, except aeronautical mobile, service on a primary basis.

ALB/117/4

MOD 677A
S5.296

Additional allocation: in Albania, the Federal Republic of Germany, Austria, Belgium, Cyprus, Denmark, Spain, Finland, France, Ireland, Israel, Italy, Libya, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Sweden, Switzerland, Swaziland, Syria, Tunisia and Turkey, the band 470 - 790 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting. Stations of the land mobile service in the countries mentioned in this footnote, shall not cause harmful interference to existing or planned stations operating in accordance with the Table of Frequency Allocations in countries other than those listed in this footnote.

ALB/117/5

MOD 860
S5.508

Additional allocation: in Albania, the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, Finland, France, Greece, Ireland, Iceland, Italy, Libya, Liechtenstein, Luxembourg, Norway, the Netherlands, Portugal, the United Kingdom, Sweden, Switzerland, Turkey and Yugoslavia, the band 14.25 - 14.3 GHz is also allocated to the fixed service on a primary basis.

Reasons: To conform with the new requirements as a result of political changes.

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COMMITTEE 4

FIRST REPORT OF WORKING GROUP 4A

The attached texts (new Resolution COM4/1 and new Recommendation COM4/A), which were approved by Working Group 4A at its third meeting, are submitted to Committee 4 for consideration and approval.

I. HUTCHINGS
Chairman, Working Group 4A

Attachments: 2

ATTACHMENT 1

NEW RESOLUTION COM4/1

FOOTNOTES TO THE TABLE OF FREQUENCY ALLOCATIONS

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that footnotes to the Table of Frequency Allocations should be clear, concise and easy to understand;

b) that footnotes should relate directly to matters of frequency allocation;

c) that there is a need to review footnotes regularly to ensure that any which are no longer required are deleted;

d) that, in order to ensure that footnotes allow modification to the Table of Frequency Allocations without introducing unnecessary complications, principles related to the use of footnotes are needed;

resolves

1 that, wherever possible, footnotes to the Table of Frequency Allocations should be confined to altering, limiting, or otherwise changing the relevant allocations rather than dealing with the operation of stations, assignment of frequencies or other matters;

2 that the Table of Frequency Allocations should include only those footnotes which have international implications for the use of the radio-frequency spectrum;

3 that new footnotes to the Table of Frequency Allocations should only be adopted to:

a) achieve flexibility in the Table of Frequency Allocations; or

b) protect existing usage when the relevant allocations are changed; or

c) introduce either transitional or permanent restrictions on a new service to achieve compatibility; or

d) meet the specific requirements of a country or area when it is impracticable to satisfy such needs otherwise within the Table of Frequency Allocations;

4 that footnotes should be in a common format where they serve a common purpose, and, where possible, grouped into a single footnote with appropriate references to the relevant frequency bands;

5 that recommended agendas for future world radiocommunication conferences should include an agenda item which would permit country footnotes, or country names to footnotes, to be deleted, if no longer required;

urges administrations

that, in making proposals to world radiocommunication conferences, account should be taken of *resolves* 1 through 5;

instructs the Director of the Radiocommunication Bureau

to review footnotes periodically, in consultation with concerned administrations, and communicate the results to future world radiocommunication conferences, with a view to administrations proposing the deletion of their country footnotes, or their own country names from footnotes as appropriate.

ATTACHMENT 2

NEW RECOMMENDATION COM4/A

PRINCIPLES FOR THE ALLOCATION OF FREQUENCY SPECTRUM

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that the ITU should maintain an International Table of Frequency Allocations covering the usable radio-frequency spectrum;

b) that it may be desirable, in certain cases, to allocate frequency bands to the most broadly defined services to improve flexibility of use but without detriment to other services;

c) that the development of common worldwide allocations is desirable to improve and harmonize utilization of the radio-frequency spectrum;

d) that adherence to these principles for allocation of spectrum will allow the Table of Frequency Allocations to focus on matters of regulatory significance while enabling greater flexibility in national spectrum use;

recommends that future world radiocommunication conferences

1 should, wherever possible, allocate frequency bands to the most broadly defined services with a view to providing the maximum flexibility to administrations in spectrum use, taking into account technical, operational, safety, economic and other relevant factors;

2 should, wherever possible, allocate frequency bands on a worldwide basis (aligned services, categories of services and frequency band limits) taking into account technical, operational, safety, economic and other relevant factors;

3 should take into account relevant studies from the Radiocommunication Sector and the reports from the relevant conference preparatory meetings;

recommends to administrations

that, in making proposals to world radiocommunication conferences, account should be taken of *recommends* 1 through 3;

requests the Director of the Radiocommunication Bureau and the ITU-R Study Groups, as appropriate,

1 when executing technical studies in a frequency band, to examine the compatibility of a broad definition of services with the existing utilizations and the possibility of alignment of allocations on a worldwide basis noting *considerings* a), b), c) and d), and *recommends* 1, 2 and 3 above;

2 where appropriate to conduct these studies in cooperation with the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO);

3 to submit a report to future world radiocommunication conferences containing the results of these studies;

invites

the relevant conference preparatory meetings and the relevant ITU-R study groups to identify areas for study and to undertake the studies necessary to determine the impact on existing services of those agenda items of future world radiocommunication conferences which involve broadening the scope of existing service allocations;

instructs the Secretary-General

to communicate this Recommendation to the ICAO and the IMO.

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COMMITTEE 5

United States of America

INFORMATION PAPER

NGSO-MSS SYSTEMS (BETWEEN 1 - 3 GHz) FEEDER-LINK REQUIREMENTS, BENEFITS AND LICENSING ARRANGEMENTS

WARC-92 made radio spectrum allocations for non-geostationary (NGSO) mobile-satellite service (MSS) applications paving the way for low-Earth orbit (LEO) satellite systems. LEO systems fall into two categories: Little LEOs provide for non-voice services while Big LEOs are primarily for voice telephony. These systems are global not regional, and capable of serving all areas of the world (except for the polar regions) for at least 75% of each day. The Big LEOs could serve locations as far north as 70° latitude and as far south as 55° latitude. This will allow coverage to populated areas that are not reached by GSO systems.

The objectives of NGSO-MSS Big LEO systems include:

- the provision of voice/data/fax/telex/paging/email and other location/position determination services etc., with seamless interconnection with the PSTN;
- accommodation of inexpensive mobile terminals;
- achievement of efficient use of spectrum;
- accommodation of distress and safety communications;
- operation with public switched networks;
- high service availability, reliability and integrity.

WARC-92 allocated worldwide spectrum in the 1.6 to 2.5 GHz frequency range for the MSS service. Each service link is interconnected at the satellite with a feeder link operating in the opposite direction of transmission. Feeder-link earth stations provide connections with other networks or among mobile earth stations in the MSS network.

While WARC-92 made decisions on allocations for service link spectrum it did not make decisions on spectrum for feeder links between the satellites and the gateways in each system. The framework for spectrum allocations for feeder links will be established at WRC-95.

Proposed feeder-link allocations

Currently six United States systems are requesting feeder-link allocations. Table 1 lists the feeder-link bands requested by the United States NGSO-MSS systems.

TABLE 1

Feeder-link bands for United States NGSO-MSS systems[1]

System	C-band		Ku-band		Ka-band	
	Uplink	Downlink	Uplink	Downlink	Uplink	Downlink
AMSC					X	X
Constellation	X	X	X			
Ellipsat		X	X			
Globalstar	X	X				
Iridium					X	X
Odyssey					X	X

The interest in NGSO-MSS is also evident from the 19 other (non-United States) NGSO-MSS systems which have been advanced published through the ITU. Table 2 summarizes these submissions for NGSO-MSS systems (with service links at 1 - 3 GHz) received by the ITU prior to 5 September 1995.

[1] While these are United States systems, almost all have or can be expected to have international partners.

TABLE 2

Submissions to the ITU for NGSO-MSS systems

Administration	System	C-band		Ku-band		Ka-band	
		Uplink	Downlink	Uplink	Downlink	Uplink	Downlink
Brazil	ECO-8	X	X				
Germany	Courier	None specified		None specified		None specified	
Germany	Quasi Geo L2			X	X	X	X
Germany	Quasi Geo L3			X	X	X	X
France	FSAT-ICO					X	X
France	FSAT-LEO					X	X
Great Britain	ICO-P	X	X				
Netherlands	Petalring 30 C-S			X	X		
Netherlands	Petalring 60 E-S			X	X		
Japan	Kiku-6	X	X				
Russia	Elekon-Stir	X	X				
Russia	Gonets	None specified		None specified		None specified	
Russia	Marafon 8HE	X	X				
Russia	Signal			X	X		
Tonga	Tongasat ELL-1	X	X	X	X	X	X
Tonga	Tongasat Leo-10000	X	X	X	X	X	X
Tonga	Tongasat Leo- 1300	X	X	X	X	X	X
Tonga	Tongasat Leo-1200	X	X	X	X	X	X
Tonga	Tongasat Radio/TV-8		X		X	Unspec.	Unspec.

Requirements for feeder-link spectrum for NGSO-MSS systems

The service link spectrum currently allocated to NGSO-MSS service providers at 1.6 and 2.4 GHz is a nominal 16.5 MHz in each direction, or a total Earth-to-space plus space-to-Earth spectrum of 33 MHz. Since all the NGSO-MSS systems intend to provide international service and address a projected large market, the relatively small service link bandwidth of 16.5 MHz has to be reused many times in order to meet the capacity requirement of the system. In many cases the service link spectrum will be shared by several operators, creating a need for significant intra-system spectrum reuse via additional beams to maintain the system capacity at levels which make the system economically viable.

It is worth noting that the majority of the traffic handled by these systems will be either to/from a mobile or transportable terminal to/from a fixed telephone operating in the PSTN. Only a small percentage of traffic is expected to be mobile-to-mobile.

There are basically two types of NGSO-MSS space segments:

– One that provides no processing of the communications signals as they pass through the satellite, other than frequency changing and amplification.

– One that demodulates the communications signal in the satellite, then processes the signal and remodulates it for transmission to the ground.

NGSO-MSS with no on-board processing

The feeder-link requirements for these systems can be configured as follows:

- The feeder-link bandwidth required is the bandwidth for the service links, multiplied by the number of reuses of this band via multiple service link beams, plus an appropriate amount of guard band. For example a NGSO-MSS system having 31 beams each using the maximum bandwidth of 16.5 MHz would require a feeder link of 511.5 MHz (with the use of dual polarization, the total bandwidth is half this value). To this must be added spectrum for the telecommand and telemetry carriers and guardband spacing between groups of carriers.

– Another consideration on feeder-link bandwidth requirements is how many times the allocated feeder-link bandwidth can be used. In some cases a single reuse of the band can be accomplished through the use of dual polarization. Additional reuses of the band can be accomplished through the use of feeder-link spot beams and frequency reuse between the beams. As systems utilize full frequency reuse with additional beams (in order to achieve additional capacity, or to recover capacity lost due to spectrum sharing with other NGSO-MSS systems) the feeder-link bandwidth requirement proportionately increases.

First generation NGSO-MSS systems without on-board processing are relatively simpler in space segment design, thus resulting in lower system costs and complexity.

NGSO-MSS with on-board processing

With these systems an additional level of flexibility is available to reduce the required feeder-link bandwidth. The signal received from the mobile terminal can be demodulated and then multiplexed and remodulated on to the feeder-link carrier. This demodulation/remodulation can result in a

requirement for a lower amount of bandwidth. The on-board processing reduces the bandwidth requirement such that it is proportional to the traffic loading in each of the beams in the service link. This approach requires a more complex satellite, with the accompanying advantage of feeder-link spectrum usage efficiency.

Feeder-link spectrum requirements

The many proposed NGSO-MSS systems require varying amounts of feeder-link spectrum in the 4 - 31 GHz range depending on each system's design and service objectives. The **CPM Report** (Section C 1.2) concluded that "the estimated amount of spectrum required, assuming the use of dual polarization, is 200 - 400 MHz in each direction in the 4 - 8 GHz and 8 - 16 GHz frequency ranges. In the 16 - 30 GHz range, where the use of dual polarization is not likely to be feasible, the requirements are 200 to 500 MHz in each direction. The lower number in each range assumes that sharing between 2 systems is feasible, the higher number applies if sharing is not feasible." These requirements are for first generation NGSO-MSS systems.

The bands that the United States has proposed to be designated for MSS feeder links at WRC-95 are listed below in Table 3.

TABLE 3

Bands proposed by United States for worldwide NGSO-MSS feeder-link allocations

Frequency band	Bandwidth (MHz)	Transmission direction
5 090 - 5 250 MHz	160	Earth-to-space
6 650 - 7 075 MHz	425*	space-to-Earth
10.7 - 10.95 GHz	250*	Earth-to-space
11.2 - 11.45 GHz	250*	Earth-to-space
12.75 - 13.25 GHz	500*	space-to-Earth
15.45 - 15.65 GHz	200	space-to-Earth
	200*	Earth-to-space
19.4 - 19.7 GHz	300*	Earth-to-space
19.3 - 19.7 GHz	400	space-to-Earth
29.1 - 29.5 GHz	400	Earth-to-space
* Reverse Band Working (RBW) would be used to accommodate two NGSO-MSS systems in the same band or some portion of the band, or to facilitate sharing, with FSS systems in this band.		

WRCs are obliged to consider spectrum identification for the longer term to meet growth and new requirements. Long lead periods are required to deploy satellite systems for the next round of services to evolve after the beginning of the next millennium.

In line with this, at WRC-95, it is important to meet the feeder-link spectrum needs of all currently identified NGSO-MSS systems. Growth in NGSO-MSS feeder-link spectrum requirements also needs to be accommodated at WRC-95. Thus the WRC-95 should attempt to fulfil the spectrum requirements identified in the CPM report. The United States proposals (Table 2) are generally in concert with the CPM proposals. However, they also attempt to take into consideration not only the spectrum requirements of United States systems but the identified requirements of non-United States systems. In view of the fact that some systems may not yet have been advanced published the United States proposals can be considered to be conservative.

NGSO-MSS licensing requirements

In Big LEO NGSO-MSS systems, the space segment operator, will provide space segment capacity to operators licensed in each country. In each country, operators (who will usually be locally owned and governed) will utilize the space segment to provide service, almost always in conjunction with existing mobile and fixed communications services. These operators will have to obtain national licenses to comply with the regulations of that country where they are providing service. In other words, the in-country operator must obtain authority to operate and thus will be required to enter into financial settlement arrangements with national and international carriers. Arrangements to permit roaming of handsets into the country of operation will also have to be made by the local operator.

This means that each administration will determine the regulatory requirements as well as the settlement principles applicable to the in-country operator.

Benefits of NGSO-MSS

NGSO-MSS systems have been designed to provide global coverage and as such are well-suited to serve the telecommunications requirements of developing countries particularly in those areas which do not currently have a well developed telecommunications infrastructure. The range of technical benefits to the United States and world communities by Big LEO systems includes virtually instantaneous voice transmissions, broader geographic coverage, use of low power handheld transceivers and small antennas. Some of the benefits of MSS in developing countries are discussed below:

- Providing an economical way to improve and expand existing terrestrial communications infrastructure, and to expand outreach of the terrestrial wireless networks.
- Contribute significantly to expansion of a country's basic telephone service and to introduce data services (fax, email, etc.).
- Stimulate growth in international telecommunications settlements payments: increased revenue due to increased traffic by international business users.
- Public safety is improved through low-cost, long-range, effective communications for government officials, military, public safety, emergency, medical services, etc.
- A "force multiplier" is provided for economic development, allowing investment in remote regions.
- Enhance international, regional and domestic communications services for developing countries by use of low-cost transportables.

In summary, spectrum allocations for NGSO-MSS feeder links will help developing countries expand telephone services, and gain high quality wireless access. The increased availability of telecommunications facilities offered by NGSO-MSS systems should stimulate calling, resulting not only in an increase in revenues from the local service provider but also from settlements resulting from increased international traffic.

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COMMITTEE 5

Note by the Chairman of Committee 4
to the Chairman of Committee 5

COORDINATION OF WORK RELATING TO RESOLUTION 46

In accordance with the decisions taken in Plenary, Working Group 4B has, with the participation of members of Committee 5, begun its work on the modifications which could be made to Resolution 46.

This work has highlighted the need for close coordination between Committee 5 and Working Group 4B, particularly as regards:

- the need to take account of inter-service sharing methods and criteria in the procedure of Resolution 46, taking into consideration the texts adopted by the Radiocommunication Assembly;
- the need to maintain, in the notes in Article 8 which refer to Resolution 46 and in the title of the Annex to that Resolution, a reference to the power flux-density levels above which coordination with terrestrial services is required.

Liaison statements will be sent to Committee 5 as the work progresses with a view to facilitating this coordination.

M. GODDARD
Chairman of Committee 4

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COMMITTEE 4
COMMITTEE 5
WORKING GROUP
OF THE PLENARY

Japan

PROPOSALS FOR THE WORK OF THE CONFERENCE

1 Chapter 5 of the CPM Report

Chapter 5 of the CPM Report to the WRC-95 presents possible amendments to Nos. 2502.2 and 2506.1 of Article 27 (see the item of Resolution 65 (WARC-79)) and to Recommendation 100 (WARC -79).

It seems appropriate that WRC-95 take action on these points. Therefore, the following proposals are submitted.

1.1 Proposal to Committee 4 (agenda item 1)

J/121/1

In Nos. 2502.2 and 2506.1 of Article 27, "CCIR Report 393" should read "Recommendation ITU-R SF.765".

1.2 Proposal to Committee 5 (agenda item 2.1a))

J/121/2

Recommendation 100 (WARC-79) should be revised along the lines presented in Chapter 5 of the CPM Report to WRC-95.

2 Proposal to the Working Group of the Plenary (agenda item 6.2)

Article 8 of the Convention (Geneva, 1992) specifies the duties of the Radiocommunication Assembly. Among them, Nos. 135 and 136 of the Convention specify that the Radiocommunication Assembly shall advise and report to the associated World Radiocommunication Conference.

The revised Resolution ITU-R 1 approved by the Radiocommunication Assembly (Geneva, October 1995) contains the following provision:

"**1.9** The Radiocommunication Assembly shall report to the associated World Radiocommunication Conference on the progress in matters that may be included in the agenda of future radiocommunication conferences as well as on the progress of ITU-R studies in response to requests made by previous radiocommunication conferences".

A future WRC should review and take appropriate actions on the report from the Radiocommunication Assembly. Therefore, the following proposal is submitted.

J/121/3

The agendas of WRC-97 and WRC-99 should contain the following item:

"to review, and take appropriate action on, the report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention (Geneva, 1992)".

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WORKING GROUP 4C

Sweden

PROPOSALS FOR THE WORK OF THE CONFERENCE

The VGE proposals for the tabulation of conditions of issue of operator's certificate under Article S47 and in Appendix S13 have been reviewed, and an alternative layout for the presentation of the concerned tables are presented in the annexes.

Annexes: 2

ANNEX 1

ARTICLE S 47, Section III
Conditions for the Issue of Operator's Cerificate

Knowledge Requirements for Radio Electronic Operator's and General Operators's Cerificates				
The relevant certificate is issued to a candidate who has given proof of the technical and professional knowledge and qualifications enumerated below, as applicable, and indicated by an asterisk (*) in the appropriate box	1st-Class Radio Electronic Certificate	2nd-Class Radio Electronic Cerificate	General Operator's Certificate	Restricted Operator's Certificate
Knowledge of the principles of electricity and the theory of radio and of electronics sufficient to meet the requirements specified below	*	*		
General		*		
theoretical knowledge of GMDSS radiocommunication equipment, including narrow-band direct-printing telegraph and radiotelephone transmitters and receivers, digital selective calling equipment, ship earth stations, emergency position-indicating radiobeacons, marine antenna systems, radio equipment for survival craft together with all auxiliary items, including power supplies, as well as general knowledge of the principles of other equipment generally used for radionavigation, with particular reference to maintaining equipment in service;	*	*		
Practical knowledge of the operation and knowledge of the preventive maintenance of the equipment indicated above	*	*		
Practical knowledge necessary for the location and repair (using appropriate testing equipment and tools) of faults in the equipment mentioned above which may occur during a voyage;	*			
Practical knowledge necessary for effecting repairs in the case of faults in the equipment indicated above, using the means available on board and, if necessary, replacing modular units;		*		
Detailed	*	*	*	
practical knowledge of the operation of all the GMDSS sub-systems and equipment	*	*	*	*
which is required while the ship is within the range of VHF coast stations; [see Note 1]				*
Ability to send and to receive correctly by radiotelephone	*	*	*	*
and direct-printing telegraphy	*	*	*	
Detailed knowledge of the regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommunications and knowledge of those provisions of the International Convention for the Safety of Life at Sea which relate to radio;	*	*	*	
Knowledge of the Regulations applying to radiotelephone communications and specifically of that part of those Regulations relating to the safety of life				*
Sufficient	*	*	*	
An elementary				*
knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing. .	*	*	*	*
Administrations may waive the above language requirements for holders of a restricted operator's certificate when the ship station is confined to a limited area specified by the administration concerned. In such cases the certificate shall be suitably endorsed.				*

Note 1: A restricted operator's Certificate (ROC) covers only the operation of the minimum GMDSS equipment required for GMDSS A1 sea areas, and does not cover the operation of GMDSS A2/A3/A4 equipment fitted on a vessel over and above the basic A1 requirements, even if the vessel is in an A1 sea area.

ANNEX 2

APPENDIX S 13 TABLE [AR55A]
Conditions for the Issue of Operator's Cerificate

The relevant certificate is issued to a candidate who has given proof of the technical and professional knowledge and qualifications enumerated below, as applicable, and indicated by an asterisk (*) in the appropriate box	Radiocom-municat. Operator's General Cerificate	1st-Class Radio telegraph Operator's Cerificate	2nd-Class Radio-Telegraph Operator's Certificate	Radio-Telegraph Operator's Special Cerificate
Knowledge of the principles of electricity and the theory of radio and of electronics sufficient to meet the requirements specified below:	*			
Theoretical knowledge of modern radiocommunication equipment, including marine radiotelegraph and radiotelephone transmitters and receivers, marine antenna systems, automatic alarm devices, radio equipment for lifeboats and other survival craft, direction-finding equipment, together with all auxiliary items including power supply (such as motors, alternators, generators, inverters, rectifiers and accumulators), as well as a general knowledge of the principles of other apparatus generally used for radionavigation, with particular reference to maintaining the equipment in service;	*			
Practical knowledge of the operation, adjustment and maintenance of the apparatus mentioned above, including the taking of direction-finding bearings and knowledge of the principles of the calibration of radio direction-finding apparatus;	*			
Practical knowledge necessary for the location and remedying (using appropriate testing equipment and tools) of faults in the apparatus mentioned above which may occur during a voyage;	*			
Knowledge both of the general principles of electricity and of the theory of radio,		*		
Elementary theoretical and practical knowledge of electricity and radio,			*	
knowledge of the adjustment and practical working of various types of radiotelegraph and radiotelephone apparatus used in the mobile service, including apparatus used for radio direction-finding and the taking of direction-finding bearings, as well as a general knowledge of the principles of operation of other apparatus generally used for radionavigation;		*	*	
Elementary			*	
theoretical and practical knowledge of the operation and maintenance of apparatus, such as motor-generators, storage batteries, etc., used in the operation and adjustment of the radiotelegraph, radiotelephone and radio direction-finding apparatus mentioned above;		*	*	
Practical knowledge necessary to repair, with the means available on board,		*		
Practical knowledge sufficient for effecting repairs in the case of minor			*	
damage which may occur to the radiotelegraph, radiotelephone and radio direction-finding apparatus during a voyage;		*	*	
Ability to send correctly by hand and to receive correctly by ear, in the Morse code, code groups (mixed letters, figures and punctuation marks) at a speed of	*	*	*	*
sixteen groups a minute, and a plain language text at a speed of twenty	*		*	*
twenty groups a minute, and a plain language text at a speed of twenty-five		*		
words a minute. Each code group shall comprise five characters, each figure or punctuation mark counting as two characters. The average word of the text in plain language shall contain five characters. The duration of each test of sending and receiving shall be, as a rule, five minutes;	*	*	*	*

Knowledge of the practical operation and adjustment of radiotelegraph apparatus;				*
Ability to send correctly and to receive correctly by radiotelephone	*	*	*	*
except in the case provided for in No. [3890]			*	
Detailed		*		
Knowledge of the Regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommunications and knowledge of the provisions of the Convention for the Safety of Life at Sea which relate to radio;	*	*	*	
Knowledge of the Regulations applying to radiotelegraph communications and specifically of that part of those Regulations relating to the safety of life				*
A sufficient knowledge of world geography, especially the principal shipping routes and the most important telecommunication routes;	*	*	*	
Sufficient		*		
If necessary,an elementary			*	
knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing. Each administration shall decide for itself the language or languages required	*	*	*	

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-95 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 23 OCTOBRE – 17 NOVEMBRE 1995

Corrigendum 1 au Document 123-F/E/S
1 novembre 1995
Original: anglais

COMMISSION 5

République fédérative du Brésil, Canada, République de Colombie, Equateur, Etats-Unis d'Amérique, Mexique, République du Paraguay, Pérou, République du Suriname, République du Venezuela

DOCUMENT D'INFORMATION

BILAN DE LA SITUATION DES SYSTÈMES DU SMS/NON OSG FONCTIONNANT AU-DESSOUS DE 1 GHz (SYSTÈMES MINI LEO) DANS LA RÉGION 2

Ajouter **"République Argentine, Chili, République du Honduras, Jamaïque, Pérou, Trinité-et-Tobago, République Orientale de l'Uruguay"** dans la liste des pays signataires de ce document.

*Add **"Argentine Republic, Chile, Republic of Honduras, Jamaica, Peru, Trinidad and Tobago, Eastern Republic of Uruguay"** in the list of countries cosponsoring this document.*

Añádanse **"República Argentina, Chile, República de Honduras, Jamaica, Perú, Trinidad y Tabago, República Oriental del Uruguay"** a la lista de países firmantes de este documento.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 123-E
30 October 1995
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GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 5

Federative Republic of Brazil, Canada, Republic of Colombia, Ecuador, the United States of America, Mexico, Republic of Paraguay, Peru, Republic of Suriname and Republic of Venezuela

INFORMATION DOCUMENT

STATUS OF NGSO MSS BELOW 1 GHz (LITTLE LEO) SYSTEMS IN REGION 2

Introduction

Region 2 countries are actively engaging in the implementation of global NGSO MSS systems below 1 GHz (Little LEOs), along with many other countries around the world. The following information regarding Little LEO systems, services and sharing capabilities in the Americas is submitted for the information of WRC-95.

Region 2 systems and spectrum requirements

There are ten Little LEO systems presently under development by Region 2 countries. System constellations range from 2 to 48 satellites, and will provide service on a global basis. In March 1995 satellites of the first of these systems were launched. Because of the great demand for Little LEO system-type services around the world, Region 2 countries support the finding in the CPM Report that additional spectrum for implementation of Little LEO systems is needed in the near future, and therefore recommend that WRC-95 allocate additional worldwide spectrum for these systems taking due account of the existing allocations for other services.

Services

The following services will be provided by Little LEO systems:

- tracking services (e.g., for cargo, trucks and ships);
- positioning services;
- two-way digital paging;
- data acquisition from remote terminals;
- electronic mail;
- utility monitoring.

The electronic benefits anticipated from these low-cost services include a reduced number of vehicles required to accomplish a given service, timely control of distant vehicles, theft control for vehicles and cargo, rapid acquisition of data from remote sensors and terminals, ability to remotely monitor and control pipelines, valves, utilities and other assets.

Sharing in existing allocations

To allow sharing of the bands with terrestrial mobile and fixed systems, Little LEO MSS systems have been designed to include interference reduction techniques such as short, subsecond data bursts and low-duty cycle transmissions. In addition, other technical design characteristics have been incorporated by Region 2 Little LEO systems. For example, in the downlink (space-to-Earth) direction, implemented and proposed systems will share by either implementing low-power density, orthogonally-polarized, spread spectrum downlinks or co-channel avoidance. In the uplink, these systems have incorporated wideband, low-power density spread spectrum (CDMA) transmission schemes, or narrow-band channels avoiding (FDMA) techniques in order to successfully share the spectrum and not impact existing fixed and mobile services.

One of the key elements of the channel avoidance technique will be through the use of a dynamic channel activity assignment or channel avoidance system. The use of a dynamic channel avoidance/assignment system by mobile-satellite systems operating below 1 GHz allows mobile subscriber terminal uplink channels to be reassigned in response to actual measurements of channel occupancy. Each set of measurements is combined with past measurements in a weighted time average for each potential channel. A channel avoidance/assignment system then ranks and selects the channels from most to least desirable in terms of potential for no interference occurring.

Preliminary in-orbit testing of recently launched LEO MSS Flight Model 1 and 2 satellites has found that their dynamic channel assignment system performs better than initially predicted, i.e., the channel availability has been better than 95%.

Uplink interference studies, based on the density of terrestrial mobile users and the limited interference region around a mobile earth station, have shown the probability of interference to terrestrial fixed and mobile users will be very low. One example is contained in ITU-R Recommendation 1039. Studies conducted in two Region 2 countries have shown the probability of interference from a mobile-satellite subscriber terminal into a fixed or mobile receiver would not exceed 1%. The results of these studies, in combination with the use of a dynamic channel assignment/avoidance system, suggest that uplink sharing is feasible between LEO MSS systems and existing mobile and fixed services.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 124(Rev.1)-E
1 November 1995
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COMMITTEE 4

Note by the Chairman of Committee 4

INCORPORATION BY REFERENCE

1 The VGE Report, in Part A, 3.3, Section 3, discusses the concept of "incorporation by reference". That concept, which is used already to a certain extent, involves the inclusion in the Radio Regulations of reference to a separate document (e.g. an ITU-R Recommendation) which thereby becomes incorporated into the Regulations by reference.

2 Committee 4 discussed this issue at its meeting on Monday, 30 October 1995. Following extensive debate, the following conclusions were drawn:

a) No restrictions are necessary on the inclusion of references where these are non-mandatory. In such cases, reference could be made to "the latest version" of a recommendation.

b) Mandatory references to resolutions or recommendations of a world radiocommunication conference are acceptable without restriction, since such texts will have been agreed by a WRC.

c) Where mandatory references are suggested, and the relevant texts are brief, the reference material should be incorporated into the body of the Radio Regulations.

d) If, on a case-by-case basis, it is decided to incorporate material by reference on a mandatory basis, then the following provisions shall apply:

   i) the referenced text shall have the same treaty status as the Regulations themselves;

   ii) the reference must be explicit, specifying the specific part of the text (if appropriate) and the version or issue number;

   iii) the referenced text must be adopted by the Plenary of a competent WRC, but should not be part of the Final Acts;

   iv) all texts incorporated by reference must be readily available, for example by being published in a separate volume;

   v) if, between WRCs, a referenced text (e.g. an ITU-R recommendation) is updated, the reference in the Radio Regulations shall continue to apply to the original version until such time as a competent WRC agrees to incorporate the new version of the reference. The mechanism for considering such a step requires further study.

3 The above conclusions are submitted for the formal approval of Committee 4.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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31 October 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4

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b) Mandatory references to resolutions or recommendations of a world radiocommunication conference are acceptable without restriction, since such texts will have been agreed by a WRC.

c) Where mandatory references are suggested, and the relevant texts are brief, the reference material should be incorporated into the body of the Radio Regulations.

d) If, on a case-by-case basis, it is decided to incorporate material by reference on a mandatory basis (for example when the referenced material is voluminous and likely to be of specific interest to a limited number of users of the Radio Regulations), then the following provisions shall apply:

   i) the referenced text shall have the same treaty status as the Regulations themselves;

   ii) the reference must be explicit, specifying the specific part of the text (if appropriate) and the version or issue number;

   iii) the referenced text must be adopted by the WRC;

   iv) all texts incorporated by reference must be readily available, for example by being published in a separate volume;

   v) if, between WRCs, a referenced text (e.g. an ITU-R recommendation) is updated, the reference in the Radio Regulations shall continue to apply to the original version until such time as a competent WRC agrees to incorporate the new version of the reference. The mechanism for considering such a step could be on the basis of proposals from

administrations (within the scope of a WRC agenda), or following a report from the Director of the Radiocommunication Bureau which informs each WRC of any changes to referenced texts. (Annex 11 to Part 1 of Document 5 (proposal EUR/5/27) presents a draft resolution setting out the latter approach.)

3 The above conclusions are submitted for the formal approval of Committee 4.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Corrigendum 1 to Addendum 1 to Document 125-E 13 November 1995 Original: English

COMMITTEE 4

South Africa (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

Proposal AFS\125\4 should read as follows:

AFS/125/4

The Republic of South Africa requests that the Plenary of WRC-95 formally approves the allocation of the International Call Sign series S8A-S8Z.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Addendum 1 to Document 125-E 10 November 1995 Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4

South Africa (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

AFS/125/4

The Republic of South Africa requests that the Plenary of WRC-95 formally approves the allocation of the International Call Sign series ZRA-ZUZ.

AFS/125/5

MOD 608C
S5.221 Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from stations of the fixed or mobile services in the following countries: Algeria, the Federal Republic of Germany, Saudi Arabia, Australia, Austria, Bangladesh, Belarus, Belgium, Brunei Darussalam, Bulgaria, Cameroon, Canada, Cyprus, Colombia, Congo, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Spain, Ethiopia, the Russian Federation, Finland, France, Ghana, Greece, Honduras, Hungary, Iran, Ireland, Iceland, Israel, Italy, Japan, Jordan, Kenya, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Mozambique, Namibia, Norway, New Zealand, Oman, Pakistan, Panama, Papua New Guinea, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Romania, the United Kingdom, Singapore, Sri Lanka, South Africa, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, the Czech and Slovak Federal Republic, Thailand, Tunisia, Turkey, Ukraine, Yemen and Yugoslavia that operate in accordance with the Table of Frequency Allocations.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4
COMMITTEE 5

Republic of South Africa

PROPOSALS FOR THE WORK OF THE CONFERENCE

TABLE OF CONTENTS

1 Introduction

The proposals of the Republic of South Africa have been drawn up with the following key considerations as background:

1) South Africa is a developing country with limited resources to meet the needs of its unique social dispensation. The country has a significant and well-developed telecommunications market sector characteristic of a developed country, which demands innovative regulatory practices to meet the needs for a wide variety of sophisticated requirements both within the telecommunications and broadcasting sectors. At the same time there is a huge underdeveloped telecommunications market where the greatest priority is to provide basic services, like basic telephony, under the most arduous conditions and general lack of infrastructure. Equally challenging regulatory innovation is required to meet the requirements of this underdeveloped market sector in a cost-effective manner.

2) South Africa supports the principle of facilitating regulatory processes by simplifying such processes and is therefore in favour of the recommendations of the VGE to simplify the Radio Regulations.

3) South Africa is in favour of facilitating the possible introduction of various MSS systems, so multiplying the means and choice available to the country for addressing basic telecommunications needs in under-provided areas of the country in a cost-effective manner. It is considered that the most applicable solutions to this objective may be found by facilitating a wide selection of technologies to choose from for purposes of national licensing.

AFS/125/1

2 VGE Report

Considering the detailed revision of the Radio Regulations proposed by the VGE and others, South Africa is in favour of all the proposed changes to simplify and speed up processes associated with the Radio Regulations. South Africa is in principle in favour of the concept of incorporation by reference providing the following guidelines are met:

1) The versions of the documents incorporated by reference must be clearly indicated.

2) No facility shall be provided for the automatic updating of references during the period between world radiocommunication conferences, i.e. all updates to references shall explicitly be approved at WRCs only.

3) All references shall be published within a single document or a single series of documents, for the sake of convenience.

AFS/125/2

3 Matters relating to MSS

South Africa is in favour of facilitating the early introduction of global mobile-satellite systems. This includes the provision of sufficient frequency spectrum where possible, the early entry into force of allocations for service links for mobile-satellite service systems in the 2 GHz bands as far as possible by the year 2000, and the final entry into force of the remainder of all such allocations

by no later than 2005. This also includes the provision of sufficient spectrum for the supporting feeder links within similar time-scales, particularly within 4 - 8 GHz and the 20 - 30 GHz bands. These aspects can be outlined in more detail as follows:

1) South Africa supports the retention of the current footnote 599A with regard to the use of the band 137 - 138 MHz with the single exception that consideration should be given to the revision of Resolution 46 by WRC-95 and therefore the reference to this Resolution should be modified accordingly. The power flux-density limit for coordination for the space stations of -125 dB(W/m^2/4 kHz) at the Earth's surface should be retained. Changing the limit at this stage would set back development of systems already in production in good faith in accordance with this requirement. Furthermore, there are mechanisms for the resolution of difficulties outlined within the current Resolution 46 and will no doubt also be in the revised Resolution 46. From a technical evaluation point of view the limit is also acceptable to South Africa.

2) South Africa notes the operational difficulties of the power flux-density limitations required of mobile earth stations outside national boundaries in the current 608A, pertaining to the band 148 - 149.9 MHz, and supports initiating such coordination by means of a threshold distance, in principle as per draft ITU-R Recommendation M (CPM Report, Document 8/46), although some elements of this document require further development. This methodology should be reflected in the revision of Resolution 46.

3) South Africa is not in favour of extending mobile-satellite service allocations below 1 GHz. This matter could be reviewed at a subsequent WRC depending on the success of the mobile-satellite service within these bands already allocated.

4) South Africa takes cognizance of studies indicating the fractional degradation percentage into fixed terrestrial systems within the 2 GHz band to be within acceptable limits in South African context. These indicate that co-existence is possible between 2 GHz mobile-satellite service downlinks and terrestrial systems within this band without the need for coordination. On this basis, South Africa supports the entry into force of these allocations by the year 2000. South Africa itself is in a position to make limited dedicated frequency spectrum available by means of coordination with and between major terrestrial system providers within the country for purposes of mobile-satellite service uplinks by the year 2000. Such provision of limited spectrum within the mobile-satellite service allocations would also have to be subject to regional coordination with immediate neighbours also affected by the coverage of such systems. In advocating a similar approach worldwide, South Africa recognizes that the success of such an approach, i.e. a staged introduction of available spectrum should we choose to put such systems into operation, would depend on the frequency agility and the position identification capability of such systems. South Africa also proposes that further study be done with regard to the co-existence of mobile earth stations in close proximity to fixed terrestrial stations. South Africa would support the introduction of all remaining 2 GHz mobile-satellite service allocations by 2005. South Africa also supports the use of Resolution 46 as the technical basis for the use of the 2 GHz bands by the non-geostationary mobile-satellite service. South Africa will encourage the use of channelization plans for new fixed terrestrial systems that do not overlap mobile-satellite service bands, e.g. Recommendation ITU-R F.1098, with immediate effect and will require this by the year 2000.

5) South Africa is not in favour of rationalizing allocations for the mobile-satellite service within the 2 GHz bands between the three Regions of the ITU as many large users of fixed terrestrial systems within these bands already have replacement equipment on order that meet the requirements of Recommendation ITU-R F.1098. Rationalization would require the revision of this Recommendation and further delays in replacing terrestrial fixed equipment. South Africa, therefore, supports the allocations made in this regard during WARC-92.

6) South Africa supports the modification of footnote 796 in order to limit the band for the operation of the international standard system (microwave landing system) for precision approach and landing to 5 000 - 5 150 MHz in accordance with indications from ICAO.

7) South Africa supports the additional allocation of the band 5 150 - 5 250 MHz to the fixed-satellite service (Earth-to-space) on a primary basis, limited to feeder links for non-geostationary mobile-satellite service systems subject to all aspects of Resolution 46, subject to the revision of this Resolution to include non-geostationary mobile-satellite service feeder links.

8) South Africa supports the additional allocation of the band 6 825 - 7 075 MHz to the fixed-satellite service (space-to-Earth) on a primary basis, limited to feeder links for non-geostationary mobile-satellite service systems subject to all aspects of Resolution 46, subject to the revision of this Resolution to include non-geostationary mobile-satellite service feeder links. South Africa notes that protection is required from such services that may already be in service in the opposite direction. With regard to sharing of this band (i.e. on a co-primary basis) with the fixed-satellite service in the Earth-to-space direction, South Africa supports the requirement that the emissions from any non-geostationary-satellite system at the geostationary orbit shall not exceed -168 dB(W/m^2) in any 4 kHz band.

9) South Africa is aware of a non-geostationary orbit fixed-satellite system intended to operate within the 20/30 GHz band which may be of interest to developing countries in providing digital broadband transmissions at low cost. Particularly as some non-geostationary mobile-satellite service systems operating in the 2 GHz bands may require feeder links within the same band, South Africa urges that this issue be thoroughly discussed at WRC-95 and an allocation be considered pending the outcome of more detailed sharing criteria investigations which should be completed by and placed on the agenda for WRC-97. Failure to do so may jeopardize the ability of developing countries to consider such systems when dealing with current and short-term future licence applications. Furthermore, this may complicate the coordination aspects relating to pending non-geostationary mobile-satellite service applications should this aspect only be considered at WRC-97.

10) South Africa supports the suppression of Resolution 112 as the studies referred to within this Resolution have been completed and the values expressed in footnote 855A have been confirmed. This footnote can be retained without reference to Resolution 112.

AFS/125/3

4 Review of MSS requirements for WRC-97

South Africa does not support the further consideration of additional allocations prior to WRC-97 for the mobile-satellite service. Providing that current regulatory restraints on access to allocations pertaining to the mobile-satellite service, particularly in the 2 GHz bands, are removed at WRC-95, it is proposed that this issue be dealt with at WRC-97.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

PLENARY MEETING

Luxembourg

PROPOSALS FOR THE WORK OF THE CONFERENCE

FUTURE USE OF THE 20/30 GHz BAND BY THE FSS

A number of administrations and ITU members have asked for information about plans for utilization of the 20/30 GHz spectrum for NGSO and GSO FSS systems, in relation to each other and in co-existence with other services like the terrestrial FS. The following items highlight some characteristics of the two types of FSS systems, and how Europe sees the roles they might play in a global scenario:

1) There is currently a gap between the communication facilities in developed and developing countries.

2) Universal broadband communications would provide a potential benefit to developing countries.

3) There are several systems in the planning stage to provide this service by GSO FSS satellites in the 20/30 GHz band as well as one NGSO FSS system (Teledesic).

4) The probable cost-effectiveness of GSO FSS systems compared with NGSO FSS systems is expected to favour the former.

5) Present GSO FSS systems are less complex and represent a lower technology and financial risk than that of a NGSO FSS system.

6) The GSO FSS systems are more spectrally efficient than NGSO FSS systems (each of, for instance, 360 orbital positions in the GSO might serve in excess of 20 different coverage areas in the same frequency band).

7) The GSO systems allow for a multiplicity of different operators, in contrast to the monopolistic nature of the NGSO system(s).

8) High capacity broadband GSO FSS systems will require a large contiguous frequency band of approximately 1 GHz in each direction.

9) Studies have not yet been conducted to determine the extent of the sharing capabilities of NGSO and GSO FSS systems.

10) A question to address these studies was adopted by this year's Radiocommunication Assembly.

11) This Conference should not take any decisions which would jeopardize the continuing developing of the viable GSO FSS systems in the 20/30 GHz band, since it is these systems that are most likely to be realized.

12) The proposals in Documents 9(Add.15) and 56/6 could mean that GSO FSS systems would be unable to operate in the frequency bands proposed, even though sharing may be possible in large parts of the world, depending on technical characteristics. This would make it unnecessarily difficult to implement these systems and reduce their cost-effectiveness.

13) The proposals in Documents 9(Add.15) and 56/6 would also make sharing with terrestrial FS extremely difficult in the bands proposed, especially due to the envisaged antenna mounting philosophy (Teledesic antennas on rooftops, with a free view of the sky).

14) If Teledesic (or a similar NGSO FSS system) were not implemented, then the development of GSO FSS systems in the designated bands would be harmed for no reason. The provision of low-cost universal broadband communications would be severely delayed, particularly in the developing countries, where alternatives to provision by satellite would be prohibitively expensive due to the lower density population distribution.

Conclusion

LUX/126/1

It is proposed therefore that this Conference should not take any decision on the proposals in Documents 9(Add.15) and 56/6, but that an agenda item should be included on the WRC-97 agenda to consider allocations and associated regulatory provisions in the 20/30 GHz band for FSS and MSS services using GSO and NGSO satellite systems.

WRC-97 will have the benefits of the results of the ITU-R studies into the possibilities of sharing and technical constraints that will allow that Conference to make a decision on a sound basis, compared to what would be the present somewhat uncertain, unclear and misinformed conceptions.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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31 October 1995
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COMMITTEE 4

SECOND REPORT OF WORKING GROUP 4A

The attached text of Article S1, which was approved by Working Group 4A at its third meeting, is submitted to Committee 4 for consideration and approval.

I. HUTCHINGS
Chairman, Working Group 4A

Annex: 1

ANNEX

Radio Regulations

ARTICLE S1

Terms and Definitions

NOC **S1.1 to S1.116**

MOD 111 **S1.117** *Telegraphy**: ~~A form of *telecommunication* which is concerned in any process providing transmission and reproduction at a distance of documentary matter, such as written or printed matter or fixed images, or the reproduction at a distance of any kind of information in such a form. For the purposes of the Radio Regulations, unless otherwise specified therein, telegraphy shall mean a form of *telecommunication* for the transmission of written matter by the use of a signal code (CS).~~ A form of telecommunication in which the transmitted information is intended to be recorded on arrival as a graphic document; the transmitted information may sometimes be presented in an alternative form or may be stored for subsequent use.

* *Note*: In this definition, a graphic document records information in a permanent form and is capable of being filed and consulted; it may take the form of written or printed matter or of a fixed image.

SUP **S1.117** ~~* *Note by the General Secretariat*: ...~~

NOC **S1.118 to S1.191**

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 1 to Document 128-E 6 October 1995 Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 5 WORKING GROUP OF THE PLENARY

State of Israel

PROPOSALS FOR THE WORK OF THE CONFERENCE

Page 2, proposal ISR/128/2, Reasons, § 1 should read as follows:

1 Once a decision to update the Plan of Appendix 30A is taken by the present Conference there is no reason to bind administrations to the frequency bands requested previously in 1988 [(WARC-ORB-88)].

Proposal ISR/128/7 should read as follows:

At off-axis angles greater than 1°, the gain will be assumed to be given by:

- ITU-R Recommendation 580 for co-polarized signals;
- ITU-R Recommendation 731 for cross-polarized signals.

Reasons for a) to d) above: The availability of small receive and improved receive and transmit antennas having the characteristics given in the proposals.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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31 October 1995
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COMMITTEE 5
WORKING GROUP
OF THE PLENARY

State of Israel

PROPOSALS FOR THE WORK OF THE WORKING GROUP OF THE PLENARY

PART A – PLANNING PRINCIPLES FOR UPDATING THE APPENDIX 30 AND APPENDIX 30A ALLOTMENT PLANS

1 Planning approach

ISR/128/1

A completely new plan will be established during the WRC-97 Conference based on principles agreed at the present Conference with no restrictions based on the existing Plans, except for the existing systems, those already notified to the ITU as per the present Appendix 30 and Appendix 30A procedures, or those that will be notified as per the same procedures until [6 months] before the starting date of the WRC-97 Conference.

Reasons: All the following, taken together, make the present Plans inefficient in terms of use of the spectrum and orbital resources:

1) Many of the technical parameters are obsolete.

2) The number of new countries that have emerged since 1977 is such that using modification procedures provided for in the Plans to allow new entrants might result in tedious and long tasks, if at all possible in the long run.

3) The number of channels per country may be increased, based on present technologies and actual technical parameters, to meet the ever-increasing demand for TV channels.

4) Present-day antennas allow for much closer orbital locations than that of the existing Plans (in fact, there seems to be no reason for an *a priori* fixed orbital separation - see FSS Allotment Plan as per Appendix 30B).

5) Some countries may wish to use the same platform, i.e. the same orbital location for the BSS service (Appendix 30 and Appendix 30A) and the FSS service as per Appendix 30B; as this wish is highly cost-related and the overall global result very cost-effective, there seems to be

no justification not to try to satisfy it, to the extent possible, with a few planning exercises, with no orbital location constraints.

[2 Frequency bands for feeder links

ISR/128/2

Administrations will submit their choice in one or more of the following bands for their feeder links, in time for the ITU to take action in its planning exercises for WRC-97:

- 14.5 to 14.8 GHz;
- 17.3 to 17.7 GHz;
- 17.7 to 18.1 GHz.

Reasons:

1 Once a decision to update the Plan of Appendix 30B is taken by the present Conference there is no reason to bind administrations to the frequency bands requested previously in 1988 [(WARC-ORB-88)].

2 The band 17.7 to 18.1 GHz is also allocated on a primary basis to the fixed service and to the mobile service.

Some administrations not wishing to share their BSS feeder links with fixed and mobile services may wish to limit the BSS feeder links to 17.3 - 17.7 GHz band, which is not allocated on a primary basis to the fixed and mobile services.]

3 Specifically, Israel is considering to modify its present allotment in the 14.5 to 14.8 GHz frequency range to the frequency range of 17.3 to 18.1 GHz.

3 Number of channels per country

ISR/128/3

The planning will be based on the same maximum number of channels, for all countries, as derived from the new planning principles and from the updated set of technical parameters.

Reasons: The number of channels in the present plans are not sufficient, especially in those countries undergoing a rapid development of their broadcasting infrastructure. In an unsaturated market, demand for channels increases with their availability. Further, Israel has been alloted only four channels, although most countries have been alloted five channels. There are growing demands from the public for new BSS channels, including new requirements for the Palestinian Authority.

4 Basic technical parameters for the updating of the Plans

a) Receive earth station antenna (for individual reception)

ISR/128/4

A parabolic antenna with a 60 cm diameter will be assumed in the planning.

b) G/T of the receive earth station antenna (for individual reception)

ISR/128/5

A G/T factor of 14.6 dB/°K will be assumed in the planning.

c) Antenna pattern of the receive earth station (for individual reception)

ISR/128/6

The pattern of Document [RA95 10-11/1009] will be assumed in the planning.

d) Off-beam gain of transmit earth station antenna

ISR/128/7

At off-axis angles greater than 1°, the gain will be assumed to be given by $G(\theta) = 29\text{-}25 \text{ Log } (\theta)$.

Reasons for a) to d) above: The availability of small and improved antennas having the characteristics given in the proposals.

e) Satellite antenna beamwidth

ISR/128/8

The minimum beamwidth [(between -3 dB points)] in the Plan will be 1°.

Reasons: Compromise between coverage and size of antenna.

f) Energy dispersal signal (for FM/TV)

ISR/128/9

A peak-to-peak deviation of 2 MHz will be assumed in the planning.

Reasons: In an interference-limited environment, as is the case in an allotment plan, the present value of 600 kHz is inadequate.

g) Rain attenuation and test points

ISR/128/10

1 The most recent ITU-R Recommendations regarding the rain model will be used in the planning.

2 For WRC-97, administrations will be requested to submit their updated set of test points, in case they are different from those submitted [in/before] 1977.

3 Notwithstanding the above-mentioned ITU-R rain model, the attribution of the specific rain attenuation to each test point will be the responsibility of the administrations, while adhering to the model, in general.

Reasons:

1 The recent rain model is based on improved statistical information since 1977 and therefore it is more accurate than that used in the existing Plans.

2 New countries have emerged since the former planning and some countries have undergone territorial changes since then.

3 In some parts of the world, the resolution accuracy of the ITU-R model is not sufficient to enable the correct attribution of the specific rain attenuation based solely on the model. Based on knowledge of local conditions, administrations are in a better position to determine rain attenuation characteristics at their test points.

PART B – PROPOSALS FOR NON-GSO/MSS FEEDER LINKS

A Non-GSO/MSS feeder links in the 4 to 8 GHz band

ISR/128/11

A.1 The State of Israel proposes to allocate feeder links for non-GSO/MSS in the following sub-bands between 4 and 8 GHz:

A.1.1 Earth-to-space: 5 000 to 5 120 MHz;

A.1.2 Space-to-Earth: 6 650 to 7 075 MHz.

A.2 The State of Israel recommends separate uplinks and downlinks, rather than shared in the same band, in order to simplify coordination.

A.3 The State of Israel recommends for non-GSO/MSS feeder links the following power flux-density limit: -158/-148 dB(W/m^2/4 kHz) in the 7 GHz band.

A.4 The State of Israel specifies that under footnotes 797A and 797B, the 5 000 to 5 250 MHz band is allocated in Israel for mobile service on a primary basis. Therefore a minimum elevation angle should be defined by the ITU-R, for the non-GSO/MSS Earth-to-space feeder links.

B Non-GSO/MSS feeder links in the 8 to 16 GHz band

ISR/128/12

B.1 The State of Israel proposes to allocate feeder links for non-GSO/MSS in the following sub-bands between 8 and 16 GHz:

B.1.1 Earth-to-space: 10.7 to 10.95 GHz and 11.2 to 11.45 GHz;

B.1.2 Space-to-Earth and Earth-to-space: 15.4 to 15.7 GHz;

B.1.3 We propose to allocate frequencies above 15 700 MHz for additional space-to-Earth feeder links, if necessary.

B.2 For non-GSO/MSS feeder links at 15 GHz, the State of Israel recommends the following power flux-density limit: -150/-140 dB(W/m^2/4 kHz).

C Non-GSO/MSS feeder links in the 16 to 30 GHz band

ISR/128/13

C.1 The State of Israel proposes to allocate feeder links for non-GSO/MSS in the following sub-bands between 16 and 30 GHz:

C.1.1 Space-to-Earth: 19.3 to 19.7 GHz;

C.1.2 Earth-to-space: 29.1 to 29.5 GHz.

C.2 For non-GSO/MSS feeder links at 19 GHz, the State of Israel recommends the following power flux-density limit: -115/-105 dB(W/m^2/1 MHz).

D Regulatory provisions for non-GSO/FSS

ISR/128/14

D.1 The State of Israel supports the United States proposal detailed in Addendum 15 to Document 9, to allocate frequencies to non-GSO/FSS, in the following bands:

D.1.1 Space-to-Earth: 18.8 to 19.3 GHz;

D.1.2 Earth-to-space: 28.6 to 29.1 GHz.

PART C – PROPOSAL FOR MOBILE-SATELLITE SERVICE

A Proposal for the 2 GHz band for the MSS

ISR/128/15

A.1 The State of Israel proposes to extend and shift the bands for MSS as follows:

A.1.1 Earth-to-space: 1 990 - 2 025 MHz;

A.1.2 Space-to-Earth: 2 165 - 2 200 MHz.

A.2 The State of Israel proposes to consider both the changes in frequency allocation and the date of entry into force. The following proposal takes into account that there are existing terrestrial links in Israel and other countries that cannot all be shifted by the year 2000. We propose to combine the date of entry and frequency allocation as follows:

A.2.1 1 990 - 2 010 (MHz) (BW = 20 MHz), entry into force for the year 2000;

A.2.2 2 010 - 2 020 MHz (BW = 10 MHz), entry into force for the year 2005;

A.2.3 2 020 - 2 025 MHz (BW = 5 MHz), entry into force for the year 2007;

A.2.4 No limitations for space-to-Earth links.

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COMMITTEE 5

Note by the Secretary-General

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS INFORMATION PAPER

I have the honour to bring to the attention of the Conference, the annexed information paper from the International Council of Scientific Unions.

Pekka TARJANNE
Secretary-General

Annex: 1

ANNEX

International Council of Scientific Unions

INTER-UNION COMMISSION ON THE ALLOCATION OF FREQUENCIES

(IUCAF)

Importance of the 6 668 MHz methanol line for radio astronomy

Emission in the methanol transition at 6 668 MHz has been discovered only recently at numerous locations in our Galaxy. The discovery was made in 1991 by US scientists and this powerful masering line has been actively studied by astronomers from Australia, Germany, Russia, South Africa, Netherlands and the United States, among others. Research is being conducted using single dish telescopes as well as national and international very long baseline interferometry systems. The interest in this line is growing rapidly and the line has been included on the list of the most important spectral lines to radio astronomy in ITU.R RA.314-8. The minimum recommended bandwidth to be protected for studies of our Galaxy is 6 661.8 - 6 675.2 MHz. A lower bandedge of 6 650 MHz will allow studies of Doppler shifted lines from galaxies in the immediate neighbourhood.

Radio astronomical research cannot be pursued in bands will satellite downlinks and appropriate guardbands should be established to protect radio astronomical observations from such transmissions. Delegates are requested to take this into account when allocating space-to-Earth feeder links in the 6.7 GHz band.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-95 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 23 OCTOBRE – 17 NOVEMBRE 1995

Corrigendum 1 au Document 130-F/E/S 1 novembre 1995

Original: espagnol

SÉANCE PLÉNIÈRE

Canada, République de Colombie, Equateur, Etats-Unis d'Amérique, République du Honduras, Jamaïque, Mexique, République du Suriname, Trinité-et-Tobago, République du Venezuela

DÉCLARATION CONCERNANT LE SERVICE FIXE PAR SATELLITE NON GÉOSTATIONNAIRE (SFS NON OSG)

Ajouter **"République Argentine, République fédérative du Brésil, Chili, République du Paraguay, Pérou, République Orientale de l'Uruguay"** dans la liste des pays signataires de ce document.

Add **"Argentine Republic, Federative Republic of Brazil, Chile, Republic of Paraguay, Peru, Eastern Republic of Uruguay"** in the list of countries cosponsoring this document.

Añádanse **"República Argentina, República Federativa del Brasil, Chile, República del Paraguay, Perú y República Oriental del Uruguay"** a la lista de países firmantes de este documento.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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PLENARY MEETING

Canada, Republic of Colombia, Ecuador, the United States of America, Republic of Honduras, Jamaica, Mexico, Republic of Suriname, Trinidad and Tobago and Republic of Venezuela

STATEMENT REGARDING THE NON-GEOSTATIONARY FIXED-SATELLITE SERVICE (NGSO FSS)

The above-mentioned Members of The Interamerican Telecommunications Commission (CITEL) support the need for WRC-95 to take action to preserve the option for the use of a portion of the Ka-band for the non-geostationary fixed-satellite service (NGSO FSS).

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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COMMITTEE 6

FIRST SERIES OF TEXTS SUBMITTED BY COMMITTEE 5

TO THE EDITORIAL COMMITTEE

Committee 5 has concluded its consideration of agenda item 2.2 of the Conference and has unanimously adopted the attached text that is submitted for your consideration with a view to its subsequent submission to the Plenary. Please note that the modifications shown in the attached Table refer to the text of the Report of the VGE.

G. JENKINSON

Chairman of Committee 5

Annex: 1

ANNEX

S21.12 (5) The limits given in No. **S21.8** apply, where applicable, to the services and frequency bands indicated in Table [AR27ter] below for transmission by earth stations where the frequency bands are shared with equal rights with the fixed or mobile service:

TABLE [AR27ter]

Frequency band		Services
2 025 - 2 110 MHz		Fixed-Satellite
5 670 - 5 725 MHz	(for the countries mentioned in No. **S5.454** with respect to the countries mentioned in Nos. **S5.453** and **S5.455**)	Earth Exploration-Satellite Meteorological-Satellite Mobile-Satellite Space Operation Space Research
5 725 - 5 755 MHz[1]	(for Region 1 with respect to the countries mentioned in Nos. **S5.453** and **S5.455**)	
5 755 - 5 850 MHz[1]	(for Region 1 with respect to the countries mentioned in Nos. **S5.453**, **S5.455** and **S5.456**)	
5 850 - 7 075 MHz		
7 900 - 8 400 MHz		
10.7 - 11.7 GHz[1]	(for Region 1)	
12.5 - 12.75 GHz[1]	(for Region 1 with respect to the countries mentioned in No. **S5.494**)	
12.7 - 12.75 GHz[1]	(for Region 2)	
12.75 - 13.25 GHz		
14.0 - 14.25 GHz	(with respect to the countries mentioned in No. **S5.505**)	
14.25 - 14.3 GHz	(with respect to the countries mentioned in Nos. **S5.505**, **S5.508** and **S5.509**)	
14.3 - 14.4 GHz[1]	(for Regions 1 and 3)	
14.4 - 14.8 GHz		
17.7 - 18.1 GHz		
27.0 - 27.5 GHz[1]	(for Regions 2 and 3)	Fixed-Satellite
27.5 - 29.5 GHz		Earth Exploration-Satellite
31.0 - 31.3 GHz	(for the countries mentioned in No. **S5.545**)	Mobile-Satellite
34.2 - 35.2 GHz	(for the countries mentioned in No. **S5.550** with respect to the countries mentioned in No. **S5.549**)	Space Research

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4
COMMITTEE 5

State of Israel

PROPOSALS FOR THE WORK OF THE CONFERENCE

REDUCTION OF THE NUMBER OF FOOTNOTES

The Administration of the State of Israel supports the recommendations of the VGE on simplification of the Radio Regulations and in this context is prepared to have its name deleted from the list of countries figuring in the following footnotes to the Table of Frequency Allocations:

ISR/132/1

MOD 491 *Additional allocation:* In Saudi Arabia, Iraq~~, Israel~~, Libya, Poland,
S5.99 Roumania, Chad, Czechoslovakia, Togo and Yugoslavia, the band 1 810 - 1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

ISR/132/2

MOD **587** *Additional allocation:* in Bulgaria~~, Israel~~, Kenya, Lebanon,
WARC-92 Mongolia, the German Democratic Republic, the United Kingdom, Somalia,
S5.194 Syria, Czechoslovakia, Turkey and the USSR, the band 104 - 108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a permitted basis until 31 December 1995 and, thereafter, on a secondary basis.

ISR/132/3

MOD 600 *Additional allocation:* in the Federal Republic of Germany,
S5.210 Austria, Belgium, France~~, Israel~~, Italy, Liechtenstein, Luxembourg, the United Kingdom, Sweden, Switzerland and Czechoslovakia, the bands 138 - 143.6 MHz and 143.65 - 144 MHz are also allocated to the space research service (space-to-Earth) on a secondary basis.

ISR/132/4

MOD **632** *Additional allocation:* in Saudi Arabia, Bahrain, the United Arab
S5.247 Emirates~~, Israel~~, Jordan, Oman, Qatar and Syria, the band 223 - 235 MHz is also allocated to the aeronautical radionavigation service on a permitted basis.

ISR/132/5

MOD **753C** *Different category of service:* in Angola, Australia, Bangladesh,
WARC-92 Burundi, China, Côte d'Ivoire, Ethiopia, India, the Islamic Republic of Iran~~,~~
S5.400 ~~Israel~~, Italy, Jordan, Kenya, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Senegal, Sudan, Swaziland, Syria, Tanzania, Thailand, Togo, Zaire and Zambia, the allocation of the band 2 483.5 - 2 500 MHz to the radiodetermination-satellite service (space-to-Earth) is on a primary basis (see No. **425**) subject to agreement obtained under the procedure of Article **14** with other countries not listed in this provision.

ISR/132/6

MOD **815** Subject to agreement obtained under the procedure set forth in
S5.464 Article **14**, the band 8 025 - 8 400 MHz may be used for the earth exploration-satellite service (space-to-Earth) in Bangladesh, Benin, Cameroon, China, the Central African Republic, the Ivory Coast, Egypt, France, Guinea, Upper Volta, India, Iran~~, Israel~~, Italy, Japan, Kenya, Libya, Mali, Niger, Pakistan, Senegal, Somalia, Sudan, Sweden, Tanzania, Zaire and Zambia, on a primary basis.

ISR/132/7

MOD 819 *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh,
S5.468 Brunei Darussalam, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guinea, Guyana, Indonesia, Iran, Iraq~~, Israel~~, Jamaica, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, Qatar, Dem. People's Rep. of Korea, Syria, Senegal, Singapore, Somalia, Sri Lanka, Swaziland, Tanzania, Chad, Thailand, Togo, Tunisia and Yemen, the band 8 500 - 8 750 MHz is also allocated to the fixed and mobile services on a primary basis.

ISR/132/8

MOD 826 *Different category of service:* in Afghanistan, Algeria, Saudi
S5.477 Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Ethiopia, Guyana, India, Indonesia, Iran, Iraq~~, Israel~~, Jamaica, Japan, Jordan, Kuwait, the Lebanon, Liberia, Malaysia, Nigeria, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan, Sri Lanka, Sweden, Thailand, Trinidad and Tobago, and Yemen, the allocation of the band 9 800 - 10 000 MHz to the fixed service is on a primary basis (see No. **S5.33**).

ISR/132/9

MOD 883 *Additional allocation:* in Afghanistan, Algeria, Saudi Arabia,
S5.543 Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Ethiopia, Guinea, India, Indonesia, Iran, Iraq~~, Israel~~, Japan, Jordan, Kenya, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Pakistan, Qatar, Syria, Singapore, Somalia, Sudan, Sri Lanka, Chad and Thailand, the band 29.5 - 31 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits specified in Nos. **S21.3** and **S21.5** shall apply.

However, Israel will remain among the list of countries in the following footnotes to the Table of Frequency Allocations:

NOC 488
S5.96

NOC **554**
S5.164

NOC **572A**
S5.181

NOC **581**
S5.190

NOC **590A**
S5.197

NOC 597
S5.205

NOC 601
S5.211

NOC 608C
S5.221

NOC **621**
S5.235

NOC **622**
S5.236

NOC 647
S5.262

NOC 658
S5.276

NOC 677A
S5.296

NOC 684
S5.300

NOC 697
S5.316

NOC 711
S5.330

NOC 724
S5.349

NOC 727
S5.355

NOC **733B**
S5.369

NOC 737
S5.378

NOC 741
S5.382

NOC 769
S5.422

NOC 779
S5.429

NOC **797A**
S5.446

NOC **797B**
S5.447

NOC 803
S5.453

NOC 834
S5.483

NOC 848
S5.494

NOC 854
S5.500

NOC 857
S5.505

NOC 865
S5.511

NOC 868
S5.514

NOC 873
S5.524

NOC 894
S5.549

E. MSS below 1 GHz

ISR/132/10

E.1 The State of Israel proposes to maintain the present service categories in the frequency bands below 1 GHz, allocated for fixed, land mobile and mobile-satellite services, as follows (detailed in Table 1 of CPM95/118, page 9):

E.1.1 137 - 138 MHz

E.1.2 148 - 149.9 MHz

E.1.3 149 - 150.05 MHz

E.1.4 312 - 315 MHz

E.1.5 387 - 390 MHz

E.1.6 400.15 - 401 MHz

E.1.7 405.5 - 406 MHz

E.1.8 406 - 410 MHz

E.1.9 608 - 614 MHz

E.1.10 806 - 890 MHz

E.1.11 942 - 960 MHz

E.2 The State of Israel requests to maintain the following footnotes related to the above-mentioned frequency bands - 597, 608, 608A, 608B, 608C, 647 and 647B.

E.3 The State of Israel supports the position to maintain the power flux-density of -125 dB(W/m^2/4 kHz) defined in footnote 599A.

Reasons: WARC-92 considered carefully the issue and defined this value. The State of Israel believes that administrations should take responsibility for their decisions, vis-à-vis commercial companies which operate or develop systems according to such decisions. The position of the State of Israel is that systems which are in a final stage of development (such as first satellite in orbit), should be considered in a similar manner to existing systems.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4

SUMMARY RECORD

OF THE

THIRD MEETING OF COMMITTEE 4

(VGE REPORT ON THE SIMPLIFICATION OF THE RADIO REGULATIONS)

Please replace paragraph 4.16 by the following text:

4.16 The **delegate of Argentina** considered that the Radio Regulations were not an abstract entity but an instrument for dealing with practical problems. From that standpoint, incorporation by reference had already revealed its limitations in the existing Regulations. The Committee did not have to accept or reject the principle outright; it should examine the VGE's recommendations in the light of administrations' proposals, with the aim of simplifying the Regulations but also of making them a more practical tool, e.g., without separating the provisions, as was done in a number of appendices.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

SUMMARY RECORD

OF THE

THIRD MEETING OF COMMITTEE 4

(VGE REPORT ON THE SIMPLIFICATION OF THE RADIO REGULATIONS)

Monday, 30 October 1995, at 1430 hours

Chairman: Mr. M. GODDARD (United Kingdom)

Subjects discussed		**Documents**
1	Appointment of Working Group Chairmen (continued)	-
2	Oral reports by the Chairmen of Working Groups 4A and 4B	-
3	Report of Working Group 4C	DT/22
4	Incorporation by reference	VGE Report Part A, No. 3.3 Section 3

1 Appointment of Working Group Chairmen (continued)

1.1 The **Chairman** announced the appointment of Mr. Rubio Carretón as Chairman of Working Group 4C. This had been confirmed according to the principles adopted at the second meeting.

2 Oral reports by the Chairmen of Working Groups 4A and 4B

2.1 The **Chairman of Working Group 4A** said that, in the three meetings held, the Working Group had considered the recommendations of the VGE and the proposals of administrations relating to Task 1 of the VGE. The participants had reached agreement on a resolution concerning the principles governing the insertion of footnotes and on a recommendation concerning the Table of Frequency Allocations. The question of the aeronautical fixed service remained unresolved. The participants had agreed to propose the removal of the "permitted" category of service but they had not yet reached a consensus on the modifications to be made to the Table of Frequency Allocations. Two Drafting Groups had been set up (4A1 and 4A2) and the Working Group was confident that it would complete its work in time.

2.2 The **Chairman of Working Group 4B** said that the Group had already met six times and that it had practically completed its work on Articles S7 and S8. A Drafting Group 4B1 had been set up with the task of reviewing Resolution 46 (WARC-92). A liaison statement relating to questions calling for joint consideration with Committee 5 would be sent to the latter. A Drafting Group 4B2 had been created to propose solutions to the problems connected with Task 2 of the VGE, and those proposals would be examined in the Plenary. Drafting Group 4B3 was considering the general principles to be followed when administrations failed to reply. The Working Group envisaged proposing that the Working Group should examine the VGE Report section by section, and no longer paragraph by paragraph, and not to examine the sections in detail until Drafting Group 4B2 had completed its work. Finally, it was planned to establish a new drafting group to review Appendices S4 and S5.

3 Report of Working Group 4C (Document DT/22)

3.1 The **Chairman of Working Group 4C**, introducing Document DT/22, said that the Working Group had considered the matter of incorporation by reference and the VGE's proposals concerning the preamble and Articles S2, S3, S6, S15, S16, S17 and S18 of the simplified Radio Regulations, taking account of the administrations' proposals.

3.2 The **Chairman** invited participants to consider, article by article, the proposals formulated by Working Group 4C in the annex to Document DT/22.

Preamble

3.3 The Committee **approved** Nos. S0.1 to S0.11 proposed by the VGE.

Article S2

3.4 The Committee **approved** Nos. S2.1 to S2.7.

Article S3

3.5 The Committee **approved** Nos. S3.1 to S3.4.

3.6 With regard to Nos. S3.5 and S3.6, the **delegate of Argentina** said that his delegation was opposed to the VGE's proposal to transfer Annexes AP7 and AP8 to the ITU-R Recommendations and that the VGE, in recommending the deletion of Article 68 of the Radio Regulations, had failed to grasp the sense of the concepts contained therein.

3.7 The **Chairman** proposed leaving Nos. S3.5 and S3.6 in square brackets.

3.8 That proposal was **approved**.

3.9 With regard to No. S3.7, the **Chairman of the VGE** said, in reply to a question from the **delegate of Australia**, that Annex AP17 might subsequently be incorporated by reference in the same way as Annexes AP7 and AP8.

3.10 The **delegate of Australia** proposed deleting the words "e.g. [Annex AP 17]", since that would not affect the substance of No. S3.7.

3.11 No. S3.7 as amended was **approved**.

3.12 Nos. S3.8 to S3.15 proposed by the VGE were **approved**.

Article S6

3.13 Nos. S6.1 to S6.7 proposed by the VGE were **approved**.

Article S15

3.14 Nos. S15.1 to S15.11 proposed by the VGE were **approved**.

3.15 Referring to Nos. S15.12 and S15.13, the **delegate of Argentina** said that his delegation wished to introduce modifications to emphasize the increasingly serious threats posed by radiation to the health of living beings.

3.16 The **Chairman of the VGE** said that, although the problem was indeed a real one, its solution lay with the health authorities.

3.17 The Committee **approved** Nos. S15.12 and S15.13 proposed by the VGE and **took note** of the remarks made by the delegate of Argentina.

3.18 Nos. S15.14 to S15.17 proposed by the VGE were **approved**.

3.19 No. S15.18 proposed by the VGE was **approved** subject to the introduction, at the proposal of the **delegate of the United States,** of the word "maritime", which would remain in square brackets pending a decision on Article S45 proposed by the VGE.

3.20 Nos. S15.19 to S15.46 proposed by the VGE were **approved**.

Article S16

3.21 Nos. S16.1 and S16.1.1 proposed by the VGE were **approved**.

3.22 No. S16.2 proposed by the VGE was **approved**, subject to deletion of the reference to RR 1879 and to keeping within square brackets the reference to Annex 20 pending a decision on incorporation by reference.

3.23 Nos. S16.3 to S16.5 proposed by the VGE were **approved**.

3.24 No. S16.6 proposed by the VGE was **approved**, the reference to Annex 20 being kept within square brackets pending a decision on incorporation by reference.

3.25 Nos. S16.7 and S16.8 proposed by the VGE were **approved**.

Article S17

3.26 Regarding No. S17.1, the **Chairman of Working Group 4C** said that, in addition to the words "Constitution and the", the Working Group had decided, at the proposal of the delegation of India, to add the word "practical" after the words "to take the necessary" in the text proposed by the VGE.

3.27 The **delegate of Morocco** was against introducing the word "practical", since that would enable administrations to avoid taking the "necessary" measures on the pretext that they were not "practical". In that respect, the Conference was required, in accordance with agenda item 1 (Document 1), to examine the simplifications proposed by the VGE and not to propose substantial modifications requiring protracted debate.

3.28 The **Chairman of the VGE** said that the proposal by the delegation of India had certainly not been intended to shield administrations from their responsibilities. However, the risk to which the delegate of Morocco referred was a real one, and he therefore proposed that the proposal by the delegation of India should not be adopted.

3.29 It was so **agreed**.

3.30 No. S17.1, as set out in Document DT/22, was **approved**.

3.31 Nos. S17.2 to S17.3 proposed by the VGE were **approved**.

Article S18

3.32 Regarding No. S18.1, the **delegate of Morocco** said that it was up to the government of the country, and to it alone, to issue a licence, and therefore suggested that the words in square brackets, which had been added to the VGE text on the proposal of the New Zealand delegation, be deleted.

3.33 The **delegate of New Zealand** supported by the **delegate of Australia**, agreed to the deletion of the words in square brackets and suggested that the words "by the government" be replaced by "under the authority of government".

3.34 The **delegate of France** said that he was not against that suggestion, but proposed that it should be discussed thoroughly by Working Group 4C.

3.35 That proposal was **approved**.

3.36 Nos. S18.2 to S18.11 proposed by the VGE were **approved**, subject to insertion of the words "Constitution and the" in No. S18.4.

Resolution [Com 4-#]

3.37 The **Chairman of Working Group 4C** said that the draft new Resolution "Further studies concerning application of Article S19 (Identification of stations)" in fact corresponded to proposal EUR/5/29 and that it reflected both the spirit and the letter of footnote 6 to section 4 of No. 3.3 in Part A of the VGE Report.

3.38 The **delegate of Japan** wished to know whether the studies referred to at the end of the Resolution would be carried out within the framework of ITU-R.

3.39 The **delegate of Morocco** said that, as he understood it, although the VGE did not wish to modify Article [25] S19, it nevertheless felt that the ITU should carry out studies with a view to finding the technical means of providing new entities with identification numbers. In his view, those studies should be carried out within the framework of ITU-R.

3.40 The **Chairman of Working Group 4C** said that the conclusions reached in Document 15(Rev.1) included a proposal to set up a special inter-organ study group to study the matter; that would not be necessary, since the draft Resolution met that need precisely. He agreed that it would be clearer to specify within the text that ITU-R would be responsible for carrying out the necessary studies with ICAO and IMO.

3.41 The **Chairman** proposed that consideration of the Resolution be left in abeyance until the Working Group for Article S19 had completed its work and had submitted its findings to the Committee, and until the body responsible for carrying out the necessary studies had been more clearly identified. Furthermore, the revision of Article S19 was included in the agenda of WRC-97 and he did not know whether the matter had been discussed by the Working Group of the Plenary. In conclusion, he proposed that the Committee take note of the draft Resolution of Working Group 4C and revert to it at a later stage.

3.42 It was so **agreed**.

3.43 In response to a question by the **delegate of France** concerning "Other business" in Document DT/22, the **Chairman** explained that it referred to the fact that if those participating in the work of the Committee were to take account only of Part C of the VGE Report, they might well find that they were no longer sure which parts of the Regulations had been deleted. It was therefore important to work not only with Part C of the Report, but also with Part B.

3.44 The **delegate of Germany**, reverting to the statement by the delegate of Morocco, which he supported, requested confirmation that the task of the Committee was, in principle, to decide on the adoption of the VGE's proposals as they appeared in the Report, without introducing additions or modifications.

3.45 The **Chairman** proposed that the Committee go through the VGE Report, adopting it section by section and paragraph by paragraph, without seeking to introduce substantial changes, while not ruling out the possibility of improvements.

3.46 In the view of the **delegate of Argentina**, the wording of item 1 of the Conference agenda implied that a delegation could, if it so wished, examine and modify the substance of a point in the VGE Report.

3.47 The **delegate of France**, while sharing the view of the delegate of Germany that the proposals in the VGE Report should not be modified, pointed out that according to the Conference agenda, proposals from administrations were to be taken into consideration for possible approval. It would therefore be unwise to adopt a position of principle at the present juncture.

3.48 The **Chairman** explained that his proposal had not been made with a view to the systematic rejection of proposals from administrations, but to encouraging the Committee to confirm its attention to proposals likely to gain rapid unanimous support.

3.49 The **delegate of Morocco**, referring to the Conference agenda, emphasized that the ultimate aim of the VGE Report was to simplify the Radio Regulations. It was therefore the Committee's job to examine any proposal from an administration that was intended for that purpose. It was not a matter of excluding proposed improvements that were acceptable to a large majority of participants without lengthy debate; however, as a general rule, the Committee should avoid considering any proposal that was not designed to simplify the Radio Regulations. The **delegate of Germany**, referring to item 1 of the Conference agenda, added that only related proposals from administrations were to be discussed.

3.50 The **delegates of the United States** and **China** shared the views of the two previous speakers.

3.51 The **Chairman** noted that the majority of participants considered the Committee's task to be to examine the VGE Report together with administrations' proposals aimed at the simplification of the Radio Regulations.

3.52 The **delegate of Argentina**, reverting to item 1 of the Conference agenda, read out a definition of the word "consider", which implied a thorough examination of the VGE Report.

3.53 The **delegate of Saudi Arabia** felt that the views expressed were not contradictory, since the aim was to simplify the Radio Regulations. The Committee should therefore consider the VGE Report and any proposals confined to the simplification of the Radio Regulations.

3.54 The **Chairman**, having noted the views expressed, announced that the Committee had completed its consideration of the Report of Working Group 4C.

4 Incorporation by reference (VGE Report, Part A, No. 3.3, Section 3)

4.1 The **Chairman of the VGE** pointed out that the existing Radio Regulations already contained examples of incorporation by reference and that the VGE had recommended that texts which were fairly detailed and had treaty status should be replaced by Recommendations drafted by the ITU-R. All that would then remain in the Regulations would be a mandatory reference to the corresponding ITU-R Recommendations. In view of the fact that those Recommendations had not yet been drawn up at the time when it was writing its report, the VGE had prepared annexes containing the texts that might be replaced by Recommendations. He invited participants to refer to Annex 20 in Part C of the VGE Report, containing a typical example of provisions which might be removed from the Regulations but would remain mandatory through incorporation by reference. Those texts, incidentally, were not essential for most users of the Regulations. Following discussion in the VGE, it had been decided that the texts in question would be included in a separate volume or volumes that could be consulted by the few people involved. As far as incorporation by reference proper was concerned, the obligation to comply with the provisions in the document referred to was strictly limited to the context of the linking provision in the Simplified Radio Regulations, i.e., it was the reference to a text which made it mandatory, the reference had to be explicit and it did not change the nature of the document to which it referred, which could thus be revised by the competent Sector. If the document referred to was modified, it would be considered incorporated in the Radio Regulations only after a decision by a world radio conference. It was for the Conference to decide, case by case, which texts might lend themselves to incorporation by reference.

4.2 The **delegate of Morocco**, referring to Document 34, which explained why its authors were opposed to incorporation by reference, said that, in his view, the VGE proposal would not simplify the Regulations, but, on the contrary, make them less user-friendly. The number of works - of different formats - to be consulted would be greater, and it would be difficult to know which version of the Recommendation was to be followed, the revised or unrevised one, particularly if the values given were different. If incorporation by reference was adopted, a four- or five-line provision in the present Regulations would be replaced by a reference to a Recommendation, which might contain a large number of preambular paragraphs that had no bearing on that provision but would also be mandatory for Members. That was a dangerous approach. With regard to annexes mentioned by the VGE Chairman, they were of three kinds: annexes containing material that was not of a regulatory nature and was to be discarded, those containing provisions that were more a matter for other international organizations and those containing texts that could be incorporated by reference. In conclusion, he urged participants not to adopt an all-or-nothing approach to incorporation by reference. For mandatory provisions, he advocated keeping the whole text necessary for their application in the Radio Regulations. On the other hand, when provisions were not mandatory and it was necessary to indicate the existence of other material that would facilitate their application, it would be possible to use incorporation by reference.

4.3 The **delegate of Brazil** considered that the principles cited by the Chairman of the VGE with respect to incorporation by reference would help to simplify the Radio Regulations and provide users with up-to-date texts, since conferences would have to review the texts every two years. He was therefore in favour of incorporation by reference.

4.4 The **delegate of the United Kingdom**, saying that he also favoured that approach, considered that the concern expressed about texts with international treaty status was unjustified, since it was common practice in international law to refer to other procedures developed in other bodies. The principle of incorporation by reference would not in any case deprive texts removed from the Regulations of their international treaty status. Each individual case, moreover, would have to be considered to decide whether incorporation by reference was suitable. If he was in favour of that principle, it was because it would also allow a more rational division of functions among the Radio Regulations, the Rules of Procedure and the appendices, making them easier for the reader to use. The method would also enable the Recommendations to be brought up to date regularly by study groups, subject to subsequent endorsement by world radio conferences. Hence, he considered that incorporation by reference would help to simplify the Radio Regulations, and the European countries had made a proposal along those lines.

4.5 The **delegate of Oman** agreed with the delegate of Morocco that incorporation by reference would merely complicate the Radio Regulations, increase the number of publications to be consulted and create confusion between the revised and unrevised versions of any particular Recommendation. The **delegate of Saudi Arabia**, endorsing that view, added that everyone working in radiocommunications referred to the different types of texts to be found at present in the Regulations. The VGE's recommendation on the subject did not allow for the needs of countries that had been unable to participate in its work. He therefore considered that it was not a practical solution, since it did not take account of the possibilities of all countries.

4.6 The **delegate of Argentina**, while recognizing that in practical terms the revision of the Radio Regulations had reduced the number of articles from 69 to 58 and number of appendices from 44 to 22, nevertheless felt that there had been no real simplification. Some of the appendices which were to be made the subject of ITU-R Recommendations were very useful to operators in their routine work. Furthermore, neither the manner in which those ITU-R Recommendations were to be

incorporated by reference nor the procedure for modifying the Recommendations was yet very clear. Dispensing the information needed by operators in that way would simply mean that problems would take longer to deal with. How could anyone speak of simplification when instead of looking up a single text, operators would have to consult the Simplified Regulations, the ITU-R Recommendations, the Rules of Procedure and the International Frequency List.

4.7 The **delegate of France** noted that the VGE had debated at length the question of the legal status of texts incorporated by reference and concluded that they were an integral part of treaties. Moreover, when, say, RR 735A stated that use of the band 1 675 - 1 170 MHz was subject to the application of the provisions of Resolution 46 (WARC-92), no one challenged the fact that those provisions were part of the treaty. On the subject of the subsequent updating of texts incorporated by reference, the European countries were proposing, in Document 5, a detailed procedure to ensure that the Conference remained sovereign with regard to the approval or otherwise of revised texts. The VGE had proposed various solutions to the practical problem of the multiplicity of sources to be referred to.

4.8 The **delegate of Spain** said he was in favour of incorporation by reference, because the Rules of Procedure were a more appropriate place for certain administrative texts, while others which were highly technical would be better dealt with in ITU-R Recommendations. On that understanding, the principle should be applied case by case.

4.9 The **delegate of Australia** proposed that the principle of incorporation by reference should be accepted, but that its implementation should be considered case by case, with a view to simplifying the application of both the Regulations and the Recommendations. The result of such consideration would take the form of a recommendation to Committee 4, on which the Plenary would make the final decision.

4.10 The **delegate of Morocco** said he was not in any way denying that the legal value of a reference was determined by the nature of the provision in which it was embodied. Nor was he challenging the validity of references to Resolutions, which everyone had had a part in drafting. But the same was not true of ITU-R Recommendations. Developing countries lacked the resources to make a thorough study, not just of the Regulations, which were already formidable enough in themselves, but also of the many documents to which reference would be made for the Recommendations. Nor were they able to take part in all the study groups which produced the Recommendations. Acceptance of the principle of incorporation by reference would merely make the problem worse, without any saving of paper, since the Recommendations would in any case have to be published, or of time, since just as much time would be needed to study the revised Recommendations. There was also the risk of confusion between what would be a simple Recommendation and what would become an official part of the Regulations. Any provision intended to be mandatory should be placed before a conference, debated by it and included as such in the Regulations. Committee 5 should therefore be asked to avoid incorporation by reference as far as possible until Committee 4 and the Plenary had taken a position. Committee 4, for its part, ought to decide as soon as possible, so that Recommendations were not incorporated by reference simply owing to lack of time.

4.11 The **delegate of New Zealand** emphasized that the Regulations already contained many texts incorporated by reference, in RR 3632 and 4686D among others. Similarly, the Regulations already contained material of a treaty nature, which was nevertheless published separately. There was thus no question of introducing a new principle, but merely of extending the application of an existing one and fixing its limits. With regard to the revision of texts incorporated by reference, administrations would in fact have more time to study them before conferences.

4.12 The **delegate of the United States** was in favour of the principle of incorporation by reference in the cases proposed, as in the cases already provided for in the Regulations. It would make it possible to refer to precise technical parameters without having to include a great many of them in the body of the Regulations.

4.13 The **delegate of India** said that incorporation by reference would raise problems of legal status and accessibility, which could be resolved if the following four fundamental principles were adopted: texts incorporated by reference should have the same treaty status as the body of the Regulations; the references should be explicit and clearly identify specific provisions of a specific document, indicating the version intended; texts incorporated by reference should be approved by the competent WRC; all texts incorporated by reference should be assembled in a single document, preferably in the form of an annex to the Regulations.

4.14 The **delegate of Canada** thought that it would be difficult to agree on a blanket principle, but quite possible to envisage applying such a procedure case by case, since the Conference would always have the right to agree or refuse to refer to an ITU-R Recommendation in the Regulations. In view of the growing complexity of the methods applied, e.g., in Appendix 29, the VGE had proceeded from the principle that some technical material might be omitted from the body of the Regulations, on the understanding that from the legal standpoint it would still remain mandatory. His country had some reservations about references to the latest version of such or such Recommendation, although they did appear in some cases in the existing Regulations. The delegate of India had made some interesting points on the subject. The Committee should therefore make a careful study of all individual cases to see whether there were any grounds, or not, for referring to a Recommendation and notify Committee 5 accordingly.

4.15 The **delegate of Sweden** pointed out that if a Recommendation was incorporated by reference and subsequently updated, the preparatory meeting for the next conference would presumably draw its attention to the fact that the reference needed to be changed. On the assumption that radiocommunication assemblies and study groups applied the latest standards and endeavoured to improve use of the Regulations, incorporation by reference should not entail any additional burden for delegations.

4.16 The **delegate of Argentina** considered that the Radio Regulations were not an abstract entity but an instrument for dealing with practical problems. From that standpoint, incorporation by reference had already revealed its limitations in the existing Regulations. The Committee did not have to accept or reject the principle outright; it should examine the VGE's recommendations in the light of administrations' proposals, with the aim of simplifying the Regulations but also of making them a more practical tool, e.g., by not keeping the provisions separate from the examples, as was done in a number of appendices.

4.17 The **Chairman** summarized the points on which there seemed to him to be agreement: when a provision was not mandatory, it was permissible to refer to other texts, including, for example, the latest version of the relevant Recommendation; when a provision was mandatory and referred to a concise text, it was preferable to include the text itself in the body of the Regulations; it would be possible to refer, in a footnote to a table of frequency band allocations, for example, to a Resolution or Recommendation, when its text had been duly approved by a WRC. Those principles merely reflected the existing situation and left open the question of whether it would be acceptable to have references to a substantial text which was not in the body of the Regulations, but acquired mandatory status by being incorporated by reference. All speakers had advocated caution in such cases. In the event of incorporation of an ITU-R Recommendation, it had been proposed that a number of principles should be applied, which were fully consistent with the VGE Report, namely:

texts incorporated by reference were to have the legal status of treaties; the reference was to be very explicit and precise; updating was to be the result of an express decision by a WRC; and the texts referred to were to be assembled in a single document. The best way to proceed might be to consider the situation case by case, without reopening the debate every time, endeavouring as far as possible to include the full text of mandatory provisions in the Regulations, but when the Committee's working groups considered that the texts in question were not really of any general interest for users of the Regulations, reserving the possibility of proceeding to incorporate them by reference, provided that the principles he had mentioned were applied.

4.18 The **delegate of Morocco** asked the Chairman to put the summary of the debate he had just given in writing so that the Committee could take a position on it at a later meeting. Supported by the **delegate of Saudi Arabia**, he said he was against the rubber-stamping by WRCs of revised versions of Recommendations incorporated by reference in the Regulations. Such revisions should be adopted by the WRC at the proposal of administrations and after consideration under an agenda item.

4.19 The **Chairman** said that when a Recommendation had been incorporated in the Regulations by reference and the Radiocommunication Assembly subsequently decided to update it, the new version of the Recommendation would in principle have to be the subject of an express decision by the next WRC. Document 5 submitted by the European countries contained a draft Resolution proposing a detailed procedure along those lines.

4.20 The **delegate of Sweden** was of the opinion that the Committee could apply the principles stated by the Chairman to the cases of incorporation by reference in the existing Regulations without further ado. The reference in RR 4686D cited by the delegate of New Zealand, for example, might be made more precise.

4.21 The **Chairman** said that if the Committee adopted a set of principles, it should normally review the Regulations in detail in order to apply them consistently. He proposed that he should put his conclusions on the debate in writing and submit them to the Committee at its next meeting. In the meantime, he would draw the attention of Committee 5 to those conclusions, making it clear that they had not yet been approved by Committee 4 or the Plenary.

4.22 It was so **agreed**.

The meeting rose at 1725 hours.

The Secretary:
M. GIROUX

The Chairman:
M. GODDARD

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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1 November 1995
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WORKING GROUP OF THE PLENARY

Kingdom of the Netherlands

1 Introduction

There is a growing need for timely and reliable information on forest cover and the extent and rate of forest degradation in tropical and temperate regions. This need for assessment and systematic observations of forest cover has been strongly expressed in Agenda 21 of the UNCED Conference in Rio de Janeiro 1992. Agenda 21 is to be seen as an operational international framework which has been authorized by 178 participating countries. Within Agenda 21, the subject of Earth observation is addressed in Chapters 7 and 11. In Chapter 7 it reads:

> "7.33 All countries, in particular developing countries, alone or in regional or subregional groupings, should be given access to modern techniques of land-resource management such as Geographic Information Systems (GIS), satellite photography/imagery and other remote sensing technologies."

Agenda 21 includes an important forestry component, and, in addition to forest-related aspects on climate and biodiversity, agreement was reached on a declaration of "forest principles". These principles relate to the sustainable management and sustainable use of the world's forest resource.

Earth observation is a source of information reliable to assess forest cover changes on an operational and sustainable basis. It allows repetitive coverage of areas at selected intervals to update information on forest resources and to assess changes in forest cover.

2 Technology

Optical remote sensing methods are not adequate due to frequent cloud cover and inability to detect biomass. Synthetic Aperture Radar (SAR) satellites offer the possibility to monitor changes in forests due to their all-weather capability.

However, a primary obstacle precludes the large scale use of these SAR satellites for forest monitoring: an inappropriate radar wavelength (for the present and proposed systems). Currently, the SAR, on board the ERS-1 satellite, with its 6 cm wavelength (C-band) is considered to be only of a very specific use for forestry applications because the radar signal does not penetrate the canopy. Longer wavelengths (e.g. 70 cm, $\approx$ 450 MHz) have the capability to determine the ground-trunk interaction and are in the context of forest cover information of particular importance.

The SAR satellite will perform 5 256 orbits per year yielding a complete coverage of the Earth eight times a year. Locations at equatorial latitude will be illuminated by the SAR satellite eight times a year, whereas a location at 60° latitude will be illuminated 16 times a year.

The footprint of the antenna will be ±83 km by ±83 km. Since the satellite's velocity is around 7 km/s (at an altitude of 750 km) a location on Earth will be illuminated for about 13 seconds while the satellite passes over.

3 Principles for international cooperation

To respond to the above described problems, nowadays active remote sensing satellites are developed, in order to allow an effective global forestry monitoring service, considering the following presumptions:

i) the provision of the acquired monitoring information to the end users by direct downlinks with the use of local processing, and consequently, avoiding the need for intervening international processing entities and dissemination networks;

ii) the option for individual countries to renounce the service and the associated frequency allocation.

4 Proposal

HOL/134/1

It is proposed that WRC-95 decides to include in the revision of Resolution 712 a *resolves* specifying the need for a worldwide primary allocation of a frequency band (3.5 MHz) between 420 and 470 MHz to be used by the earth exploration-satellite service to allow implementation of technologies as foreseen by UNCED 1992.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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WORKING GROUP OF THE PLENARY

Australia, China (People's Republic of), Korea (Republic of), India (Republic of), Indonesia (Republic of), Iran (Islamic Republic of), Japan, Malaysia, New Zealand

PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda item 3a)

"future consideration of the Plans for the broadcasting-satellite service for Regions 1 and 3 as contained in Appendices 30 and 30A of the Radio Regulations"

1 Introduction

Resolution 524 (WARC-92) invited the ITU-R to study, as a matter of priority, the technical possibilities for improving the efficiency and the flexibility of the Plans for Regions 1 and 3 in Appendices 30 and 30A.

As a consequence of these studies, the CPM Report provides the current status of studies including those carried out by Working Party 10-11S.

Region 3 contributions indicate support for minimal change in the Plans for that Region and strong concerns to protect the notified systems which are in conformity with Appendices 30 and 30A in any revision of the Plans.

2 Proposals

AUS/CHN/KOR/IND/
INS/IRN/J/MLA/
NZL/135/1

Having regard to the foregoing, the above-mentioned administrations request WRC-95, when adopting decisions on item 3a) of the agenda, to take account of the following:

– The Plans contained in Appendices 30 and 30A of the Radio Regulations continue to be valid in terms of Article 14, Section 14.3, and Article 11, Section 11.2, of these Appendices respectively. These Plans, as updated, should form the basis of any review that might be carried out by WRC-97.

- In accordance with the provisions of Resolution 524 (WARC-92), notified systems which are in conformity with Appendices 30 and 30A of the Radio Regulations shall be protected in any revision of the Plans.
- Any exercise for planning purposes should aim at minimum changes to the current orbital locations, assigned channels, beams and polarization associated with the assignments while reviewing Appendices 30 and 30A. This approach has been defined as Approach A in the CPM Report to WRC-95.
- It is imperative to eliminate those modifications to the Plans which are merely intended for "paper" assignments. To achieve this objective, further studies should be carried out with a view to review the modification procedures contained in Article 4 of Appendices 30 and 30A.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

Austria

PROPOSALS FOR THE WORK OF THE CONFERENCE

SIMPLIFICATION OF THE RADIO REGULATIONS; DELETION OF COUNTRY NAMES OR COUNTRY FOOTNOTES IN ARTICLE 8

With reference to VGE Recommendations 1/15, 1/16 and 1/26 and in accordance with Recommendation 1/27 Austria proposes:

1) to delete the entry "Austria" as follows:

AUT/136/1

MOD 490
S5.98 *Alternative allocation:* in the Federal Republic of Germany, Angola~~, Austria~~, Belgium, Bulgaria, Cameroon, the Congo, Denmark, Egypt, Spain, Ethiopia, France, Greece, Italy, the Lebanon, Luxembourg, Malawi, the Netherlands, Portugal, Syria, the German Democratic Republic, Somalia, Tanzania, Tunisia, Turkey and the U.S.S.R., the band 1 810 - 1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

2) to insert the entry "Austria" as follows:

AUT/136/2

MOD 488
S5.96 In the Federal Republic of Germany, Austria, Denmark, Finland, Hungary, Ireland, Israel, Jordan, Malta, Norway, Poland, The German Democratic Republic, the United Kingdom, Sweden, Czechoslovakia and the U.S.S.R., administrations may allocate up to 200 kHz to their amateur service in the bands 1 715 - 1 800 kHz and 1 850 - 2 000 kHz. However, when allocating the bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighbouring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. The mean power of any amateur station shall not exceed 10 W.

AUT/136/3

SUP 665
S5.283

3) to insert the entry "Austria" as follows:

AUT/136/4

MOD 657 *Additional allocation:* in Austria, Finland, Libya and Yugoslavia,
S5.275 the bands 430 - 432 MHz and 438 - 440 MHz are also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

Spain and Portugal

PROPOSALS FOR THE WORK OF THE CONFERENCE

E/POR/137/1
SUP 631
S5.246

Reasons: No. [631] S5.246 gives the fixed service permitted status in the band 223 - 230 MHz in Spain and Portugal. With the abolition of the permitted category, this service will be converted to a secondary service, so as not to adversely affect other services having primary status. Since the service in question already appears with secondary status in the body of the Table, footnote [631] S5.246 becomes superfluous.

INTERNATIONAL TELECOMMUNICATION UNION

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COMMITTEE 4
COMMITTEE 5

Note by the Chairman of Committe 5*

FOR INFORMATION OF COMMITTEES 4 AND 5

ITU-R RECOMMENDATIONS FOR DETERMINATION OF COORDINATION DISTANCES IN BANDS THAT MAY BE SUBJECT TO THE PROCEDURES OF MOD RESOLUTION 46

Frequencies Below 1 GHz

Frequency sharing situation		**Applicable ITU-R Recommendation**
Earth station for which coordination area is determined	**Other service or station (station in terrestrial service)**	
ground-based (mobile, in the band 148.0 - 149.9 MHz)	ground-based stations	*Case-by-Case Calculation* Recommendation ITU-R M.[8/1035] (approved by RA-95)
ground-based	meteorological aids (radiosonde)	*Fundamentally Covered Predetermined Distance* Note 3 of Recommendation ITU-R IS.850 (became IS.850-1 based on RA-95 approval of Document 2/1005)
ground-based	mobile (aircraft)	*Predetermined Distance* Notes 1 and 2 of Recommendation ITU-R IS.850 (became IS.850-1 based on RA-95 approval of Document 2/1005)

* The information in this document was complied by Mr. Thomas Sullivan (United States, Box 489) in consultation with the BR. Questions and comments on this document should be brought to his attention.

Frequency sharing situation		**Applicable ITU-R Recommendation**
Earth station for which coordination area is determined	**Other service or station (station in terrestrial service)**	
aircraft (mobile)	ground-based stations	*Predetermined Distance* Notes 1 and 2 of Recommendation ITU-R IS.850 (became IS.850-1 based on RA-95 approval of Document 2/1005)
aircraft (mobile)	meteorological aids (radiosonde)	*Fundamentally Covered* *Predetermined Distance* Recommendation ITU-R IS.850 ([500 km] from Notes 1 and 2 plus the distance from Note 3*)* (became Recommendation IS.850-1 based on RA-95 approval of Document 2/1005)
aircraft (mobile)	mobile (aircraft)	*Predetermined Distance* Notes 1 and 2 of Recommendation ITU-R IS.850 (became IS.850-1 based on RA-95 approval of Document 2/1005)

Frequencies Above 1 GHz

Frequency sharing situation		Applicable ITU-R Recommendation
Earth station for which coordination area is determined	**Other service or station (station in terrestrial service, earth station, or radio astronomy station)**	
ground-based mobile	ground-based stations in terrestrial services	*Case-by-Case Calculation* Recommendations ITU-R IS.847 and 849
ground-based mobile	meteorological aids (radiosonde)	*Predetermined Distance* Table 2 and Note 3 of Recommendation ITU-R IS.850 (became IS.850-1 based on RA-95 approval of Document 2/1005)
ground-based mobile	terrestrial mobile (aircraft)	*Predetermined Distance* Tables 1 and 2 of Recommendation ITU-R IS.850 (became IS.850-1 based on RA-95 approval of Document 2/1005)
mobile (in the band 1 610.6 - 1 613.8 MHz)	ground-based radio astronomy stations	*Fundamentally Covered* *Case-by-Case Calculation* Preliminary draft new Recommendation ITU-R [8D/XK] (published in Document 8D/77)
mobile (in the band 1 660.0 - 1 660.5 MHz)	ground-based radio astronomy stations	*Case-by-Case Calculation* Recommendation ITU-R M.829-1
aircraft (mobile)	ground-based stations in terrestrial services	*Predetermined Distance* Tables 1 and 2 of Recommendation ITU-R IS.850 (became IS.850-1 based on RA-95 approval of Document 2/1005)
aircraft (mobile)	meteorological aids (radiosonde)	*Fundamentally Covered* *Predetermined Distance* Recommendation ITU-R IS.850 (became IS.850-1 based on RA-95 approval of Document 2/1005) (500 km from Table 2 plus the distance from Note 3*)*
aircraft (mobile)	terrestrial mobile (aircraft)	*Predetermined Distance* Tables 1 and 2 of Recommendation ITU-R IS.850 (became IS.850-1 based on RA-95 approval of Document 2/1005)

Frequency sharing situation		**Applicable ITU-R Recommendation**
Earth station for which coordination area is determined	**Other service or station (station in terrestrial service, earth station, or radio astronomy station)**	
non-GSO MSS feeder link	ground-based stations in terrestrial services	*Case-by-Case Calulation* Recommendations ITU-R IS.847 and 849
non-GSO MSS feeder link	terrestrial mobile (aircraft)	*Fundamentally Covered* ITU-R IS.850 (became IS.850-1 based on RA-95 approval of Document 2/1005)
non-GSO MSS feeder link	earth station operating in opposite direction of transmission	*Fundamentally Covered* (Recommendations ITU-R IS.847, 848 and 849)

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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COMMITTEE 4

Denmark, Finland, Norway and Sweden

PROPOSALS FOR THE WORK OF THE CONFERENCE

1 Introduction

Developments this year have made the permitted (or primary) allocation to the land mobile service in the frequency band 223 - 230 MHz superfluous. Denmark, Finland, Norway and Sweden therefore wish to be excluded from No. [622] S5.236 of the Radio Regulations.

2 Proposal

DNK/FIN/
NOR/S/139/1

MOD 622

S5.236 *Different category of service:* In the Federal Republic of Germany, Austria, Belgium~~, Denmark~~, Spain~~, Finland~~, France, Israel, Italy, Liechtenstein, Luxembourg, Malta, Monaco~~, Norway~~, the Netherlands, Portugal, the United Kingdom~~, Sweden~~ and Switzerland, the band 223 - 230 MHz is allocated to the land mobile service on a primary basis (see No. **S5.33**). However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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WORKING GROUP OF THE PLENARY

Note by the Chairman

DRAFT REVISION OF RESOLUTION 712 (REV.WRC-95)

CONSIDERATION BY FUTURE COMPETENT WORLD RADIOCOMMUNICATION CONFERENCES OF ISSUES DEALING WITH ALLOCATIONS TO SPACE SERVICES

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that the agenda of WARC-92 called for the development of new recommendations and resolutions relating to allocations to space services which were not placed on the agenda of that Conference;

[b) that Recommendation ITU-R SA.363-5 recommends that frequencies below 1 GHz are technically suitable for telecommand of satellites operating below 2 000 km altitude;]

[c)bis that the UNCED Conference (Rio de Janeiro, 1992) identified an urgent need for systematic observations of forest cover, and that such observations can best be performed using frequencies in the range 420 - 470 MHz;]

d) that the status of existing allocations available for use by active space-based sensors between 1 and 25 GHz, in frequency bands which are shared with radiolocation or radionavigation systems, needs to be reviewed in order to facilitate worldwide usage by active space-based sensors;

e) that the allocations to the earth exploration-satellite service in the frequency bands 8.025 - 8.4 GHz and 18.6 - 18.8 GHz are complex and not uniform worldwide, and that the band 18.6 - 18.8 GHz is vital for passive sensing ecologically important data;

f) that the allocation of the frequency band 13.75 - 14 GHz to the fixed-satellite service by WARC-92 reduced the total bandwidth available for active space-based sensors in the frequency range 13 - 14 GHz, which is an important region for wideband sensor instruments e.g., radar altimeters, scatterometers;

[g) that it is necessary to protect passive sensor measurements in the unique oxygen absorption frequency range between 50 - 71 GHz, in light of the existing and planned implementation of new fixed systems, and low-Earth orbiting satellite systems using inter-satellite links, in this frequency range;]

h) that future active Earth sensing requirements for monitoring environmental data in the 35 and 95 GHz range have been identified;

i) that the ITU-R has agreed to certain important technical parameters required for coordination of the space science services under Appendix **28**;

resolves

that, based on proposals from Administrations and taking into account the results of studies conducted in the ITU-R study groups and the Conference Preparatory Meeting (CPM-97), the next competent world radiocommunication conference should consider the following matters:

[**1** provision of up to 2 MHz of frequency spectrum for the implementation of telecommand links in the space research and space operation services in the frequency range between 100 MHz and 1 GHz;]

[**2** provision of up to 3.5 MHz of frequency spectrum to the earth exploration-satellite service (active) in the frequency range 420 to 470 MHz;]

3 use of existing allocations by space-based active sensors operating in the earth exploration-satellite and space research services in frequency bands shared with the radiolocation or radionavigation services, between 1 and 25 GHz, with a view to the possibility of establishing common worldwide primary allocations;

4 use of existing allocations in the frequency range from 7 to 20 GHz to the earth exploration-satellite, meteorological-satellite, and space research services, with a view to the possibility of establishing common worldwide primary allocations to these services in appropriate bands, taking into account Recommendation 706 (WARC-79);

[**5** review of, and if necessary, re-allocation of, existing allocations in the frequency range from around 50 GHz to around 71 GHz with a view to establishing better sharing conditions for all allocated services;]

6 provision of up to 500 MHz of frequency spectrum around 35 GHz and up to 1 GHz of frequency spectrum around 95 GHz for use by space-based active Earth sensors;

7 inclusion of ITU-R approved technical coordination parameters in Appendix **28** of the Radio Regulations taking into account Resolution 60 (WARC-79) and Recommendation 711 (WARC-79);

invites the ITU-R Study Groups

to carry out the necessary studies with a view to presenting, at the appropriate time, the technical information likely to be required as a basis for the work of the Conference;

instructs the Secretary-General

to bring this Resolution to the attention of the ITU Council at its next session with a view to including these matters in the agenda of WRC-97.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

WORKING GROUP 5A

Republic of Indonesia

PROPOSALS FOR THE WORK OF THE CONFERENCE

THE ALLOCATIONS OF FREQUENCY BANDS LESS THAN 1 GHz

1 The data communications infrastructures are the prerequisites to any management information systems. These infrastructures have, even in certain parts of more developed countries, been found to be less adequate. Some recent industries survey results have shown these facts. For example, despite the vast deployment in the terrestrial SCADA systems of a great many gas and electric companies in the United States, these companies are still unable to uncover the hard-to-read locations under its present network. If it does, the terrestrial solutions will not necessarily be cost-effective solutions.

Economic analysis have shown that there will be a very significant costs saving, if SCADA networks based upon NGSO-MSS (small LEO) technology can be implemented in lieu of the terrestrial systems.

2 Such solutions will certainly be of importance in the developing countries, which, in general, have big deficiencies of reliable and adequate data communications infrastructures. In view of these facts, the NGSO-MSS based data communications services will be promising solutions to enhance the management information systems in developing countries and even in developed countries.

3 To enable the proceeding of the NGSO-MSS undertakings, WRC-95 is trying to resolve the needs of allocating the bands of 216 - 216.5, 217.5 - 218, 399 - 400.05, 455 - 456, 459 - 460 and 401 - 404 MHz, to be accommodated in future spectrum allocations. Noting the existing services already in these bands, we are of the opinion that the Conference should take action in studying the following allocations for NGSO-MSS:

1) 399 - 400.05 MHz, 455 - 456 MHz and 459 - 460 MHz to be co-primary allocations, based on ITU-R studies showing that sharing is feasible with the fixed services and mobile services.

2) 216 - 216.5 MHz and 217.5 - 218 MHz to be secondary allocations, in view of the existing broadcasting services. Studies should be undertaken by the ITU-R with a view towards making the allocations of these bands primary in WRC-97.

3) 401 - 404 MHz to be a secondary allocation and subject to future studies within ITU-R about the sharing of MSS with meteorological services, we would also support the co-primary allocation of this band in the next WRC-97.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

THIRD REPORT OF WORKING GROUP 4A

The attached text of Article S4, which was approved by Working Group 4A at its fourth meeting, is submitted to Committee 4 for consideration and approval.

The Working Group also considered proposals IRN/25/4 and ARG/8/15-16, but did not approve them.

I. HUTCHINGS
Chairman, Working Group 4A

Annex: 1

ANNEX

Radio Regulations

CHAPTER SII

Frequencies

ARTICLE S4

Assignment and Use of Frequencies

Section I. General Rules

MOD 339
S4.1 Members shall endeavour to limit the number of frequencies and the spectrum used to the minimum essential to provide in a satisfactory manner the necessary services. To that end they shall endeavour to apply the latest technical advances as soon as possible[1]. **(CS195)**

SUP 339.1
S4.1.1

NOC **S4.2**
to
S4.22

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WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

Italy

PROPOSALS FOR THE WORK OF THE CONFERENCE

PROPOSED CHANGES TO FOOTNOTES IN ARTICLE 8 OF THE RADIO REGULATIONS

Introduction

The Italian Administration, in the revision of the footnotes of Article 8, intends to modify footnote 868, WARC-92, as follows:

I/143/1

MOD 868 WARC-92 **S5.514** *Additional allocation:* in Afghanistan, Algeria, the Federal Republic of Germany, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Cameroon, Costa Rica, El Salvador, the United Arab Emirates, Finland, Guatemala, Honduras, India, Indonesia, the Islamic Republic of Iran, Iraq, Israel, Italy, Japan, Jordan, Kuwait, Libya, Nepal, Nicaragua, Oman, Pakistan, Qatar, Sudan, Sri Lanka, Sweden, Thailand and Yugoslavia, the band 17.3 - 17.7 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits given in Nos. [2505] **S21.3** and [2508] **S21.5** shall apply.

INTERNATIONAL TELECOMMUNICATION UNION

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Source: Document RA95/PLEN/74(ed) **PLENARY MEETING**

Canada

INFORMATION DOCUMENT

RESOLUTION ITU-R 38

STUDY OF REGULATORY/PROCEDURAL MATTERS

(1995)

The ITU Radiocommunication Assembly,

considering

a) that the ITU Convention included among the functions of Radiocommunication Study Groups the study of technical, operational and procedural matters to be considered by World and Regional Radiocommunication Conferences (CV 156);

b) that the Radiocommunication Assembly, 1993 (Resolution ITU-R 2) established a Working Party of the Conference Preparatory Meeting to deal with matters relating to regulatory/procedural issues as part of preparations for World Radiocommunication Conferences;

c) that the maintenance of high quality Radio Regulations is of concern to the membership of the ITU-R Sector;

d) that regulatory/procedural matters may need to be considered for a longer period than the two-year period normally between Radiocommunication Conferences and that consequently their study should not be approached in a fragmented manner,

resolves

1 to establish a special committee to address the review of regulatory/procedural matters, the results of which may be used by administrations in their preparation for the 1997 World Radiocommunication Conference;

2 that the committee shall incorporate and address the work formerly undertaken in the Working Party to the Conference Preparatory Meeting on regulatory/procedural matters;

3 that the results of these studies shall be contained in reports as contributions to the work of the Conference Preparatory Meeting in preparing its report to the 1997 World Radiocommunication Conference;

4 that the committee shall be open to all the membership of the ITU-R Sector;

5 that the committee shall adopt the working methods of the Study Groups wherever applicable, and shall be task oriented;

6 that the committee will have a Chairman and at least one Vice-Chairman appointed by this Radiocommunication Assembly,

instructs the Director

1 to investigate, with the advice of the Radiocommunication Advisory Group, options for the study of regulatory/procedural matters, including but not limited to the use of a Working Party to the Conference Preparatory Meeting or a full ITU-R Study Group;

2 to include in the investigation the precise definition of the tasks that are necessary; the relationship of the work to World Radiocommunication Conferences, the Conference Preparatory Meeting and Study Groups; possible working methods of any long term group, and the financial implications for the Sector;

3 to report on these matters to the 1997 Radiocommunication Assembly;

4 to invite the ITU-R membership to participate in both the work of the special committee, and the investigation of options for the study of regulatory/procedural matters in the period beyond 1997;

5 to invite the Chairman and Vice-Chairman/Chairmen of the special committee to participate in meetings of Study Group Chairmen and Vice-Chairmen to ensure co-ordination of work programmes, meetings, and resources.

Note by the Director: Following the approval of Resolution ITU-R 38, the Assembly appointed Mr. A. Berrada (Morocco) as Chairman and Mr. R.N. Agarwal (India) and Mr. V. Rubio Carretón (Spain) as Vice-Chairmen of this special committee (Minutes of the eleventh and last Plenary Meeting (Document RA95/PLEN/81)).

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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PLENARY MEETING

Note by the Secretary-General

I have the honour to transmit to the Conference the Report from the ITU Radiocommunication Assembly, Geneva, 1995 to the World Radiocommunication Conference, Geneva, 1995.

Pekka TARJANNE
Secretary-General

Annex: 1

ANNEX

Report from the ITU Radiocommunication Assembly, Geneva, 1995 to the World Radiocommunication Conference, Geneva, 1995

The Radiocommunication Assembly, in accordance with No. 136 of the Convention, hereby submits this progress report on matters that WRC-95 may wish to consider for inclusion in the agenda of future radiocommunication conferences.

The present report also takes into consideration the preliminary draft agenda for the 1997 World Radiocommunication Conference as proposed in Resolution 2 of the Final Acts of the World Radiocommunication Conference, Geneva, 1993.

A list of ITU-R Recommendations in force after the Radiocommunication Assembly, Geneva, 1995, is given in Annex 1. These Recommendations represent completed studies which future radiocommunication conferences wish to take into account.

Also, a list of Questions in force after the Radiocommunication Assembly, Geneva, 1995, is given in Addendum 1 to Document RA95/PLEN/51 (document available upon request). A final edited version of this document concerning minor modifications will be available before the end of the Conference.

ANNEX 1

List of ITU-R
Recommendations
in force as of 21 October 1995

ITU-R Recommendations in force as at
Recommandations de l'UIT-R en vigueur au
Recomendaciones del UIT-R vigentes con fecha de
21/10/95

Series/Série/Serie

SM

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
SM	182-4	Automatic monitoring of occupancy of the radio-frequency spectrum	Contrôle automatique du degré d'occupation du spectre radioélectrique	Comprobación automática de la ocupación del espectro de frecuencias radioeléctricas	SM	1994
SM	239-2	Spurious emissions from sound and television broadcast receivers	Rayonnements parasites produits par les récepteurs de radiodiffusion sonore et de télévision	Emisiones no esenciales producidas por los receptores de radiodifusión sonora y de televisión	SM	1994
SM	326-6	Determination and measurement of the power of radio transmitters	Détermination et mesure de la puissance des émetteurs radioélectriques	Determinación y medición de la potencia de los transmisores radioeléctricos	SM	1994
SM	328-8	Spectra and bandwidth of emissions	Spectres et largeurs de bande des émissions	Espectros y anchuras de banda de las emisiones	SM	1994
SM	329-6	Spurious emissions	Rayonnements non essentiels	Emisiones no esenciales	SM	1994
SM	331-4	Noise and sensitivity of receivers	Bruit de fond et sensibilité des récepteurs	Ruido y sensibilidad de los receptores	SM	1994
SM	332-4	Selectivity of receivers	Sélectivité des récepteurs	Selectividad de los receptores	SM	1994
SM	337-3	Frequency and distance separations	Séparations en fréquence et en distance	Separaciones de frecuencia y en distancia	SM	1994
SM	377-3	Accuracy of frequency measurements at stations for international monitoring	Précision des mesures de fréquence dans les stations pour le contrôle international des émissions	Precisión de las mediciones de frecuencia en las estaciones de comprobación técnica internacional	SM	1994
SM	378-6	Field-strength measurements at monitoring stations	Mesures de champ dans les stations de contrôle des émissions	Mediciones de la intensidad de campo en las estaciones de comprobación técnica	1/1011	AR95
SM	433-5	Methods for the measurement of radio interference and the determination of tolerable levels of interference	Méthodes de mesure des perturbations radioélectriques et de détermination des niveaux de brouillage tolérables	Métodos de medición de las perturbaciones radioeléctricas y de determinación de los niveles admisibles de interferencia	SM	1994
SM	443-2	Bandwidth measurement at monitoring stations	Mesure de la largeur de bande dans les stations de contrôle des émissions	Mediciones de anchura de banda en las estaciones de comprobación técnica de las emisiones	1/1012	AR95
SM	508	Use of radio-noise data in spectrum utilization studies	Emploi des données sur le bruit radioélectrique dans les études relatives à l'utilisation du spectre	Empleo de datos de ruido radioeléctrico en los estudios sobre la utilización del espectro radioeléctrico	SM	1994
SM	575	Protection of fixed monitoring stations against radio-frequency interference	Protection des stations fixes de contrôle des émissions contre les brouillages aux fréquences radioélectriques	Protección de las estaciones fijas de comprobación técnica contra la interferencia de radiofrecuencia	SM	1994
SM	667	National spectrum management data	Données nationales sur la gestion du spectre	Datos de gestión nacional del espectro	SM	1994
SM	668	Methods of exchanging computer programs and data for spectrum management purposes	Méthodes d'échange de programmes et de données informatiques pour la gestion du spectre radioélectrique	Métodos de intercambio de programas y de datos informáticos para la gestión del espectro	SM	1994

SM	669-1	Protection ratios for spectrum sharing investigations	Rapports de protection pour les études de partage des fréquences	Relaciones de protección para las investigaciones sobre la compartición del espectro	SM	1994
SM	852	Sensitivity of radio receivers for class of emissions F3E	Sensibilité des récepteurs pour les émissions de la classe F3E	Sensibilidad de los receptores radioeléctricos para la clase de emisión F3E	SM	1994
SM	853	Necessary bandwidth	Largeur de bande nécessaire	Anchura de banda necesaria	SM	1994
SM	854	Direction finding at monitoring stations of signals below 30 MHz	Radiogoniométrie dans les stations de contrôle, de signaux inférieurs à 30 MHz	Estaciones de radio y de comprobación de señales por debajo de 30 MHz	SM	1994
SM	855	Multi-service telecommunication systems	Systèmes de télécommunication à services multiples	Sistemas de telecomunicación multiservicio	SM	1994
SM	856	Use of interference cancellers, screens and adaptive antennas	Emploi d'annuleurs de brouillage, d'écrans et d'antennes adaptables	Utilización de compensadores de interferencia, pantallas y antenas adaptativas	SM	1994
SM	1045	Frequency tolerance of transmitters	Tolérance en fréquence des émetteurs	Tolerancia de frecuencia en los transmisores	SM	1994
SM	1046	Definition of spectrum use and efficiency of a radio system	Définitions du facteur d'utilisation du spectre et de l'efficacité d'utilisation du spectre d'un système radioélectrique	Definición de la eficacia en la utilización del espectro por un sistema de radiocomunicaciones	SM	1994
SM	1047	National spectrum management	Gestion nationale du spectre	Gestión nacional del espectro	SM	1994
SM	1048	Design guidelines for a basic automated spectrum management system (BASMS)	Directives de conception d'un système de base pour la gestion automatisée du spectre	Directrices para el diseño de un sistema básico automatizado de gestión del espectro	SM	1994
SM	1049-1	A method of spectrum management to be used for aiding frequency assignment for terrestrial services in border areas	Méthode de gestion du spectre à utiliser pour faciliter le processus d'assignation de fréquence aux services de Terre dans les zones frontalières	Método de gestión del espectro destinado a facilitar el proceso de asignación de frecuencias a estaciones de servicios terrenales en zonas fronterizas	1/1008	AR95
SM	1050	Tasks of a monitoring service	Fonctions assignées à un service de contrôle des émissions	Tareas que ha de realizar el servicio de comprobación técnica de las emisiones	SM	1994
SM	1051-1	Priority of identifying and eliminating radio interference in the Band 406-406.1 MHz	Priorité accordée à l'identification et à la suppression des brouillages radioélectriques dans la bande 406-406,1 MHz	Prioridad de identificación y supresión de interferencia radioeléctrica en la banda 406-406,1 MHz	1/1010	AR95
SM	1052	Automatic identification of radio stations	Identification automatique des stations radioélectriques	Identificación automática de las estaciones radioeléctricas	SM	1994
SM	1053	Methods of improving HF direction-finding accuracy at fixed stations	Méthodes permettant d'améliorer la précision des mesures de radiogoniométrie par stations fixes en ondes decamétriques	Métodos para mejorar la exactitud de la radiogoniometría en ondas decamétricas en estaciones fijas	SM	1994
SM	1054	Monitoring of radio emissions from spacecraft at monitoring stations	Contrôle des émissions radioélectriques en provenance d'engins spatiaux par des stations de contrôle des émissions	Comprobación técnica de las emisiones de vehículos espaciales en las estaciones de comprobación técnica	SM	1994
SM	1055	The use of spread spectrum techniques	L'utilisation des techniques d'étalement du spectre	Utilización de técnicas de espectro ensanchado	SM	1994

SM	1056	Limitation of radiation from industrial, scientific and medical (ISM) equipment	Limitation des rayonnements provenant des appareils industriels, scientifiques et médicaux (ISM)	Limitación de las radiaciones procedentes de equipos industriales, científicos y médicos (ICM)	SM	1994
SM	1131	Factors to consider in allocating spectrum on a worldwide basis	Facteurs à prendre en compte lors de l'attribution du spectre des fréquences radioélectriques à l'échelle mondiale	Factores que intervienen en la atribución de espectro a escala mundial	1/1005	AR95
SM	1132	General principles and methods for sharing between radio services	Principes généraux et méthodes d'utilisation en partage de bandes de fréquences entre des services de radiocommunication	Principios y métodos generales de compartición entre servicios de radiocomunicación	1/1006	AR95
SM	1133	Spectrum utilization of broadly defined services	Utilisation du spectre par des services génériques	Utilización del espectro por servicios definidos en acepción amplia	1/1007	AR95
SM	1134	Intermodulation interference calculations in the land-mobile service	Calculs des brouillages d'intermodulation dans le service mobile terrestre	Cálculos de la interferencia de intermodulación en el servicio móvil terrestre	1/1009	AR95
SM	1135	SINPO and SINPFEMO codes	Codes SINPO et SINPFEMO	Códigos SINPO y SINPFEMO	1/1013	AR95
SM	1136	Maximum permitted spurious emission power levels	Niveaux de puissance maximaux tolérés des rayonnements non essentiels	Niveles máximos permitidos de potencia de las emisiones no esenciales	1/1014	AR95
SM	1137	Transmitter frequency tolerances	Tolérance de fréquence des émetteurs	Tolerancias de frecuencia de los transmisores	1/1015	AR95
SM	1138	Determination of necessary bandwidths including examples for their calculation and associated examples for the designation of emissions	Détermination des largeurs de bande nécessaires, exemples de calcul de la largeur de bande nécessaire et exemples connexes de désignation des émissions	Determinación de las anchuras de banda necesarias, con inclusión de ejemplos de cálculo de las mismas y ejemplos conexos de denominación de emisiones	1/1016	AR95
SM	1139	International monitoring system	Système de contrôle international des émissions	Sistema de comprobación tecnica internacional de las emisiones	1/1017	AR95

NOC	SUP	MOD	NEW	Total in force
30	0	4	9	43

ITU-R Recommendations in force as at
Recommandations de l'UIT-R en vigueur au
Recomendaciones del UIT-R vigentes con fecha de
21/10/95

Series/Série/Serie

IS

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
IS	847-1	Determination of the coordination area of an earth station operating with a geostationary space station and using the same frequency band as a system in a terrestrial service	Détermination de la zone de coordination d'une station terrienne opérant avec une station spatiale géostationnaire dans une bande de fréquences partagée avec un service de Terre	Determinación de la zona de coordinación de una estación terrena que funciona con una estación espacial geoestacionaria y utiliza la misma banda de frecuencias que un sistema de un servicio terrenal	IS	1994
IS	848-1	Determination of the coordination area of a transmitting earth station using the same frequency band as receiving earth stations in bidirectionally allocated frequency bands	Détermination de la zone de coordination d'une station terrienne d'émission utilisant la même bande de fréquences que des stations terriennes de réception dans des bandes de fréquences attribuées dans les deux sens	Determinación de la zona de coordinación de una estación terrena transmisora que utiliza la misma banda de frecuencias que estaciones terrenas receptoras en bandas de frecuencia atribuidas con carácter bidireccional	IS	1994
IS	849-1	Determination of coordination area for earth stations operating with non-geostationary spacecraft in bands shared with terrestrial services	Détermination de la zone de coordination pour les stations terriennes opérant avec des engins spatiaux non géostationnaires dans les bandes partagées avec des services de Terre	Determinación de la zona de coordinación para estaciones terrenas que funcionan con vehículos espaciales no geoestacionarios en bandas compartidas con los servicios terrenales	IS	1994
IS	850-1	Coordination areas using predetermined coordination distances	Zones de coordination établies d'après des distances de coordination prédéterminées	Zonas de coordinación con distancias de coordinación predeterminadas	2/1005	AR95
IS	851-1	Sharing between the broadcasting service and the fixed and/or mobile services in the VHF and UHF bands	Partage entre le service de radiodiffusion et les services fixe et/ou mobile dans les bandes d'ondes métriques et décimétriques	Compartición entre el servicio de radiodifusión y los servicios fijo y/o móvil en las bandas de ondas métricas y decimétricas	IS	1994
IS	1009-1	Compatibility between the sound-broadcasting service in the band of about 87-108 MHz and the aeronautical services in the band 108-137 MHz	Compatibilité entre le service de radiodiffusion sonore dans la bande d'environ 87-108 MHz et les services aéronautiques dans la bande 108-137 MHz	Compatibilidad entre el servicio de radiodifusión sonora en la banda de aproximadamente 87-108 MHz y los servicios aeronáuticos en la banda 108-137 MHz	2/1006	AR95
IS	1140	Test procedures for measuring aeronautical receiver characteristics used for determining compatibility between the sound-broadcasting service in the band of about 87-108 MHz and the aeronautical services in the band 108-118 MHz	Procédures d'essai pour la mesure des caractéristiques des récepteurs du service de radionavigation aéronautique servant à déterminer la compatibilité entre le service de radiodiffusion sonore dans la bande des 87-108 MHz et les services aéronautiques dans la bande 108-118 MHz	Procedimientos de prueba utilizados en las medidas de las características de los receptores aeronáuticos que sirven para determinar la compatibilidad entre el servicio de radiodifusión sonora en la banda de unos 87-108 MHz y los servicios aeronáuticos en la banda 108-118 MHz	2/1007	AR95

IS	1141	Sharing in the frequency bands in the 1-3 GHz frequency range between the non-geostationary space stations operating in the mobile-satellite service and the fixed service	Partage dans les bandes de fréquences de la gamme 1-3 GHz, entre les stations spatiales non géostationnaires du service mobile par satellite et le service fixe	Compartición en las bandas de frecuencias de la gama 1-3 GHz entre las estaciones espaciales no geoestacionarias que operan en el servicio móvil por satélite y el servicio fijo	2/1008	AR95
IS	1142	Sharing in the frequency bands in the 1-3 GHz frequency range between geostationary space stations operating in the mobile-satellite service and the fixed service	Partage dans les bandes de fréquences de la gamme 1-3 GHz entre les stations spatiales géostationnaires du service mobile par satellite et le service fixe	Compartición en las bandas de frecuencias de la gama 1-3 GHz entre las estaciones espaciales geoestacionarias del servicio móvil por satélite y el servicio fijo	2/1009	AR95
IS	1143	System specific methodology for coordination of non-geostationary space stations (space-to-Earth) operating in the mobile-satellite service with the fixed service	Méthode systémique de coordination des stations spatiales non géostationnaires du service mobile par satellite (espace vers Terre) avec les systèmes du service fixe	Metodología específica de sistema para la coordinación de estaciones espaciales no geoestacionarias (espacio-Tierra) del servicio móvil por satélite con el servicio fijo	2/1010	AR95

NOC	SUP	MOD	NEW	Total in force
4	0	2	4	10

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ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
P	310-9	Definitions of terms relating to propagation in non-ionized media	Définitions des termes relatifs à la propagation dans les milieux non ionisés	Definición de términos relativos a la propagación en medios no ionizados	PN	1994
P	311-7	Acquisition, presentation and analysis of data in studies of tropospheric propagation	Acquisition, présentation et analyse des données dans les études relatives à la propagation troposphérique	Recopilación, presentación y análisis de los datos obtenidos mediante estudios relativos a la propagación troposférica	PN	1994
P	313-8	Exchange of information for short-term forecasts and transmission of ionospheric disturbance warnings	Echange de renseignements en vue des prévisions à court terme et transmission des avertissements de perturbations ionosphériques	Intercambio de observaciones para predicciones a corto plazo y transmisión de avisos de perturbaciones ionosféricas	3/1018	AR95
P	341-4	The concept of transmission loss for radio links	Notion d'affaiblissement de transmission pour les liaisons radioélectriques	Noción de pérdidas de transmisión en los enlaces radioeléctricos	3/1022	AR95
P	368-7	Ground-wave propagation curves for frequencies between 10 kHz and 30 MHz	Courbes de propagation de l'onde de sol entre 10 kHz et 30 MHz	Curvas de propagación por onda de superficie para frecuencias comprendidas entre 10 kHz y 30 MHz	PN	1994
P	369-6	Reference atmosphere for refraction	Atmosphère de référence pour la réfraction	Atmósfera de referencia para la refracción	PN	1994
P	370-7	VHF and UHF propagation curves for the frequency range from 30 MHz to 1000 MHz. *Broadcasting services*	Courbes de propagation en ondes métriques et décimétriques dans la gamme des fréquences comprises entre 30 et 1000 MHz. *Services de radiodiffusion*	Curvas de propagación en ondas métricas y decimétricas para la gama de frecuencias comprendidas entre 30 y 1000 MHz. *Servicios de radiodifusión*	3/1015	AR95
P	371-7	Choice of indices for long-term ionospheric predictions	Choix d'indices pour les prévisions ionosphériques à long terme	Elección de índices para las predicciones ionosféricas a largo plazo	3/1017	AR95
P	372-6	Radio noise	Bruit radioélectrique	Ruido radioeléctrico	PI	1994
P	373-7	Definitions of maximum and minimum transmission frequencies	Définition des fréquences maximales et minimales de transmission	Definición de las frecuencias máximas y mínimas de transmisión	3/1009	AR95
P	434-6	ITU-R reference ionospheric characteristics and methods of basic MUF, operational MUF and ray-path prediction	Caractéristiques ionosphériques de référence de l'UIT-R et méthodes de prévision des MUF de référence et d'exploitation et du trajet des rayons	Características ionosféricas de referencia del UIT-R y métodos de predicción de la MUF básica, de la MUF de explotación y trayecto del rayo	3/1008	AR95
P	452-7	Prediction procedure for the evaluation of microwave interference between stations on the surface of the Earth at frequencies above about 0.7 GHz	Méthode de prévision pour évaluer les brouillages hyperfréquences entre stations situées à la surface de la Terre à des fréquences supérieures à 0,7 GHz environ	Procedimiento de predicción para evaluar la interferencia en microondas entre estaciones situadas en la superficie de la Tierra a frecuencias superiores a unos 0,7 GHz	3/1026	AR95

P	453-5	The radio refractice index: its formula and refractivity data	Indice de réfraction radioélectrique : formules et données de réfractivité	Índice de refracción radioeléctrica: fórmulas y datos sobre la refractividad	3/1005	AR95
P	525-2	Calculation of free-space attenuation	Calcul de la propagation en espace libre	Cálculo de la atenuación en el espacio libre	PN	1994
P	526-4	Propagation by diffraction	Propagation par diffraction	Propagación por difracción	3/1007	AR95
P	527-3	Electrical characteristics of the surface of the Earth	Caractéristiques électriques du sol	Características eléctricas de la superficie de la Tierra	PN	1994
P	528-2	Propagation curves for aeronautical mobile and radionavigation services using the VHF, UHF and SHF bands	Courbes de propagation dans les bandes d'ondes métriques, décimétriques et centimétriques pour le service mobile aéronautique et le service de radionavigation aéronautique	Curvas de propagación para los servicios móvil aeronaútico y de radionavegación aeronaútica que utilizan las bandas de ondas métricas, decimétricas y centimétricas	PN	1994
P	529-2	Prediction methods for the terrestrial land mobile service in the VHF and UHF bands	Méthodes de prévision de la propagation pour le service mobile terrestre de terre dans les bandes des ondes métriques et décimétriques	Métodos de predicción requeridos para el servicio móvil terrestre terrenal en las bandas de ondas métricas y decimétricas	3/1014	AR95
P	530-6	Propagation data and prediction methods required for the design of terrestrial line-of-sight systems	Données de propagation et méthodes de prévision nécessaires pour la conception de faisceaux hertziens à visibilité directe de Terre	Datos de propagación y métodos de predicción necesarios para el diseño de sistemas terrenales con visibilidad directa	3/1023	AR95
P	531-3	Ionospheric effects influencing radio systems involving spacecraft	Effets ionosphériques qui influent sur les systèmes de radiocommunication comportant des engins spatiaux	Efectos ionosféricos que influyen sobre los sistemas de radiocomunicaciones en que intervienen vehículos espaciales	PI	1994
P	532-1	Ionospheric effects and operational considerations associated with artificial modification of the ionosphere and the radio-wave channel	Effets ionosphériques et problèmes d'exploitation liés à la modification artificielle de l'ionosphère et du canal radioélectrique	Efectos ionosféricos y consideraciones de explotación en relación con la modificación artificial de la ionosfera y del canal de ondas radioeléctricas	PI	1994
P	533-5	HF propagation prediction method	Méthode pour la prévision de la propagation des ondes décamétriques	Método para la predicción de la propagación de las ondas decamétricas	3/1019	AR95
P	534-3	Method for calculating sporadic-E field strength	Méthode de calcul du champ en présence d'ionisation sporadique de la région E	Método para calcular la intensidad de campo en presencia de la capa E esporádica	PI	1994
P	581-2	The concept of "worst month"	Notion de mois le plus défavorable	Noción de mes más desfavorable	PN	1994
P	616	Propagation data for terrestrial maritime mobile services operating at frequencies above 30 MHz	Données sur la propagation nécessaires pour les services mobiles maritimes de Terre fonctionnant à des fréquences supérieures à 30 MHz	Datos de propagación para servicios móviles marítimos terrenales que funcionan a frecuencias superiores a 30 MHz	PN	1994
P	617-1	Propagation prediction techniques and data required for the design of trans-horizon radio-relay systems	Techniques de prévision de la propagation et données de propagation nécessaires pour la conception des faisceaux hertziens transhorizon	Datos de propagación y métodos de predicción necesarios para el diseño de sistemas de radioenlaces transhorizonte	PN	1994
P	618-4	Propagation data and prediction methods required for the design of Earth-space telecommunications systems	Données de propagation et méthodes de prévision nécessaires pour la conception de systèmes de télécommunication Terre-espace	Datos de propagación y métodos de predicción necesarios para el diseño de sistemas de telecomunicaciones Tierra-espacio	3/1024	AR95

P	619-1	Propagation data required for the evaluation of interference between stations in space and those on the surface of the Earth	Données sur la propagation nécessaires à l'évaluation des brouillages entre des stations dans l'espace et des stations situées à la surface de la Terre	Datos de propagación necesarios para evaluar la interferencia entre estaciones en el espacio y estaciones sobre la superficie de la Tierra	PN	1994
P	620-2	Propagation data required for the calculation of coordination distances in the frequency range 1-40 GHz	Données sur la propagation nécessaires au calcul des distances de coordination dans la gamme de fréquences 1-40 GHz	Datos de propagación necesarios para calcular las distancias de coordinación en la gama de frecuencias 1-40 GHz	3/1027	AR95
P	676-2	Attenuation by atmospheric gases in the frequency range 1-350 GHz	Affaiblissement par les gaz de l'atmosphère dans la gamme de fréquences de 1 à 350 GHz	Atenuación producida por los gases atmosféricos en la gama de frecuencias 1-350 GHz	3/1006	AR95
P	678-1	Characterization of the natural variability of propagation phenomena	Caractérisation de la variabilité naturelle des phénomènes de propagation	Caracterización de la variabilidad natural de los fenómenos de propagación	PN	1994
P	679-1	Propagation data required for the design of broadcasting-satellite systems	Données de propagation nécessaires pour la conception des systèmes de radiodiffusion par satellite	Datos de propagación necesarios para el diseño de sistemas de radiodifusión por satélite	PN	1994
P	680-1	Propagation data required for the design of Earth-space maritime mobile telecommunication systems	Données de propagation nécessaires pour la conception de systèmes de télécommunication mobiles maritimes Terre-espace	Datos de propagación necesarios para el diseño de sistemas de telecomunicación móviles marítimos Tierra-espacio	PN	1994
P	681-2	Propagation data required for the design of Earth-space land mobile telecommunication systems	Données de propagation nécessaires pour la conception de systèmes de télécommunication mobiles terrestres Terre-espace	Datos de propagación necesarios para el diseño de sistemas de telecomunicaciones móviles terrestres Tierra-espacio	3/1025	AR95
P	682-1	Propagation data required for the design of Earth-space aeronautical mobile telecommunication systems	Données de propagation nécessaires pour la conception de systèmes de télécommunication aéronautiques mobiles Terre-espace	Datos de propagación necesarios para el diseño de sistemas de telecomunicación móviles aeronáuticos Tierra-espacio	PN	1994
P	684-1	Prediction of field strength at frequencies below about 500 kHz	Prévision du champ aux fréquences inférieures à 500 kHz environ	Predicción de la intensidad de campo en frecuencias por debajo de unos 500 kHz	PI	1994
P	832	World atlas of ground conductivities	Atlas mondial de la conductivité du sol	Atlas mundial de la conductividad del suelo	PN	1994
P	833-1	Attenuation in vegetation	Affaiblissement dû à la végétation	Atenuación debida a la vegetación	PN	1994
P	834-1	Effects of tropospheric refraction on radiowave propagation	Effets de la réfraction troposphérique sur la propagation des ondes radioélectriques	Efectos de la refracción troposférica sobre la propagación de las ondas radioeléctricas	PN	1994
P	835-1	Reference standard atmosphere for gaseous attenuation	Atmosphère de référence pour l'affaiblissement dû aux gaz	Atmósfera normalizada de referencia para la atenuación producida por los gases	PN	1994
P	836	Surface water vapour density	Concentration en vapeur d'eau à la surface de la Terre	Densidad del vapor de agua en la superficie	PN	1994
P	837-1	Characteristics of precipitation for propagation modelling	Caractéristiques des précipitations pour la modélisation de la propagation	Características de la precipitación para establecer modelos de propagación	PN	1994
P	838	Specific attenuation model for rain for use in prediction methods	Modèle d'affaiblissement linéique dû à la pluie destiné aux méthodes de prévision	Modelo de la atenuación específica debida a la lluvia para los métodos de predicción	PN	1994
P	839	Rain height model for prediction methods	Modèle d'altitude de pluie pour les méthodes de prévision	Modelo de la altura de lluvia para utilizar en los métodos de predicción	PN	1994

P	840-1	Attenuation due to clouds and fog	Affaiblissement dû aux nuages et au brouillard	Atenuación debida a las nubes y la niebla	PN	1994
P	841	Conversion of annual statistics to worst-months statistics	Conversion des statistiques annuelles en statistiques pour le mois le plus défavorable	Conversión de las estadísticas anuales en estadísticas del mes más desfavorable	PN	1994
P	842-1	Computation of reliability and compatibility of HF radio systems	Calcul de la fiabilité et de la compatibilité des systèmes radioélectriques en ondes décamétriques	Cálculo de la fiabilidad y la compatibilidad de los sistemas radioeléctricos en ondas decamétricas	PI	1994
P	843	Communication by meteor-burst propagation	Communications utilisant la propagation par impulsions météoriques	Comunicaciones mediante la propagación por impulsos meteóricos	PI	1994
P	844-1	Ionospheric factors affecting frequency sharing in the VHF and UHF bands (30 MHz-3 GHz)	Facteurs ionosphériques qui affectent le partage des fréquences dans les bandes des ondes métriques et décimétriques (30 MHz-3 GHz)	Factores ionosféricos que afectan la compartición de frecuencias en las bandas de ondas métricas y decimétricas (30 MHz-3 GHz)	PI	1994
P	845-2	HF field-strength measurement	Mesure du champ des ondes décamétriques	Medición de la intensidad de campo en ondas decamétricas	3/1020	AR95
P	846-1	Measurements of ionospheric and related characteristics	Mesures de caractéristiques ionosphériques et de caractéristiques associées	Mediciones de las características ionosféricas y otras afines	3/1021	AR95
P	1057	Probability distributions relevant to radio-wave propagation modelling	Modélisation de la propagation des ondes radioélectriques: distributions de probabilité	Distribuciones de probabilidad para establecer modelos de propagación de las ondas radioeléctricas	PN	1994
P	1058	Digital topographic databases for propagation studies	Bases de données topographiques numériques pour les études de propagation	Bases de datos topográficas digitales para estudios de propagación	PN	1994
P	1060	Propagation factors affecting frequency sharing in HF terrestrial systems	Facteurs de propagation influant sur le partage des fréquences entre systèmes de Terre en ondes décamétriques	Factores de propagación que afectan a la compartición de frecuencias en sistemas terrenales en ondas decamétricas	PI	1994
P	1144	Guide to the application of the propagation methods of Study Group 3	Guide pour l'application des méthodes de prévision de la propagation de la commission d'études 3	Guía para la aplicación de los métodos de propagación de la Comisión de Estudio 3	3/1010	AR95
P	1145	Propagation data for the terrestrial land mobile service in the VHF and UHF bands	Données de propagation pour le service mobile terrestre dans les bandes d'ondes métriques et décimétriques	Datos de propagación para el servicio móvil terrestre terrenal en las bandas de ondas métricas y decimétricas	3/1013	AR95
P	1146	The prediction of field strength for land mobile and terrestrial broadcasting services in the frequency range from 1 to 3 GHz	Prévision du champ pour les services mobile terrestre et de radiodiffusion de terre dans la gamme de fréquences 1 à 3 GHz	Predicción de la intensidad de campo para los servicios móvil y de radiodifusión terrestres en la banda de frecuencias de 1 a 3 GHz	3/1012	AR95
P	1147	Prediction of sky-wave field strength at frequencies between about 150 and 1 700 kHz	Prévision du champ de l'onde ionosphérique pour les fréquences comprises entre 150 kHz and 1 700 kHz environ	Predicción de la intensidad de campo de la onda ionosférica en frecuencias comprendidas entre 150 y 1 700 kHz aproximadamente	3/1011	AR95

P	1148	Standardized procedure for comparing predicted and observed HF sky-wave signal intensities and the presentation of such comparisons	Procédure normalisée de comparaison des valeurs prévues et observées des intensités des signaux transmis par l'onde ionosphérique dans la gamme des ondes décamétriques et présentation de ces comparaisons	Procedimiento normalizado para comparar las intensidades predichas y observadas de la señal de onda ionosférica en ondas decamétricas y presentación de esta comparación	3/1016	AR95

NOC	SUP	MOD	NEW	Total in force
36	3*	18	5	59

*Rec. UIT-R PI.435-7, Rec. UIT-R PI.683, Rec. UIT-R PI.1059

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Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
S	352-4	Hypothetical reference circuit for systems using analogue transmission in the fixed-satellite service	Circuit fictif de référence pour les systèmes utilisant la transmission analogique dans le service fixe par satellite	Circuito ficticio de referencia para los sistemas que utilizan la transmisión analógica en el servicio fijo por satélite	S	1994
S	353-8	Allowable noise power in the hypothetical reference circuit for frequency-division multiplex telephony in the fixed-satellite service	Puissance de bruit admissible dans le circuit fictif de référence pour la téléphonie à multiplexage par répartition en fréquence dans le service fixe par satellite	Potencia de ruido admisible en el circuito ficticio de referencia para la telefonía con multiplaje por distribución de frecuencia en el servicio fijo por satélite	S	1994
S	354-2	Video bandwidth and permissible noise level in the hypothetical reference circuit for the fixed-satellite service	Largeur de la bande vidéofréquence et niveau de bruit admissible dans le circuit fictif de référence pour le service fixe par satellite	Anchura de banda de vídeo y nivel de ruido admisible en el circuito ficticio de referencia para el servicio fijo por satélite	S	1994
S	446-4	Carrier energy dispersal for systems employing angle modulation by analogue signals or digital modulation in the fixed-satellite service	Dispersion de l'énergie de la porteuse pour des systèmes employant une modulation angulaire par des signaux analogiques ou une modulation numérique dans le service fixe par satellite	Dispersión de la energía de la portadora para los sistemas que emplean modulación angular y señales analógicas o modulación digital en el servicio fijo por satélite	S	1994
S	464-2	Pre-emphasis characteristics for frequency-modulation systems for frequency-division multiplex telephony in the fixed-satellite service	Caractéristiques de préaccentuation pour les systèmes à modulation de fréquence pour la téléphonie à multiplexage par répartition en fréquence dans le service fixe par satellite	Características de preacentuación para los sistemas con modulación de frecuencia para telefonía con multiplaje por distribución de frecuencia en el servicio fijo por satélite	S	1994
S	465-5	Reference earth-station radiation pattern for use in coordination and interference assessment in the frequency range from 2 to about 30 GHz	Diagramme de rayonnement de référence de station terrienne, à utiliser pour la coordination et pour l'évaluation des brouillages dans la gamme des fréquences comprises entre 2 et environ 30 GHz	Diagrama de radiación de referencia de estación terrena para utilizar en la coordinación y evaluación de las interferencias, en la gama de frecuencias comprendidas entre 2 y unos 30 GHz	S	1994
S	466-6	Maximum permissible level of interference in a telephone channel of a geostationary-satellite network in the fixed-satellite service employing frequency modulation with frequency-division multiplex, caused by other networks of this service	Niveau maximal admissible du brouillage, dans une voie téléphonique d'un réseau à satellite géostationnaire du service fixe par satellite utilisant la modulation de fréquence avec multiplexage en fréquence, produit par d'autres réseaux de ce service	Nivel máximo admisible de la interferencia, en un canal telefónico de una red de satélites geoestacionarios del servicio fijo por satélite que utilice la modulación de frecuencia con multiplaje por distribución de frecuencia, producida por otras redes de este servicio	S	1994

S	481-2	Measurement of noise in actual traffic for systems in the fixed-satellite service for telephony using frequency-division multiplex	Mesures de bruit en cours de trafic pour les systèmes du service fixe par satellite pour la téléphonie à multiplexage par répartition en fréquence	Mediciones de ruido en tráfico real para sistemas del servicio fijo por satélite para telefonía con multiplaje por distribución de frecuencia	S	1994
S	482-2	Measurement of performance by means of a signal of a uniform spectrum for systems using frequency-division multiplex telephony in the fixed-satellite service	Mesure de la qualité à l'aide d'un signal à spectre continu uniforme, pour les systèmes qui utilisent la téléphonie à multiplexage par répartition en fréquence dans le service fixe par satellite	Medición de la calidad de funcionamiento mediante una señal de espectro continuo uniforme en sistemas para telefonía con multiplaje por distribución de frecuencia en el servicio fijo por satélite	S	1994
S	483-2	Maximum permissible level of interference in a television channel of a geostationary-satellite network in the fixed-satellite service employing frequency modulation, caused by other networks of this service	Niveau maximal admissible du brouillage, dans un canal de télévision d'un réseau à satellite géostationnaire du service fixe par satellite utilisant la modulation de fréquence, produit par d'autres réseaux de ce service	Nivel máximo admisible de la interferencia causada en un canal de televisión de una red de satélites geoestacionarios del servicio fijo por satélite con modulación de frecuencia, por otras redes de este servicio	S	1994
S	484-3	Station-keeping in longitude of geostationary satellites in the fixed-satellite service	Maintien en position en longitude des satellites géostationnaires du service fixe par satellite	Mantenimiento de la posición en longitud de los satélites geoestacionarios del servicio fijo por satélite	S	1994
S	521-2	Hypothetical reference digital path for systems using digital transmission in the fixed-satellite service	Conduit numérique fictif de référence pour les systèmes utilisant la transmission numérique dans le service fixe par satellite	Trayecto digital ficticio de referencia para los sistemas del servicio fijo por satélite que utilizan la transmisión digital	S	1994
S	522-5	Allowable bit error ratios at the output of the hypothetical reference digital path for systems in the fixed-satellite service using pulse-code modulation for telephony	Valeurs admissibles du taux d'erreur binaire à la sortie du conduit numérique fictif de référence des systèmes du service fixe par satellite utilisant la modulation par impulsions et codage pour la téléphonie	Valores admisibles de la proporción de bits erróneos a la salida del trayecto digital ficticio de referencia en los sistemas del servicio fijo por satélite que utilizan la modulación por impulsos codificados para telefonía	S	1994
S	523-4	Maximum permissible levels of interference in a geostationary-satellite network in the fixed-satellite service using 8 bit PCM encoded telephony, caused by other networks of this service	Niveaux maximaux admissibles du brouillage dans un réseau à satellite géostationnaire du service fixe par satellite utilisant la téléphonie à codage MIC à 8 bits, produit par d'autres réseaux de ce service	Niveles máximos admisibles de la interferencia producida en una red de satélites geoestacionarios del servicio fijo por satélite, utilizada para telefonía con codificación MIC de 8 bits, por otras redes de este servicio	S	1994
S	524-5	Maximum permissible levels of off-axis e.i.r.p. density from earth stations in the fixed-satellite service transmitting in the 6 and 14 GHz frequency bands	Niveaux maximaux admissibles de la densité de p.i.r.e. hors axe rayonnée par les stations terriennes du service fixe par satellite fonctionnant dans les bandes de fréquences des 6 GHz et des 14 GHz	Niveles máximos admisibles de la densidad de la p.i.r.e. fuera del eje, de las estaciones terrenas del servicio fijo por satélite que funcionan en las bandas de frecuencias de 6 GHz y de 14 GHz	S	1994
S	579-3	Availability objectives for a hypothetical reference circuit and a hypothetical reference digital path when used for telephony using pulse-code modulation, or as part of an integrated services digital network hypothetical reference connection, in the fixed-satellite service	Objectifs de disponibilité d'un circuit fictif de référence et d'un conduit numérique fictif de référence utilisés dans un service de téléphonie avec modulation par impulsions et codage, ou comme partie d'une connexion fictive de référence d'un réseau numérique à intégration de services, dans le service fixe par satellite	Objetivos de disponibilidad para un circuito ficticio de referencia y un trayecto digital ficticio de referencia para telefonía con modulación por impulsos codificados, o como parte de una conexión ficticia de referencia de una red digital de servicios integrados, en el servicio fijo por satélite	S	1994

S	580-5	Radiation diagrams for use as design objectives for antennas of earth stations operating with geostationary satellites	Diagrammes de rayonnement à utiliser comme objectifs de conception pour les antennes des stations terriennes fonctionnant avec des satellites géostationnaires	Diagramas de radiación que han de utilizarse como objetivos de diseño para las antenas de las estaciones terrenas que funcionan con satélites geoestacionarios	S	1994
S	614-3	Allowable error performance for a hypothetical reference digital path in the fixed-satellite service operating below 15 GHz when forming part of an international connection in an integrated services digital network	Taux d'erreur admissible pour un conduit numérique fictif de référence du service fixe par satellite fontionnant en dessous de 15 GHz et faisant partie d'une communication internationale dans un réseau numérique à intégration de services	Objetivos de características de error para un trayecto digital ficticio de referencia del servicio fijo por satélite que funciona por debajo de 15 GHz, cuando forma parte de una conexión internacional en una red digital de servicios integrados	S	1994
S	670-1	Flexibility in the positioning of satellites as a design objective	Souplesse de positionnement des satellites en tant qu'objectif de conception	Flexibilidad en la ubicación de los satélites como objetivo de diseño	S	1994
S	671-3	Necessary protection ratios for narrow-band single channel-per-carrier transmissions interfered with by analogue television carriers	Rapports de protection nécessaires pour des transmissions à une seule voie par porteuse (SCPC) à bande étroite brouillées par des porteuses de télévision analogiques	Relaciones de protección necesarias para transmisiones de banda estrecha con un solo canal por portadora (SCPC) interferidas por portadoras de televisión analógicas	S	1994
S	672-3	Satellite antenna radiation pattern for use as a design objective in the fixed-satellite service employing geostationary satellites	Diagramme de rayonnement à utiliser comme objectif de conception pour les antennes de satellite dans le service fixe par satellite employant des satellites géostationnaires	Diagramas de radiación de antenas de satélite para utilizar como objetivo de diseño en el servicio fijo por satélite que emplea satélites geoestacionarios	4/1007	AR95
S	673	Terms and definitions relating to space radiocommunications	Termes et définitions concernant les radiocommunications spatiales	Términos y definiciones relativos a radiocomunicaciones espaciales	S	1994
S	725	Technical characteristics for very small aperture terminals (VSATs)	Caractéristiques techniques des microstations	Características técnicas de los terminales de muy pequeña apertura (VSAT)	S	1994
S	726-1	Maximum permissible level of spurious emissions from very small aperture terminals (VSATs)	Niveau maximal admissible des rayonnements non essentiels émis par les microstations (VSAT)	Nivel máximo admisible de las emisiones no esenciales procedentes de estaciones terminales de apertura muy pequeña (VSAT)	S	1994
S	727	Cross-polarization isolation from very small aperture terminals (VSATs)	Discrimination de polarisation croisée des microstations	Discriminación por polarización cruzada en los terminales de muy pequeña apertura (VSAT)	S	1994
S	728-1	Maximum permissible level of off-axis e.i.r.p. density from very small aperture terminals (VSATs)	Niveau maximal admissible de la densité de p.i.r.e. hors axe des microstations (VSAT)	Máximo nivel admisible de densidad de p.i.r.e. fuera del eje procedente de terminales de muy pequeña apertura (VSAT)	4/1008	AR95
S	729	Control and monitoring function of very small aperture terminals (VSATs)	Commande et surveillance des microstations terriennes	Funciones de control y supervisión de terminales de muy pequeña apertura (VSAT)	S	1994

S	730	Compensation of the effects of switching discontinuities for voice band data and of Doppler frequency-shifts in the fixed-satellite service	Compensation de l'influence des discontinuités dues à la commutation sur la transmission de données dans la bande vocale et de l'effet Doppler dans le service fixe par satellite	Compensación de los efectos causados por discontinuidades debidas a la conmutación en la transmisión de datos en banda vocal y los desplazamientos de frecuencia por efecto Doppler en el servicio fijo por satélite	S	1994
S	731	Reference earth-station cross-polarized radiation pattern for use in frequency coordination and interference assessment in the frequency range from 2 to about 30 GHz	Diagramme de rayonnement contrapolaire de référence de station terrienne, à utiliser pour la coordination des fréquences et pour l'évaluation des brouillages dans la gamme des fréquences comprises entre 2 et environ 30 GHz	Diagrama de radiación contrapolar de referencia de estación terrena para utilizar en la coordinación de frecuencias y la evaluación de la interferencia en la gama de frecuencias comprendida entre 2 y unos 30 GHz	S	1994
S	732	Method for statistical processing of earth-station antenna side-lobe peaks	Méthode de traitement statistique des crêtes des lobes latéraux d'antenne de station terrienne	Método para el tratamiento estadístico de las crestas de los lóbulos laterales de las antenas de estación terrena	S	1994
S	733-1	Determination of the G/T ratio for earth stations operating in the fixed-satellite service	Détermination du rapport G/T des stations terriennes du service fixe par satellite	Determinación de la relación ganancia/termperatura de ruido de las estaciones terrenas que funcionan en el servicio fijo por satélite	S	1994
S	734	The application of interference cancellers in the fixed-satellite service	Application des annuleurs de brouillage dans le service fixe par satellite	Utilización de canceladores de interferencia en el servicio fijo por satélite	S	1994
S	735-1	Maximum permissible levels of interference in a geostationary-satellite network for an HRDP when forming part of the ISDN in the fixed-satellite service caused by other networks of this service below 15 GHz	Niveaux maximaux admissibles, dans un réseau du service fixe par satellite géostationnaire, du brouillage provoqué par d'autres réseaux de ce service en dessous de 15 GHz, pour un conduit numérique fictif de référence (CNFR) faisant partie du RNIS	Niveles máximos admisibles de la interferencia causada en una red de satélite geoestacionario, para un trayecto digital ficticio de referencia (TDFR) del servicio fijo por satélite que forme parte de la RDSI, por otras redes de este servicio a frecuencias inferiores a 15 GHz	S	1994
S	736-2	Estimation of polarization discrimination in calculations of interference between geostationary-satellite networks in the fixed-satellite service	Evaluation de la discrimination de polarisation dans les calculs de brouillage entre réseaux à satellites géostationnaires dans le service fixe par satellite	Estimación de la discriminación por polarización en los cálculos de interferencia entre redes de satélites geoestacionarios en el servicio fijo por satélite	4/1009	AR95
S	737	Relationship of technical coordination methods within the fixed-satellite service	Relations entre les différentes méthodes de coordination technique dans le service fixe par satellite	Relación entre los métodos de coordinación técnica en el servicio fijo por satélite	S	1994
S	738	Procedure for determining if coordination is required between geostationary-satellite networks sharing the same frequency bands	Procédure permettant de déterminer s'il y a lieu de procéder à la coordination entre des réseaux à satellites géostationnaires partageant les mêmes bandes de fréquences	Procedimiento para determinar si es necesaria la coordinación entre las redes de satélites geoestacionarios que comparten las mismas bandas de frecuencia	S	1994

S	739	Additional methods for determining if detailed coordination is necessary between geostationary-satellite networks in the fixed-satellite service sharing the same frequency bands	Méthodes additionnelles pour déterminer si une coordination détaillée est nécessaire entre réseaux à satellites géostationnaires partageant les mêmes bandes de fréquences dans le service fixe par satellite	Métodos adicionales para determinar si es necesaria la coordinación detallada entre las redes de satélites geoestacionarios del servicio fijo por satélite que comparten las mismas bandas de frecuencia	S	1994
S	740	Technical coordination methods for fixed-satellite networks	Méthodes de coordination technique de réseaux du service fixe par satellite	Métodos de coordinación técnica para redes del servicio fijo por satélite	S	1994
S	741-2	Carrier-to-interference calculations between networks in the fixed- satellite service	Calculs des rapports porteuse sur brouillage entre réseaux dans le service fixe par satellite	Cálculo de la relación portadora/interferencia entre redes del servicio fijo por satélite	S	1994
S	742-1	Spectrum utilization methodologies	Méthodes d'utilisation du spectre	Metodologías de utilización del espectro	S	1994
S	743-1	The coordination between satellite networks using slightly inclined geostationary-satellite orbits (GSOs) and between such networks and satellite networks using non-inclined GSO satellites	Coordination des réseaux utilisant des satellites sur orbite géostationnaire légèrement inclinée et coordination de ces réseaux avec les réseaux utilisant des satellites sur orbites géostationnaires non inclinées	Coordinación de las redes por satélite que utilizan órbitas geoestacionarias ligeramente inclinadas y entre dichas redes y las redes por satélite que utilizan la órbita de los satélites geoestacionarios no inclinada	S	1994
S	744	Orbit/spectrum improvement measures for satellite networks having more than one service in one or more frequency bands	Mesures permettant d'améliorer l'efficacité d'utilisation de la ressource orbite/spectre par les réseaux à satellites assurant plusieurs services sur une ou plusieurs bandes de fréquences	Medidas para mejorar el recurso órbita/espectro en las redes por satélite que tienen más de un servicio en una o más bandas de frecuencias	S	1994
S	1001	Use of systems in the fixed-satellite service in the event of natural disasters and similar emergencies for warning and relief operations	Utilisation de systèmes du service fixe par satellite en cas de catastrophes naturelles et de situations critiques analogues pour les avertisssements et les opérations de secours	Utilización de sistemas en el servicio fijo por satélite en los casos de desastres naturales y otras emergencias similares para avisos y operaciones de socorro	S	1994
S	1002	Orbit management techniques for the fixed-satellite service	Techniques de gestion de l'orbite applicables au service fixe par satellite	Técnicas de gestión de la órbita en el servicio fijo por satélite	S	1994
S	1003	Environmental protection of the geostationary orbit	Protection de l'environnement de l'orbite des satellites géostationnaires	Protección medioambiental de la órbita de los satélites geoestacionarios	S	1994
S	1061	Utilization of fade countermeasures strategies and techniques in the fixed-satellite service	Utilisation de stratégies et de techniques de protection contre les évanouissements dans le service fixe par satellite	Utilización de estrategias y técnicas contra el desvanecimiento en el servicio fijo por satélite	S	1994
S	1062-1	Allowable error performance for a hypothetical reference digital path operating at or above the primary rate	Qualité de fonctionnement admissible en termes d'erreur pour un conduit numérique fictif de référence fonctionnant à un débit égal ou supérieur au débit primaire	Características de error admisible para el trayecto digital ficticio de referencia a la velocidad primaria o a velocidades superiores	4/1012	AR95
S	1063	Criteria for sharing between BSS feeder links and other Earth-to-space or space-to-Earth links on the FSS	Critères de partage entre liaisons de connexion du SRS et d'autres liaisons du SFS dans le sens Terre-espace ou espace-Terre	Criterios para la compartición de frecuencias entre los enlaces de conexión del SRS y otros enlaces Tierra-espacio o espacio-Tierra del SFS	S	1994

S	1064-1	Pointing accuracy as a design objective for earthward antennas on board geostationary satellites in the FSS	Objectif de conception pour la précision du pointage vers la Terre des antennes des satellites géostationnaires du SFS	La precisión de puntería como objetivo de diseño para las antenas dirigidas a la Tierra a bordo de satélites geoestacionarios del SFS	4/1010	AR95
S	1065	Power flux-density values to facilitate the application of RR Article 14 for the FSS in Region 2 in relation to the BSS in the band 11.7-12.2 GHz	Valeurs de puissance surfacique destinées à faciliter l'application de l'Article 14 du RR pour le SFS en Région 2 en relation avec le SRS dans la bande 11,7-12,2 GHz	Valores de densidad de flujo de potencia que facilitan la aplicación del artículo 14 del RR al SFS en la Región 2 con relación al SRS en la banda 11,7-12,2 GHz	S	1994
S	1066	Ways of reducing the interference from the broadcasting-satellite service of one Region into the fixed-satellite service of another Region around 12 GHz	Moyens de réduire le brouillage causé par le service de radiodiffusion par satellite d'une Région, au service fixe par satellite d'une autre Région, aux environs des 12 GHz	Método para reducir la interferencia causada por el servicio de radiodifusión por satélite de una Región al servicio fijo por satélite de otra Región en torno a 12 GHz	S	1994
S	1067	Ways of reducing the interference from the broadcasting-satellite service into the fixed-satellite service in adjacent frequency bands around 12 GHz	Moyens de réduire le brouillage causé par le service de radiodiffusion par satellite au service fixe par satellite, dans les bandes adjacentes aux environs des 12 GHz	Métodos para reducir la interferencia causada por el servicio de radiodifusión por satélite al servicio fijo por satélite en bandas de frecuencia adyacentes en torno a 12 GHz	S	1994
S	1068	Fixed-satellite and radiolocation/radionavigation services sharing in the band 13.75 to 14 GHz	Partage de la bande 13,75-14 GHz entre le service fixe par satellite et le service de radiolocalisation/radionavigation	Compartición entre el servicio fijo por satélite y los servicios de radiolocalización y radionavegación en la banda de 13,75 a 14 GHz	S	1994
S	1069	Compatibility between the fixed-satellite service and the space science services in the band 13.75-14 GHz	Compatibilité du service fixe par satellite et des services scientifiques spatiaux dans la bande 13,75-14 GHz	Compatibilidad entre el servicio fijo por satélite y los servicios científicos espaciales en la banda 13,75-14 GHz	S	1994
S	1149	Network architecture and equipment functional aspects of digital satellite systems in the FSS forming part of SDH transport networks	Architecture de réseau et caractéristiques fonctionnelles des systèmes numériques à satellites du SFS utilisés dans les réseaux de transport HNS	Arquitectura de red y aspectos funcionales del equipo de los sistemas digitales de satélite del SFS que forman parte de las redes de transporte SDH	4/1011	AR95
S	1150	Technical criteria to be used in examinations relating to the probability of harmful interference between frequency assignments in the FSS as required in No. 1506 of the Radio Regulations	Critères techniques à utiliser pour les examens concernant la probabilité de brouillage préjudiciable entre des assignations de fréquence dans le SFS demandés au titre du No. 1506 du Règlement des radiocommunications	Criterios técnicos que deben utilizarse en las consideraciones relativas a la probabilidad de interferencia perjudicial entre las asignaciones de frecuencias del SFS como estipula el número 1506 del Reglamento de Radiocomunicaciones	4/1006	AR 95
S	1151	Sharing between the inter-satellite service involving geostationary satellites in the fixed-satellite service and the radionavigation service at 33 GHz	Partage entre le service inter-satellites reliant des satellites géostationnaires du service fixe par satellite et le service de radionavigation à 33 GHz.	Compartición entre el servicio entre satélites en el que intervienen satélites geoestacionarios del servicio fijo por satélite y el servicio de radionavegación a 33 GHz	4/1005	AR95

NOC	SUP	MOD	NEW	Total in force
49	0	5	3	57

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Series/Série/Serie

SNG

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
SNG	722-1	Uniform technical standards (analogue) for Satellite News Gathering (SNG)	Normes techniques unifiées (applicables aux systèmes analogiques) pour le reportage d'actualités par satellite (RAS)	Normas técnicas (analógicas) uniformes para el periodismo electrónico por satélite (SNG)	SNG	1994 *
SNG	770-1	Uniform operational procedures for Satellite News Gathering (SNG)	Procédures d'exploitation unifiées applicables au reportage d'actualités par satellite (RAS)	Procedimientos operativos uniformes para el periodismo electrónico por satélite (SNG)	SNG	1994 *
SNG	771-1	Auxiliary coordination satellite circuits for SNG terminals	Circuits auxiliaires par satellite pour la coordination des stations RAS	Circuitos de coordinación auxiliares por satélite para terminales SNG	SNG	1994 *
SNG	1007-1	Uniform technical standards (digital) for satellite news gathering (SNG)	Normes techniques unifiées (applicables aux systèmes numériques) pour le reportage d'actualités par satellite (RAS)	Normas técnicas (digitales) uniformes para el periodismo electrónico por satélite (SNG)	4/1013	AR95
SNG	1070	An automatic transmitter identification system (ATIS) for analogue-modulation transmissions for satellite news gathering and outside broadcasts	Système automatique d'identification des émetteurs (ATIS) applicables aux transmissions à modulation analogique par satellite pour le reportage d'actualités et la production en extérieur	Sistema de identificación automática del transmisor (ATIS) para transmisiones con modulación analógica del periodismo electrónico por satélite y desde exteriores	SNG	1994 *
SNG	1152	Use of digital transmission techniques for satellite news gathering (sound)	Utilisation de techniques numériques pour le reportage d'actualités par satellite (en radiodiffusion sonore)	Utilización de técnicas digitales de transmisión para el periodismo electrónico por satélite (sonido)	4/1014	AR95

NOC	SUP	MOD	NEW	Total in force
4	0	1	1	6

* Second edition/Seconde édition/Segunda edición

Series/Série/Serie
TF

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ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
TF	374-3	Standard-frequency and time-signal emissions	Emissions de fréquences étalon et de signaux horaires	Emisiones de frecuencias patrón y de señales horarias	TF	1994
TF	375-2	Standard-frequency and time-signal emissions in additional frequency bands	Emissions de fréquences étalon et de signaux horaires dans de nouvelles bandes de fréquences	Emisiones de frecuencias patrón y de señales horarias en nuevas bandas de frecuencias	TF	1994
TF	376-1	Avoidance of external interference with emissions of the standard-frequency service in the bands allocated to that service	Suppression des brouillages d'origine extérieure causés aux émissions du service de fréquences étalon dans les bandes attribuées à ce service	Supresión de las interferencias de origen externo causadas a las emisiones del servicio de frecuencias patrón en las bandas atribuidas a este servicio	TF	1994
TF	457-1	Use of the modified Julian date by standard-frequency and time-signal services	Utilisation de la date julienne modifiée par les services de fréquences étalon et de signaux horaires	Utilización de la fecha juliana modificada en los servicios de frecuencias patrón y de señales horarias	TF	1994
TF	458-2	International comparisons of atomic time scales	Comparaisons internationales d'échelles de temps atomique	Comparaciones internacionales de escalas de tiempo atómico	TF	1994
TF	460-4	Standard-frequency and time-signal emissions	Emissions de fréquences étalon et de signaux horaires	Emisiones de frecuencias patrón y señales horarias	TF	1994
TF	485-2	Use of time scales in the field of standard-frequency and time services	Utilisation d'échelles de temps dans les services de fréquences étalon et de signaux horaires	Utilización de escalas de tiempo en los servicios de frecuencias patrón y de señales horarias	TF	1994
TF	486-1	Reference of precisely controlled frequency generators and emissions to the international atomic time scale	Référence à l'échelle de temps atomique international pour les générateurs et les émissions de fréquence commandés avec précision	Referencia de los generadores y emisiones con control preciso de frecuencia a la escala de tiempo atómico internacional	TF	1994
TF	535-1	Use of the term UTC	Emploi du terme UTC	Utilización del término UTC	TF	1994
TF	536	Time-scale notations	Notations à utiliser pour désigner les échelles de temps	Notación de las escalas de tiempo	TF	1994
TF	537	Reduction of mutual interference between emissions of the standard-frequency and time-signal service on the allocated frequencies in bands 6 and 7	Réduction des brouillages mutuels entre émissions du service de fréquences étalon et de signaux horaires sur les fréquences qui leur sont attribuées dans les bandes 6 et 7	Reducción de la interferencia mutua entre las emisiones de los servicios de frecuencias patrón y de señales horarias en las frecuencias atribuidas en las bandas 6 y 7	TF	1994
TF	538-3	Measures for random instabilities in frequency and time (phase)	Mesures de l'instabilité aléatoire de fréquence et de temps (phase)	Mediciones de la inestabilidad de frecuencia y en el tiempo (fase)	TF	1994

TF	582-1	Time and frequency reference signal dissemination and coordination using satellite methods	Diffusion et coordination de signaux de référence de temps et de fréquence par satellite	Difusión y coordinación de señales de referencia de tiempo y frecuencia por satélite	TF	1994
TF	583-3	Time codes	Codes horaires	Códigos de tiempo	7/1026	AR95
TF	685	International synchronization of UTC time scale	Synchronisation internationale des échelles de temps UTC	Sincronización internacional de las escalas de tiempo UTC	TF	1994
TF	686	Glossary	Glossaire	Glosario	TF	1994
TF	767	Use of the Global Positioning System (GPS) and the Global Navigation Satellite System (GLONASS) for high-accuracy time transfer	Utilisation du système mondial de positionnement (GPS) et du système mondial de satellites de navigation (GLONASS) pour le transfert de temps de haute précision	Utilización del sistema global de determinación de la posición (GPS) y del sistema global de navegación por satélite (GLONASS) para la transferencia de señales horarias de gran precisión	TF	1994
TF	768-2	Standard frequencies and time signals	Fréquences étalon et signaux horaires	Frecuencias patrón y señales horarias	7/1025	AR95
TF	1010	Relativistic effects in a coordinate time system in the vicinity of the Earth	Effets relativistes dans un système de temps coordonné au voisinage de la Terre	Efectos relativistas en un sistema con coordenada de tiempo en las proximidades de la Tierra	TF	1994
TF	1011	Systems, techniques and services for time and frequency transfer	Transfert de signaux horaires et de fréquences étalon: systèmes, techniques et services	Sistemas, técnicas y servicios para la transferencia de tiempo y frecuencia	TF	1994
TF	1153	The operational use of two-way satellite time and frequency transfer employing PN codes	Utilisation opérationnelle du transfert bidirectionnel de signaux horaires et de fréquences étalon par satellite au moyen de codes de pseudo-bruit	Utilización operativa de la transferencia bidireccional por satélite de señales horarias y frecuencias utilizando códigos de seudorruido	7/1027	AR95

NOC	SUP	MOD	NEW	Total in force
18	0	2	1	21

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Series/Série/Serie

SA

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
SA	362-2	Frequencies technically suitable for meteorological satellites	Fréquences techniquement appropriées pour les satellites météorologiques	Frecuencias técnicamente adecuadas para los satélites meteorológicos	SA	1994
SA	363-5	Space operation systems. *Frequencies, bandwidths and protection criteria*	Systèmes d'exploitation spatiale. *Fréquences, largeurs de bande et critères de protection*	Sistemas de operaciones espaciales. *Frecuencias, anchuras de banda y criterios de protección*	SA	1994
SA	364-5	Preferred frequencies and bandwidths for manned and unmanned near-Earth research satellites	Fréquences et largeurs de bandes préférées pour les satellites habités ou non du service de recherche spatiale, proches de la Terre	Anchuras de banda y frecuencias preferidas para satélites de investigación espacial próximos a la Tierra, tripulados o no tripulados	SA	1994
SA	509-1	Generalized space research earth station antenna radiation pattern for use in interference calculations, including coordination procedures	Diagramme de rayonnement de référence d'une antenne de station terrienne dans le service de recherche spatiale, à utiliser pour les calculs de brouillage ainsi que dans les procédures de coordination	Diagrama de radiación de referencia de una antena de estación terrena del servicio de investigación espacial, para uso en los cálculos de interferencia y en los procedimientos de coordinación	SA	1994
SA	510-1	Feasibility of frequency sharing between the space research service and other services in band 10. *Potential interference from data relay satellite systems*	Possibilité de partage des fréquences entre le service de recherche spatiale et d'autres services dans la bande 10. *Brouillage potentiel causé par les systèmes à satellites relais de données*	Posibilidad de compartición de frecuencias entre el servicio de investigación espacial y otros servicios en la banda 10. *Interferencia potencial procedente de los sistemas de satélites de retransmisión de datos*	SA	1994
SA	513-1	Preferred frequency bands for spacecraft transmitters used as beacons	Bandes de fréquences préférées pour les émetteurs d'engins spatiaux utilisés comme balises	Bandas de frecuencias preferidas para los transmisores de vehículos espaciales utilizados como radiofaros	SA	1994
SA	514-2	Interference criteria for command and data transmission systems operating in the Earth exploration-satellite and meteorological-satellite services	Critères de brouillage pour les systèmes de télécommande et de transmission de données fonctionnant dans les services d'exploration de la Terre par satellite et de météorologie par satellite	Criterios de interferencia para los sistemas de telemando y transmisión de datos que funcionan en los servicios de exploración de la Tierra por satélite y de meteorología por satélite	SA	1994
SA	515-2	Frequency bands and bandwidths used for satellite passive sensing	Bandes de fréquences et largeurs de bande utilisées pour la télédétection passive par satellite	Bandas de frecuencias y anchuras de banda utilizadas para la detección pasiva por satélite	SA	1994

SA	516-1	Feasibility of sharing between active sensors used on Earth exploration and meteorological satellites and the radiolocation service	Possibilités de partage entre les capteurs actifs utilisés dans les services d'exploration de la Terre par satellite et de météorologie par satellite et le service de radiolocalisation	Viabilidad de la compartición entre el servicio de radiolocalización y los sensores activos utilizados en los satélites de exploración de la Tierra y de meteorología	SA	1994
SA	577-4	Preferred frequencies and necessary bandwidths for spaceborne active remote sensing	Fréquences préférées et largeurs de bande nécessaires pour la télédétection active spatiale	Frecuencias preferidas y anchuras de banda necesarias para la teledetección activa desde vehículos espaciales	7/1011	AR95
SA	578	Protection criteria and sharing considerations relating to deep-space research	Critères de protection et considérations relatives au partage pour la recherche dans l'espace lointain	Criterios de protección y consideraciones relativas a la compartición para la investigación del espacio lejano	SA	1994
SA	609-1	Protection criteria for telecommunication links for manned and unmanned near-Earth research satellites	Critères de protection pour les liaisons de télécommunication avec les satellites de recherche habités ou non, proches de la Terre	Criterios de protección para los enlaces de telecomunicación con satélites de investigación espacial, tripulados o no tripulados, próximos a la Tierra	SA	1994
SA	1012	Preferred frequency bands for deep-space research in the 1-40 GHz range	Bandes de fréquences préférées pour la recherche dans l'espace lointain dans la gamme 1-40 GHz	Bandas de frecuencias preferidas para la investigación del espacio lejano en la gama de 1-40 GHz	SA	1994
SA	1013	Preferred frequency bands for deep-space research in the 40-120 GHz range	Service de recherche spatiale dans l'espace lointain: bandes de fréquences préférées dans la gamme 40-120 GHz	Bandas de frecuencias preferidas para la investigación del espacio lejano en la gama de 40-120 GHz	SA	1994
SA	1014	Telecommunication requirements for manned and unmanned deep-space research	Vaisseaux habités ou inhabités destinés à la recherche dans l'espace lointain: exigences en matière de télécommunications	Requisitos de telecomunicaciones para la investigación del espacio lejano con vuelos tripulados y no tripulados	SA	1994
SA	1015	Bandwidth requirements for deep-space research	Recherche dans l'espace lointain: largeur de bande requise	Requisitos de anchura de banda para la investigación del espacio lejano	SA	1994
SA	1016	Sharing considerations relating to deep-space research	Recherche dans l'espace lointain: considérations relatives au partage	Consideraciones sobre la compartición en relación con la investigación del espacio lejano	SA	1994
SA	1017	Preferred method for calculating link performance in the space research service	Méthode préférée de calcul de la qualité de fonctionnement des liaisons dans le service de recherche spatiale	Método sugerido para calcular la calidad de un enlace en el servicio de investigaciones del espacio	SA	1994
SA	1018	Hypothetical reference system for systems comprising data relay satellites in the geostationary orbit and user spacecraft in low Earth-orbits	Système fictif de référence pour des systèmes comprenant des satellites relais de données en orbite géostationnaire et des engins spatiaux en orbites terrestres basses	Sistema ficticio de referencia para los sistemas que comprenden satélites de retransmisión de datos en la órbita geoestacionaria y vehículos espaciales de usuario en órbitas bajas	SA	1994
SA	1019	Preferred frequency bands and transmission directions for data relay satellite systems	Systèmes à satellites relais de données: bandes de fréquences préférées et sens de transmission	Bandas de frecuencias preferidas y sentidos de transmisión para los sistemas de satélites de retransmisión de datos	SA	1994
SA	1020	Hypothetical reference system for the Earth exploration-satellite and meteorological satellite services	Système fictif de référence pour les services d'exploration de la Terre par satellite et de météorologie par satellite	Sistema ficticio de referencia para los servicios de exploración de la Tierra por satélite y de meteorología por satélite	SA	1994

SA	1021	Methodology for determining performance objectives for systems in the Earth exploration-satellite and meteorological-satellite services	Méthode permettant de déterminer les objectifs de qualité de fonctionnement pour des systèmes des services d'exploration de la Terre par satellite et de météorologie par satellite	Metodología para determinar los objetivos de calidad de los sistemas que intervienen en los servicios de exploración de la Tierra por satélite y de meteorología por satélite	SA	1994
SA	1022	Methodology for determining interference criteria for systems in the Earth exploration-satellite and meteorological-satellite services	Méthode permettant d'établir des critères de brouillage pour les systèmes des services d'exploration de la Terre par satellite et de météorologie par satellite	Metodología para determinar los criterios de interferencia de los sistemas utilizados en los servicios de exploración de la Tierra por satélite y de meteorología por satélite	SA	1994
SA	1023	Methodology for determining sharing and coordination criteria for systems in the Earth exploration-satellite and meteorological-satellite services	Méthode permettant d'établir des critères de partage et de coordination pour les systèmes utilisés dans les services d'exploration de la Terre par satellite et de météorologie par satellite	Metodología para determinar los criterios de compartición y coordinación de los sistemas que intervienen en los servicios de exploración de la Tierra por satélite y de meteorología por satélite	SA	1994
SA	1024	Necessary bandwidths and preferred frequency bands for data transmission from Earth exploration-satellites (not including meteorological-satellites)	Largeurs de bande nécessaires et bandes de fréquences préférées pour la transmission de données par les satellites d'exploration de la Terre (non compris les satellites météorologiques)	Anchuras de banda necesarias y bandas de frecuencias preferidas para la transmisión de datos desde satélites de exploración de la Tierra (excluyendo satélites meteorológicos)	SA	1994
SA	1025-1	Performance criteria for space-to-Earth data transmission systems operating in the Earth exploration-satellite and meteorological-satellite services using satellites in low-Earth orbit	Critères de qualité de fonctionnement pour les systèmes de transmission de données espace-Terre dans les services d'exploration de la Terre par satellite et de météorologie par satellite utilisant des satellites en orbites terrestres basses	Criterios de calidad para los sistemas de transmisión de datos espacio-Tierra que funcionan en los servicios de exploración de la Tierra por satélite y de meteorología por satélite que utilizan satélites de órbita baja	7/1008	AR95
SA	1026-1	Interference criteria for space-to-Earth data transmission systems operating in the Earth exploration-satellite and meteorological-satellite services using satellites in low-Earth orbit	Critères de brouillage pour les systèmes de transmission de données espace-Terre dans les services d'exploration de la Terre par satellite et de météorologie par satellite utilisant des satellites en orbites terrestres basses	Criterios de interferencia para los sistemas de transmisión de datos espacio-Tierra que funcionan en los servicios de exploración de la Tierra por satélite y de meteorología por satélite que utilizan satélites de órbita baja	7/1009	AR95
SA	1027-1	Sharing and coordination criteria for space-to-Earth data transmission systems in the Earth exploration-satellite and meteorological-satellite services using satellites in low-Earth orbit	Critères de partage et de coordination pour les systèmes de transmission de données espace-Terre dans les services d'exploration de la Terre par satellite et de météorologie par satellite utilisant des satellites en orbites terrestres basses	Criterios de compartición y coordinación para los sistemas de transmisión de datos espacio-Tierra de los servicios de exploración de la Tierra por satélite y de meteorología por satélite que utilizan satélites de órbita baja	7/1010	AR95
SA	1028	Performance criteria for satellite passive remote sensing	Critères de qualité de fonctionnement pour la télédétection passive par satellite	Criterios de calidad para la teledetección pasiva por satélite	SA	1994
SA	1029	Interference criteria for satellite passive remote sensing	Critères de brouillage propres à la télédétection passive par satellite	Criterios de interferencia para la teledetección pasiva por satélite	SA	1994
SA	1030	Telecommunication requirements of satellite systems for geodesy and geodynamics	Besoins de télécommunications des systèmes à satellites pour la géodésie et la géodynamique	Requisitos de telecomunicación de los sistemas de satélite para geodesia y la geodinámica	SA	1994

SA	1071	Use of the 13.75 to 14.0 GHz band by the space science services and the fixed satellite service	Utilisation de la bande 13,75-14,0 GHz par les services scientifiques spatiaux et le service fixe par satellite	Utilización de la banda 13,75-14 GHz por los servicios científicos espaciales y el servicio fijo por satélite	SA	1994
SA	1154	Provisions to protect the Space Research (SR), Space Operations (SO) and Earth-Exploration Satellite Services (EES) and to facilitate sharing with the mobile service in the 2 025 - 2 110 and 2 200 - 2 290 MHz bands	Dispositions propres à assurer la protection des services de recherche spatiale (SRS), d'exploitation spatiale (SES) et d'exploration de la Terre par satellite (SETS) et à faciliter le partage avec le service mobile dans les bandes 2 025 - 2 110 MHz et 2 200 - 2 290 MHz	Disposiciones para proteger los servicios de investigación espacial (IE), operaciones espaciales (OE) y explotación de la Tierra por satélite (ETS) y facilitar la compartición con el servicio móvil en las bandas 2 025 - 2 110 MHz y 2 200 - 2 290 MHz	7/1012	AR95
SA	1155	Protection criteria related to the operation of data relay satellite systems	Critères de protection relatifs à l'exploitation des systèmes à satellites relais de données	Criterios de protección relativos a la explotación de los sistemas de satélites de retransmisión de datos	7/1013	AR95
SA	1156	Methods of calculating low-orbit satellite visibility statistics	Méthodes de calcul des caractéristiques statistiques de visibilité des satellites en orbite basse	Métodos de cálculo de las estadísticas de visibilidad de un satélite en órbita baja	7/1014	AR95
SA	1157	Protection criteria for deep-space research	Critères de protection pour la recherche dans l'espace lointain	Criterios de protección para la investigación del espacio lejano	7/1015	AR95
SA	1158	Sharing of the 1 675 - 1710 MHz band between the meteorological-satellite service (space-to-Earth) and the mobile-satellite service (Earth-to-space)	Partage de la bande 1 675 - 1 710 MHz entre le service de météorologie par satellite (espace-Terre) et le service mobile par satellite (Terre-espace)	Compartición de la banda 1 675-1 710 MHz entre el servicio de meteorología por satélite (espacio-Tierra) y el servicio móvil por satélite (Tierra-espacio)	7/1016	AR95
SA	1159	Performance criteria for data dissemination and direct data readout systems in the meteorological-satellite service using satellites in geostationary orbit	Objectifs de qualité de fonctionnement pour les systèmes d'acquisition directe et de diffusion de données du service de météorologie par satellite utilisant des satellites géostationnaires	Criterios de calidad para los sistemas de difusión y toma directa de datos del servicio de meteorología por satélite que utilizan satélites situados en la órbita geoestacionaria	7/1017	AR95
SA	1160	Interference criteria for data dissemination and direct data readout systems in the meteorological-satellite service using satellites in geostationary orbit	Critères de brouillage pour les systèmes d'acquisition directe et de diffusion de données du service de météorologie par satellite utilisant des satellites géostationnaires	Criterios de interferencia para sistemas de difusión y toma directa de datos que funcionan en el servicio de meteorología por satélite utilizando satélites de órbita geoestacionaria	7/1018	AR95
SA	1161	Sharing and coordination criteria for data dissemination and direct data readout systems in the meteorological-satellite service using satellites in geostationary orbit	Critères de partage et de coordination pour les systèmes d'acquisition directe et de diffusion de données du service de météorologie par satellite utilisant des satellites géostationnaires	Criterios de compartición y coordinación para sistemas de difusión y toma directa de datos que funcionan en el servicio de meteorología por satélite utilizando satélites geoestacionarios	7/1019	AR95
SA	1162	Telecommunication requirements and performance criteria for service links in data collection and platform location systems in the Earth exploration- and meteorological-satellite services	Besoins de télécommunication et qualité de fonctionnement des liaisons de service des systèmes de collecte de données et de localisation de plates-formes utilisés par les services d'exploration de la Terre par satellite et de météorologie par satellite	Requisitos de telecomunicación y criterios de calidad de los enlaces de servicio de los sistemas de recogida de datos y localización de plataformas de los servicios de exploración de la Tierra por satélite y de meteorología por satélite	7/1020	AR95

SA	1163	Interference criteria for service links in data collection systems in the Earth exploration- and meteorological-satellite services	Critères de brouillage applicables aux liaisons de service des systèmes de collecte de données des services d'exploration de la Terre et de météorologie par satellite	Criterios de interferencia para los enlaces de servicio en los sistemas de recogida de datos de los servicios de exploración de la Tierra por satélite y de meteorología por satélite	7/1021	AR95
SA	1164	Sharing and coordination criteria for service links in data collection systems in the Earth exploration- and meteorological-satellite services	Critères de partage et de coordination applicables aux liaisons de service des systèmes de collecte de données des services d'exploration de la terre et de météorologie par satellite	Criterios de compartición y coordinación para los enlaces de servicio de los sistemas de recogida de datos en los servicios de exploración de la Tierra por satélite y de meteorología por satélite	7/1022	AR95
SA	1165	Technical characteristics and performance criteria for radiosonde systems in the meteorological aids service	Caractéristiques techniques et critères de qualité de fonctionnement des radiosondes utilisées dans le service des auxiliaires de la météorologie	Características técnicas y criterios de calidad de los sistemas de radiosondas del servicio de ayudas a la meteorología	7/1023	AR95
SA	1166	Performance and interference criteria for active spaceborne sensors	Critères de qualité de fonctionnement et de brouillage applicables aux capteurs spatiaux actifs	Criterios de calidad de funcionamiento y de interferencia para sensores activos a bordo de vehículos espaciales	7/1024	AR95

NOC	SUP	MOD	NEW	Total in force
28	2*	4	13	45

*Rec. UIT-R SA. 367, Rec. UIT-R SA. 610-1

ITU-R Recommendations in force as at
Recommandations de l'UIT-R en vigueur au
Recomendaciones del UIT-R vigentes con fecha de
21/10/95

Series/Série/Serie

RA

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
RA	314-8	Preferred frequency bands for radioastronomical measurements	Bandes de fréquences préférées pour les mesures en radioastronomie	Bandas de frecuencias preferidas para las mediciones radioastronómicas	RA	1994
RA	479-4	Protection of frequencies for radioastronomical measurements in the shielded zone of the Moon	Protection des fréquences à utiliser pour des mesures de radioastronomie dans la zone tranquille de la Lune	Protección de las frecuencias para mediciones de radioastronomía en la zona oculta de la Luna	7/1007	AR95
RA	517-2	Protection of the radioastronomy service from transmitters in adjacent bands	Protection du service de radioastronomie contre les émetteurs fonctionnant dans les bandes adjacentes	Protección del servicio de radioastronomía contra los transmisores que trabajan en las bandas adyacentes	RA	1994
RA	611-2	Protection of the radioastronomy service from spurious emissions	Protection du service de radioastronomie contre les rayonnements non essentiels	Protección del servicio de radioastronomía contra las emisiones no esenciales	RA	1994
RA	769-1	Protection criteria used for radioastronomical measurements	Critères de protection applicables aux mesures en radioastronomie	Criterios de protección para las mediciones radioastronómicas	7/1006	AR95
RA	1031-1	Protection of the radioastronomy service in frequency bands shared with other services	Protection du service de radioastronomie dans les bandes de fréquences utilisées en partage avec d'autres services	Protección del servicio de radioastronomía en las bandas de frecuencias compartidas con otros servicios	7/1005	AR95

NOC	SUP	MOD	NEW	Total in force
3	0	3	0	6

ITU-R Recommendations in force as at
Recommandations de l'UIT-R en vigueur au
Recomendaciones del UIT-R vigentes con fecha de
21/10/95

Series/Série/Serie

M

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
M	218-2	Prevention of interference to radio reception on board ships	Elimination des brouillages à la réception à bord des navires	Eliminación de las interferencias en la recepción a bordo de los barcos	M, P3	1994
M	219-1	Alarm signal for use on the maritime radiotelephony distress frequency of 2182 kHz	Signal d'alarme à utiliser sur la fréquence de détresse du service maritime radiotéléphonique de 2182 kHz	Señal de alarma para uso en la frecuencia de socorro de 2182 kHz del servicio marítimo radiotelefónico	M, P3	1994
M	257-3	Sequential single frequency selective-calling system for use in the maritime mobile service	Système d'appel sélectif séquentiel à fréquence unique à utiliser dans le service mobile maritime	Sistema de llamada selectiva secuencial de una sola frecuencia para el servicio móvil marítimo	8/1014	AR95
M	428-3	Direction-finding and/or homing in the 2 MHz band on board ships	Radiogoniométrie et/ou radioralliement dans la bande des 2 MHz à bord des navires	Radiogoniometría y radio-recalada en la banda de 2 MHz a bordo de los barcos	M, P3	1994
M	441-1	Signal-to-interference ratios and minimum field strengths required in the aeronautical mobile (R) service above 30 MHz	Rapports de protection signal/brouillage et valeurs de champ minimales nécessaires dans le service mobile aéronautique (R) au-dessus de 30 MHz	Relaciones de protección señal/interferencia e intensidades de campo mínimas necesarias en el servicio móvil aeronáutico (R) por encima de 30 MHz	M, P3	1994
M	476-5	Direct-printing telegraph equipment in the maritime mobile service	Equipements télégraphiques à impression directe dans le service mobile maritime	Equipos telegráficos de impresión directa en el servicio móvil marítimo	8/1017	AR95
M	478-5	Technical characteristics of equipment and principles governing the allocation of frequency channels between 25 and 3 000 MHz for the FM land mobile service	Caractéristiques techniques des équipements et principes à suivre pour l'assignation des voies entre 25 et 3 000 MHz pour le service mobile terrestre	Características técnicas de los equipos y principios para la asignación de canales a las estaciones del servicio móvil terrestre con modulación de frecuencia entre 25 y 3 000 MHz	8/1005	AR95
M	488-1	Equivalent powers of double-sideband and single-sideband radio telephone emissions in the maritime mobile service	Puissances équivalentes des émissions radiotéléphoniques à double bande latérale et à bande latérale unique dans le service mobile maritime	Potencias equivalentes de las emisiones radiotelefónicas en doble banda lateral y en banda lateral única en el servicio móvil marítimo	M, P3	1994
M	489-2	Technical characteristics of VHF radiotelephone equipment operating in the maritime mobile service in channels spaced by 25 kHz	Caractéristiques techniques des appareils radiotéléphoniques utilisés par le service mobile maritime fonctionnant en ondes métriques avec un espacement de 25 kHz entre voies adjacentes	Características técnicas de los equipos de radiotelefonía en ondas métricas utilizados en el servicio móvil marítimo con una separación de 25 kHz entre canales adyacentes	8/1016	AR95

M	490	The introduction of direct-printing telegraph equipment in the maritime mobile service. *Equivalence of terms*	Mise en oeuvre d'équipements télégraphiques à impression directe dans le service mobile maritime. *Equivalence des termes*	Introducción de equipo telegráfico de impresión directa en el servicio móvil marítimo. *Equivalencia entre los términos*	M, P3	1994
M	491-1	Translation between an identity number and identities for direct-printing telegraphy in the maritime mobile service	Conversion entre un numéro d'identité de station et des identités pour la télégraphie à impression directe dans le service mobile maritime	Traducción de un número de identidad en señales de identidad para la telegrafía de impresión directa en el servicio móvil marítimo	M, P3	1994
M	492-6	Operational procedures for the use of direct-printing telegraph equipment in the maritime mobile service	Procédures d'exploitation des équipements télégraphiques à impression directe dans le service mobile maritime	Procedimientos de explotación para la utilización de equipos telegráficos de impresión directa en el servicio móvil marítimo	8/1015	AR95
M	493-7	Digital selective-calling system for use in the maritime mobile service	Système d'appel sélectif numérique à utiliser dans le service mobile maritime	Sistema de llamada selectiva digital para el servicio móvil marítimo	8/1020	AR95
M	496-3	Limits of power flux-density of radionavigation transmitters to protect space station receivers in the fixed-satellite service in the 14 GHz band	Limites de la puissance surfacique des émetteurs de radionavigation pour assurer la protection des récepteurs des stations spatiales du service fixe par satellite dans la bande des 14 GHz	Límites de densidad de flujo de potencia de los transmisores de radionavegación para asegurar la protección de los receptores de estaciones espaciales del servicio fijo por satélite en la banda de 14 GHz	M. P4	1994
M	539-3	Technical and operational characteristics of international radio-paging systems	Caractéristiques techniques et d'exploitation des systèmes internationaux de radiorecherche	Características técnicas y de explotación de los sistemas internacionales de radiobúsqueda	M, P1	1994
M	540-2	Operational and technical characteristics for an automated direct-printing telegraph system for promulgation of navigational and meteorological warnings and urgent information to ships	Caractéristiques techniques et d'exploitation d'un système automatique de télégraphie à impression directe pour la diffusion aux navires d'avertissements concernant la navigation et la météorologie et d'informations urgentes	Características técnicas y de explotación de un sistema automático de telegrafía de impresión directa para la difusión a los barcos de avisos a los navegantes y de avisos meteorológicos, así como de información de urgencia	M, P3	1994
M	541-6	Operational procedures for the use of digital selective-calling (DSC) equipment in the maritime mobile service	Procédures d'exploitation des systèmes d'appel sélectif numérique (ASN) à l'usage du service mobile maritime	Procedimientos de explotación para la utilización de equipos de llamada selectiva digital en el servicio móvil marítimo	8/1013	AR95
M	542-1	On-board communications by means of portable radiotelephone equipment	Communications à bord des navires effectuées au moyen d'appareils portatifs de radiotéléphonie	Comunicaciones a bordo de los barcos por medio de equipo radiotelefónico portátil	M, P3	1994
M	546-2	Hypothetical telephone reference circuit in the aeronautical, land and maritime mobile-satellite services	Circuit téléphonique fictif de référence pour les services mobiles aéronautique, terrestre et maritime par satellite	Circuito telefónico ficticio de referencia para sistemas de los servicios móviles aeronaútico, terrestre y marítimo por satélite	M, P5	1994
M	547	Noise objectives in the hypothetical reference circuit for systems in the maritime mobile-satellite service	Objectifs de bruit dans le circuit fictif de référence pour les systèmes du service mobile maritime par satellite	Objetivos de ruido en el circuito ficticio de referencia para los sistemas del servicio móvil marítimo por satélite	M, P5	1994
M	548	Overall transmission characteristics of telephone circuits in the maritime mobile-satellite service	Caractéristiques globales de transmission des circuits téléphoniques dans le service mobile maritime par satellite	Características globales de transmisión de los circuitos telefónicos del servicio móvil marítimo por satélite	M, P5	1994

M	549-1	Side tone reference equivalent of handset used on board a ship in the maritime mobile-satellite service and in automated VHF/UHF maritime mobile radiotelephone systems	Equivalent de référence de l'effet local du combiné utilisé à bord d'un navire dans le service mobile maritime par satellite et dans les systèmes radiotéléphoniques automatiques sur ondes métriques/décimétriques du service mobile maritime	Equivalente de referencia del efecto local del microteléfono utilizado a bordo de un barco en el servicio móvil marítimo por satélite y en los sistemas radiotelefónicos automáticos del servicio móvil marítimo en ondas métricas y decimétricas	M, P5	1994
M	550-1	Use of echo suppressors in the maritime mobile-satellite service	Utilisation de suppresseurs d'écho dans le service mobile maritime par satellite	Utilización de los supresores de eco en el servicio móvil marítimo por satélite	M, P5	1994
M	552	Quality objectives for 50-baud start-stop telegraph transmission in the maritime mobile-satellite service	Objectifs de qualité des transmissions télégraphiques arythmiques à 50 bauds dans le service mobile maritime par satellite	Objetivos de calidad para la transmisión de telegrafía arrítmica a 50 baudios en el servicio móvil marítimo por satélite	M, P5	1994
M	553	Interface requirements for 50-baud start-stop telegraph transmission in the maritime mobile-satellite service	Conditions à remplir par les équipements de jonction pour les transmissions télégraphiques arythmiques à 50 bauds dans le service mobile maritime par satellite	Requisitos de interfaz para la transmisión de telegrafía arrítmica a 50 baudios en el servicio móvil marítimo por satélite	M, P5	1994
M	584-1	Standard codes and formats for international radio paging	Codes et formats normalisés pour l'appel unilatéral international sans transmission de parole (radiorecherche et radiomessagerie)	Códigos y formatos normalizados para radiobúsqueda internacional	M, P1	1994
M	585-2	Assignment and use of maritime mobile service identities	Assignations et utilisation des identités dans le service mobile maritime	Asignación y uso de identidades del servicio móvil marítimo	M, P3	1994
M	586-1	Automated VHF/UHF maritime mobile telephone system	Système radiotéléphonique automatique sur ondes métriques/décimétriques pour le service mobile maritime	Sistemas telefónicos automáticos para el servicio móvil marítimo en ondas métricas y decimétricas	M, P3	1994
M	587-1	Coast station identities and initiation of location registration in an automated VHF/UHF maritime mobile telephone system	Identités de stations côtières et demande d'enregistrement de la position dans un système mobile maritime téléphonique à ondes métriques/décimétriques	Identidades de estaciones costeras e inicio del registro de posición en un sistema telefónico automático móvil marítimo en ondas métricas/decimétricas	M, P3	1994
M	588	Characteristics of maritime radio beacons (Region 1)	Caractéristiques des radiophares maritimes (Région 1)	Características de los radiofaros marítimos (Región 1)	M, P4	1994
M	589-2	Interference to radionavigation services from other services in the frequency bands between 70 kHz and 130 kHz	Brouillage des services de radionavigation par d'autres services dans les bandes de fréquences comprises entre 70 et 130 kHz	Interferencia causada a los servicios de radionavegación por otros servicios en las bandas de frecuencia comprendidas entre 70 y 130 kHz	M, P4	1994
M	622	Technical and operational characteristics of analogue cellular systems for public land mobile telephone use	Caractéristiques techniques et d'exploitation de systèmes cellulaires analogiques pour le service téléphonique public mobile terrestre	Características técnicas y de explotación de los sistemas celulares analógicos del servicio móvil terrestre para telefonía de uso público	M, P1	1994
M	623	Data transmission bit rates and modulation techniques in the land mobile service	Débit binaire de transmission de données et techniques de modulation dans le service mobile terrestre	Velocidades binarias de transmisión de datos y métodos de modulación en el servicio móvil terrestre	M, P1	1994

M	624	Public land mobile communication systems location registration	Systèmes mobiles terrestres publics de télécommunication - Enregistrement des positions	Registro de la posición en los sistemas de comunicaciones móviles terrestres de uso público	M, P1	1994
M	625-3	Direct-printing telegraph equipment employing automatic identification in the maritime mobile service	Equipements télégraphiques à impression directe utilisant l'identification automatique dans le service mobile maritime	Equipos telegráficos de impresión directa que emplean la identificación automática en el servicio móvil marítimo	8/1018	AR95
M	626	Evaluation of the quality of digital channels in the maritime mobile service	Evaluation de la qualité des voies numériques dans le service mobile maritime	Evaluación de la calidad de los radiocanales digitales en el servicio móvil marítimo	M, P3	1994
M	627-1	Technical characteristics for HF maritime radio equipment using narrow-band phase-shift keying (NBPSK) telegraphy	Caractéristiques techniques des équipements de radiocommunications maritimes dans la bande des ondes décamétriques utilisés pour la télégraphie à modulation par déplacement de phase à bande étroite (MDPBE)	Características técnicas de los equipos de radiocomunicaciones marítimas en ondas decamétricas utilizados para telegrafía con modulación por desplazamiento de fase de banda estrecha (MDPBE)	8/1019	AR95
M	628-3	Technical characteristics for search and rescue radar transponders	Caractéristiques techniques des répondeurs radar de recherche et de sauvetage	Características técnicas de los respondedores de radar de búsqueda y salvamento	M, P4	1994
M	629	Use of the radionavigation service of the frequency bands 2900-3100 MHz, 5470-5650 MHz, 9200-9300 MHz, 9300-9500 MHz and 9500-9800 MHz	Utilisation par le service de radionavigation des bandes de fréquences 2900-3100 MHz, 5470-5650 MHz, 9200-9300 MHz, 9300-9500 MHz et 9500-9800 MHz	Utilización para el servicio de radionavegación de las bandas de frecuencias 2900-3100 MHz, 5470-5650 MHz, 9200-9300 MHz, 9300-9500 MHz y 9500-9800 MHz	M, P4	1994
M	630	Main characteristics of two frequency shipborne interrogator transponders (SIT)	Principales caractéristiques des interrogateurs-répondeurs de navire (SIT) à deux fréquences	Principales características de los interrogadores-respondedores (IRB) de dos frecuencias instalados a bordo de barcos	M, P4	1994
M	631-1	Use of hyperbolic maritime radionavigation systems in the band 283.5-315 kHz	Utilisation de systèmes de radionavigation maritime hyperboliques dans la bande 283,5-315 kHz	Utilización de los sistemas hiperbólicos de radionavegación marítima en la banda 283,5-315 kHz	M, P4	1994
M	632-2	Transmission characteristics of a satellite emergency position-indicating radiobeacon (satellite EPIRB) system operating through geostationary satellites in the 1.6 GHz band	Caractéristiques d'émission d'un système de radiobalises de localisation des sinistres par satellite (RLS par satellite) fonctionnant par l'intermédiaire de satellites géostationnaires dans la bande des 1,6 GHz	Características de transmisión de un sistema de radiobalizas de localización de siniestros por satélite (RLS por satélite) que funciona con satélites geoestacionarios en la banda de 1,6 GHz	M, P5	1994
M	633-1	Transmission characteristics of a satellite emergency position-indicating radiobeacon (satellite EPIRB) system operating through a low polar-orbiting satellite system in the 406 MHz band	Caractéristiques de transmission d'un système de radiobalises de localisation des sinistres par satellite (RLS par satellite) fonctionnant par l'intermédiaire d'un système à satellites sur orbite polaire basse dans la bande des 406 MHz	Características de transmisión de un sistema de radiobalizas de localización de siniestros por satélite (RLS por satélite) que utiliza un sistema de satélites de órbita polar baja en la banda de 406 MHz	M, P5	1994
M	687-1	Future Public Land Mobile Telecommunication Systems (FPLMTS)	Futurs systèmes mobiles terrestres publics de télécommunication (FSMTPT)	Futuros sistemas públicos de telecomunicaciones móviles terrestres (FSPTMT)	M, P2	1994

M	688	Technical characteristics for a high frequency direct-printing telegraph system for promulgation of high seas and NAVTEX-type maritime safety information	Caractéristiques techniques d'un système de télégraphie à impression directe, dans la bande des ondes décamétriques, pour la diffusion d'informations concernant la sécurité maritime en haute mer et du type NAVTEX	Características técnicas y de explotación de un sistema de telegrafía de impresión directa en ondas decamétricas para la difusión de información a los barcos en alta mar y de comunicaciones de seguridad marítima de tipo NAVTEX	M, P3	1994
M	689-2	International maritime VHF radiotelephone system with automatic facilities based on DSC signalling format	Système international maritime de radiotéléphonie en ondes métriques doté de fonctions automatiques et utilisant un format de signalisation ASN	Sistema radiotelefónico marítimo internacional en ondas métricas con facilidades automáticas basadas en el formato de señalización de la llamada selectiva digital	M, P3	1994
M	690-1	Technical characteristics of emergency position-indicating radio beacons (EPIRBs) operating on the carrier frequencies of 121.5 MHz and 243 MHz	Caractéristiques techniques des radiobalises de localisation des sinistres (RLS) fonctionnant sur les fréquences porteuses 121,5 MHz et 243 MHz	Características técnicas de las radiobalizas de localización de siniestros (RLS) que funcionan con frecuencias portadoras de 121,5 MHz y 243 MHz	8/1026	AR95
M	691-1	Technical characteristics and compatibility criteria of maritime radiolocation systems operating in the medium frequency band and using spread-spectrum techniques	Caractéristiques techniques et critères de compatibilité des systèmes de radiorepérage maritime fonctionnant dans la bande des ondes hectométriques et utilisant les techniques d'étalement du spectre	Características técnicas y criterios de compatibilidad de los sistemas de radiolocalización marítima que funcionan en la banda de ondas hectométricas y que utiliza técnicas de ensanchamiento del espectro	M, P4	1994
M	692	Narrow-band direct-printing telegraph equipment using a single-frequency channel	Utilisation d'un équipement télégraphique à impression directe à bande étroite sur une voie radioélectrique à une seule fréquence	Equipos telegráficos de impresión directa de banda estrecha que utilizan un canal de una sola frecuencia	M, P3	1994
M	693	Technical characteristics of VHF emergency position-indicating radio beacons using digital selective calling (DSC VHF EPIRB)	Caractéristiques techniques des radiobalises de localisation des sinistres à ondes métriques avec appel sélectif numérique (RLS à ondes métriques avec ASN)	Características técnicas de las radiobalizas de localización de siniestros en ondas métricas que utilizan llamada selectiva digital (RLS en ondas métricas con LLSD)	M, P4	1994
M	694	Reference radiation pattern for ship earth station antennas	Diagramme de rayonnement de référence pour les antennes de station terrienne de navire	Diagrama de radiación de referencia para antenas de estaciones terrenas de barco	M, P5	1994
M	816	Framework for services supported on future public land mobile telecommunication systems (FPLMTS)	Cadre de description pour des services assurés par les futurs systèmes mobiles terrestres publics de télécommunication (FSMTPT)	Marco para los servicios que prestarán los futuros sistemas públicos de telecomunicaciones móviles terrestres (FSPTMT)	M, P2	1994
M	817	Future public land mobile telecommunication systems (FPLMTS). *Network architectures*	Futurs systèmes mobiles terrestres publics de télécommunication (FSMTPT). *Architectures de réseau*	Futuros sistemas públicos de telecomunicaciones móviles terrestres. *Arquitecturas de red*	M, P2	1994
M	818-1	Satellite operation within future public land mobile telecommunication systems (FPLMTS)	Utilisation des satellites dans les futurs systèmes mobiles terrestres publics de télécommunication (FSMTPT)	Funcionamiento por satélite en los futuros sistemas públicos de telecomunicaciones móviles terrestres (FSPTMT)	M, P2	1994
M	819-1	Future Public Land Mobile Telecommunication Systems (FPLMTS) for developing countries	Futurs systèmes mobiles terrestres publics de télécommunication (FSMTPT) au service des pays en développement	Futuros sistemas públicos de telecomunicaciones móviles terrestres (FSPTMT) para los países en desarrollo	M, P2	1994

M	820	Use of 9-digit identities for narrow-band direct-printing telegraphy in the maritime mobile service	Utilisation d'identités à neuf chiffres pour la télégraphie à impression directe à bande étroite dans le service mobile maritime	Utilización de identidades de nueve cifras para la telegrafía de impresión directa en banda estrecha en el servicio móvil marítimo	M, P3	1994
M	821	Optional expansion of the digital selective calling system for use in the maritime mobile service	Extension facultative du système d'appel sélectif numérique à utiliser dans le service mobile maritime	Ampliación opcional del sistema de llamada selectiva digital para el servicio móvil marítimo	M, P3	1994
M	822-1	Calling-channel loading for digital selective calling (DSC) for the maritime mobile service	Charge des voies d'appel du système d'appel sélectif numérique (ASN) pour le service mobile maritime	Carga en el canal de llamada para la llamada selectiva digital (LLSD) en el servicio móvil marítimo	M, P3	1994
M	823-1	Technical characteristics of differential transmissions for Global Navigation Satellite Systems (GNSS) from maritime radio beacons in the frequency band 283.5-315 kHz in Region 1 and 285-325 kHz in Regions 2 and 3	Caractéristiques techniques de la transmission de données en mode différentiel pour les systèmes globaux de navigation par satellite (GNSS) à partir de radiophares maritimes dans la bande 283,5-315 kHz (Région 1) et 285-325 kHz (Régions 2 et 3)	Características técnicas de las transmisiones diferenciales efectuadas para sistemas mundiales de navegación por satélite desde radiofaros marítimos en la banda de frecuencias 283,5-315 kHz en la Región 1 y 285-325 kHz en las Regiones 2 y 3	8/1027	AR95
M	824-2	Technical parameters of radar beacons (RACONS)	Caractéristiques techniques des balises radar (RACONS)	Características técnicas de las balizas de radar (RACONES)	8/1028	AR95
M	825-1	Characteristics of a transponder system using digital selective calling techniques for use with vessel traffic services and ship-to-ship identification	Caractéristiques d'un système de répondeurs fonctionnant avec des techniques d'appel sélectif numérique à utiliser dans les systèmes de contrôle du trafic maritime et d'identification navire-navire	Características de un sistema transpondedor que utiliza técnicas de llamada selectiva digital para servicios de tráfico de barcos y para la identificación barco-barco	8/1029	AR95
M	826	Transmission of information for updating electronic chart display and information systems (ECDIS)	Transmission d'informations pour la mise à jour des systèmes de visualisation des cartes électroniques et d'information (SVCEI)	Transmisión de información para la actualización de los sistemas de visualización de cartas náuticas electrónicas e información	M, P4	1994
M	827	Hypothetical reference digital path for systems in the mobile-satellite service using feeder links	Conduit numérique fictif de référence pour les systèmes du service mobile par satellite utilisant des liaisons de connexion	Trayecto digital ficticio de referencia para sistemas que utilizan transmisión digital en el servicio móvil por satélite	M, P5	1994
M	828-1	Definition of availability for communication circuits in the mobile-satellite service (MSS)	Définition de la disponibilité des circuits de communication du service mobile par satellite (SMS)	Definición de disponibilidad para los circuitos de comunicación del servicio móvil por satélite (SMS)	M, P5	1994
M	829-1	Frequency sharing in the 1660-1660.5 MHz band between the mobile-satellite service and the radioastronomy service	Partage des fréquences dans la bande 1660-1660,5 MHz entre le service mobile par satellite et le service de radioastronomie	Compartición de frecuencias en la banda 1660-1660,5 MHz entre el servicio móvil por satélite y el servicio de radioastronomía	M, P5	1994
M	830	Operational procedures for mobile-satellite networks or systems in the bands 1530-1544 MHz and 1626.5-1645.5 MHz which are used for distress and safety purposes as specified for GMDSS	Procédures d'exploitation pour les réseaux ou systèmes mobiles à satellites dans les bandes de fréquences 1530-1544 MHz et 1626,5-1645,5 MHz utilisées pour les opérations de détresse et de sécurité (comme spécifié pour le SMDSM)	Procedimientos de explotación para las redes o los sistemas móviles por satélite en las bandas 1530-1544 MHz y 1626,5-1645,5 MHz utilizados con fines de socorro y seguridad especificados para el Sistema Mundial de Socorro y Seguridad Marítima (SMSSM)	M, P5	1994

M	831	Frequency sharing between services in the band 4-30 MHz	Partage des fréquences entre services fonctionnant dans la bande 4-30 MHz	Compartición de frecuencias entre servicios en las bandas entre 4 y 30 MHz	M, P3	1994
M	1032	Technical and operational characteristics of land mobile systems using multi-channel access techniques without a central controller	Caractéristiques techniques et d'exploitation des systèmes mobiles terrestres faisant appel à des techniques d'accès multivoies sans unité d'échange centrale	Características técnicas y de explotación de los sistemas móviles terrestres que utilizan técnicas de acceso multicanal sin controlador central	M, P1	1994
M	1033	Technical and operational characteristics of cordless telephones and cordless telecommunication systems	Caractéristiques techniques et d'exploitation des téléphones sans cordon et des systèmes de télécommunication sans cordon	Características técnicas y operacionales de los teléfonos sin cordón y los sistemas de telecomunicaciones sin cordón	M, P1	1994
M	1034	Requirements for the radio interface(s) for Future Public Land Mobile Telecommunication Systems (FPLMTS)	Exigences imposées à la ou aux interfaces radioélectriques des futurs systèmes mobiles terrestres publics de télécommunication (FSMTPT)	Requisitos de las interfaces radioeléctricas para los futuros sistemas públicos de telecomunicaciones móviles terrestres (FSPTMT)	M, P2	1994
M	1035	Framework for the radio interface(s) and radio subsystem functionality for Future Public Land Mobile Telecommunication Systems (FPLMTS)	Cadre de description de la ou des interfaces radioélectriques et fonctionnalité des sous-systèmes radioélectriques pour les futurs systèmes mobiles terrestres publics de télécommunication (FSMTPT)	Marco general para el estudio de la funcionalidad de las interfaces radioeléctricas y del subsistema radioeléctrico en los futuros sistemas públicos de telecomunicaciones móviles terrestres (FSPTMT)	M, P2	1994
M	1036	Spectrum considerations for implementation of Future Public Land Mobile Telecommunication Systems (FPLMTS) in the bands 1 885-2 025 MHz and 2 110-2 200 MHz	Considérations relatives au spectre pour la mise en œuvre des futurs systèmes mobiles terrestres publics de télécommunication (FSMTPT) dans les bandes 1 885-2 025 MHz et 2 110-2 200 MHz	Consideraciones sobre el espectro para la implementación de los futuros sistemas públicos de telecomunicaciones móviles terrestres (FSPTMT) en las bandas 1 885-2 025 MHz y 2 110-2 200 MHz	M, P2	1994
M	1037	Bit error performance objectives for aeronautical mobile-satellite (R) service (AMS(R)S) radio link	Objectifs en matière de caractéristiques d'erreur sur les bits applicables aux liaisons radioélectriques du service mobile aéronautique (R) par satellite (SMA(R)S)	Objetivos en materia de característica de bits erróneos para los radioenlaces del servicio móvil aeronáutico (R) por satélite (SMA(R)S)	M, P5	1994
M	1038	Efficient use of the geostationary-satellite orbit and spectrum in the 1-3 GHz frequency range by mobile-satellite systems	Utilisation efficace de l'orbite des satellites géostationnaires et du spectre dans la gamme de fréquences 1-3 GHz par les systèmes mobiles par satellite	Utilización eficaz de la órbita de los satélites geoestacionarios y del espectro en la gama de frecuencias 1-3 GHz por los sistemas del servicio móvil por satélite	M, P5	1994
M	1039	Method for evaluating sharing between stations in the mobile service below 1 GHz and FDMA non-geostationary-satellite orbit (non-GSO) mobile earth stations	Méthode d'évaluation des possibilités de partage entre stations du service mobile et stations terriennes mobiles AMRF utilisant des orbites autres que celles des satellites géostationnaires dans les bandes de fréquences au-dessous de 1 GHz	Método para evaluar la compartición entre estaciones del servicio móvil por debajo de 1 GHz y estaciones terrenas móviles que utilizan acceso múltiple por distribución de frecuencia (AMDF) con satélites en órbita no geoestacionaria	M, P5	1994
M	1040	Public mobile telecommunication service with aircraft using the bands 1 670-1 675 MHz and 1 800-1 805 MHz	Service mobile public de télécommunication avec les aéronefs dans les bandes 1 670-1 675 MHz et 1 800-1 805 MHz	Servicio público de telecomunicaciones móviles con aeronaves utilizando las bandas 1 670-1 675 MHz y 1 800-1 805 MHz	M, P3	1994

M	1041	Future amateur radio systems (FARS)	Futurs systèmes de radiocommunication d'amateur	Futuros sistemas de radiocomunicaciones de aficionados	M, P6	1994
M	1042	Disaster communications in the amateur and amateur-satellite services	Services d'amateur et d'amateur par satellite: communications en cas de catastrophe naturelle	Comunicaciones de los servicios de aficionados y aficionados por satélite en situaciones de catástrofe	M, P6	1994
M	1043	Use of the amateur and amateur-satellite services in developing countries	Utilisation des services d'amateur et d'amateur par satellite dans les pays en développement	Utilización de los servicios de aficionados y de aficionados por satélite en los países en desarrollo	M, P6	1994
M	1044	Frequency sharing criteria in the amateur and amateur-satellite services	Critères de partage des fréquences dans les services d'amateur et d'amateur par satellite	Criterios de compartición de frecuencias en los servicios de aficionados y de aficionados por satélite	M, P6	1994
M	1072	Interference due to intermodulation products in the land mobile service between 25 and 3000 MHz	Brouillages dus aux produits d'intermodulation dans le service mobile terrestre entre 25 et 3000 MHz	Interferencias debidas a productos de intermodulación en el servicio móvil terrestre entre 25 y 3000 MHz	M, P1	1994
M	1073	Digital cellular land mobile telecommunication systems	Systèmes mobiles terrestres cellulaires numériques de télécommunication	Sistemas celulares digitales de telecomunicaciones móviles terrestres	M, P1	1994
M	1074	Integration of public mobile radiocommunication systems	Intégration des systèmes de radiocommunication mobiles publics	Integración de sistemas públicos de radiocomunicaciones del servicio móvil	M, P1	1994
M	1075	Leaky feeder systems in the land mobile services	Systèmes à lignes d'alimentation à fuites dans les services mobiles terrestres	Sistemas de alimentador con fugas en los servicios móviles terrestres	M, P1	1994
M	1076	Wireless communication systems for persons with impaired hearing	Systèmes de communication sans fil pour les malentendants	Sistemas de comunicación inalámbricos para personas con audición deficiente	M, P1	1994
M	1077	Multi-transmitter radio systems using quasi-synchronous (simulcast) transmission for analogue speech	Systèmes de radiocommunication multiémetteurs monofréquence à transmission quasi synchrone pour les signaux vocaux analogiques ("Simulcast")	Sistemas radioeléctricos de múltiples transmisores que utilizan transmisión cuasisíncrona para señales vocales analógicas	M, P1	1994
M	1078	Security principles for future public land mobile telecommunication systems (FPLMTS)	Principes de sécurité pour les futurs systèmes mobiles terrestres publics de télécommunication (FSMTPT)	Principios de seguridad para los futuros sistemas públicos de telecomunicaciones móviles terrestres (FSPTMT)	M, P2	1994
M	1079	Speech and voiceband data performance requirements for future public land mobile telecommunication systems (FPLMTS)	Exigences imposées à la qualité de la parole et des données dans la bande vocale pour les futurs systèmes mobiles terrestres publics de télécommunication (FSMTPT)	Requisitos de comportamiento en cuanto a las señales vocales y los datos en banda vocal para los futuros sistemas públicos de telecomunicaciones móviles terrestres (FSPTMT)	M, P2	1994
M	1080	Digital selective calling system enhancement for multiple equipment installations	Amélioration du système d'appel sélectif numérique pour des installations à équipements multiples	Mejora del sistema de llamada selectiva digital en las instalaciones con múltiples equipos	M, P3	1994
M	1081	Automatic HF facsimile and data system for maritime mobile users	Transmission automatique de données et de télécopie en ondes décamétriques dans le service mobile maritime	Sistema automático de facsímil y datos en ondas decamétricas para los usuarios móviles marítimos	M, P3	1994
M	1082	International maritime MF/HF radiotelephone system with automatic facilities based on DSC signalling format	Système international automatisé de radiotéléphonie maritime en ondes hectométriques/décamétriques utilisant un format de signalisation ASN	Sistema radiotelefónico marítimo internacional en ondas hectométricas y decamétricas con facilidades automáticas basadas en el formato de señalización de llamada selectiva digital	M, P3	1994

M	1083	Interworking of maritime radiotelephone systems	Interfonctionnement des systèmes de radiotéléphonie maritimes	Interfuncionamiento de los sistemas telefónicos marítimos	M, P3	1994
M	1084-1	Improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service	Amélioration de l'utilisation de la bande 156-174 MHz par les stations du service mobile maritime	Utilización más eficaz de la banda 156-174 MHz por las estaciones del servicio móvil marítimo	8/1021	AR95
M	1085	Technical and operational characteristics of wind profiler radars	Caractéristiques techniques et d'exploitation des radars profileurs de vent	Características técnicas y de explotación de los radares de perfil del viento	M, P4	1994
M	1086	Determination of the need for coordination between geostationary mobile satellite networks sharing the same frequency bands	Détermination de la nécessité de la coordination entre réseaux à satellite géostationnaire du service mobile utilisant en partage les mêmes bandes de fréquences	Determinación de la necesidad de coordinación entre redes de satélite geoestacionario que comparten las mismas bandas de frecuencias	M, P5	1994
M	1087	Methods for evaluating sharing between systems in the land mobile service and spread-spectrum leo systems in the MSS below 1 GHz	Méthodes d'évaluation des possibilités de partage entre systèmes du service mobile et systèmes en orbite terrestre basse (LEO) à étalement de spectre du SMS en dessous de 1 GHz	Métodos para evaluar la compartición entre sistemas del servicio móvil terrestre y sistemas del servicio móvil por satélite con satélites en órbita baja que utilizan técnicas de espectro ensanchado por debajo de 1 GHz	M, P5	1994
M	1088	Considerations for sharing with systems of other services operating in the bands allocated to the radionavigation satellite service	Principes de partage avec les systèmes d'autres services exploités dans les bandes attribuées au service de radionavigation par satellite	Consideraciones relativas a la compartición con sistemas de otros servicios que funcionan en las bandas atribuidas al servicio de radionavegación por satélite	M, P5	1994
M	1089	Technical considerations for the coordination of mobile-satellite systems supporting AMS(R)S	Considérations techniques en vue de la coordination des systèmes mobiles par satellite assurant le service mobile aéronautique (R) par satellite	Consideraciones técnicas relativas a la coordinación de sistemas móviles por satélite que sustentan el servicio móvil aeronaútico (R) por satélite	M, P5	1994
M	1090	Frequency plans for satellite transmission of SCPC carriers using non-linear transponders in the mobile-satellite service	Plans de fréquences pour l'émission de porteuses monovoie, au moyen d'un répéteur non linéaire dans le service mobile par satellite	Planes de frecuencias para la transmisión por satélite de portadoras de un solo canal mediante transpondedores no lineales en el servicio móvil por satélite	M, P5	1994
M	1091	Reference off-axis radiation patterns for mobile earth station antennas operating in the land mobile-satellite service in the frequency range 1 to 3 GHz	Diagrammes de rayonnement hors axe de référence pour antennes de stations terriennes mobiles exploitées dans le cadre du service mobile terrestre par satellite dans la gamme de fréquences 1 à 3 GHz	Diagramas de radiación de referencia fuera del eje para antenas de estaciones terrenas que funcionan en el servicio móvil terrestre por satélite en la gama de frecuencias 1 a 3 GHz	M, P5	1994
M	1167	Framework for the satellite component of future public land mobile telecommunication systems (FPLMTS)	Cadre de description de l'élément satellite des futurs systèmes mobiles terrestres publics de télécommunications (FSMTPT)	Marco general sobre la componente de satélite de los futuros sistemas públicos de telecomunicaciones móviles terrestres (FSPTMT)	8/1039	AR95
M	1168	Framework of future public land mobile telecommunication systems management	Cadre de description de la gestion des futurs systèmes mobiles terrestres publics de télécommunications	Marco general para la gestión de los futuros sistemas públicos de telecomunicaciones móviles terrestres	8/1040	AR95

M	1169	Hours of service of ship stations	Vacations des stations de navire	Horas de funcionamiento de las estaciones de barco	8/1006	AR95
M	1170	Morse telegraphy procedures in the maritime mobile service	Procédures radiotélégraphiques morse dans le service mobile maritime	Procedimientos de radiotelegrafía Morse en el servicio móvil marítimo	8/1007	AR95
M	1171	Radiotelephony procedures in the maritime mobile service	Procédures radiotéléphoniques dans le service mobile maritime	Procedimientos de radiotelefonía en el servicio móvil marítimo	8/1008	AR95
M	1172	Miscellaneous abbreviations and signals to be used for radiocommunications in the maritime mobile service	Abréviations et signaux divers à employer dans les radiocommunications du service mobile maritime	Abreviaturas y señales diversas que habrán de utilizarse para las radiocomunicaciones en el servicio móvil marítimo	8/1009	AR95
M	1173	Technical characteristics of single-sideband transmitters used in the maritime mobile service for radiotelephony in the bands between 1 606.5 kHz (1 605 kHz Region 2) and 4 000 kHz and between 4 000 kHz and 27 500 kHz	Caractéristiques techniques des émetteurs à bande latérale unique utilisés dans le service mobile maritime pour la radiotéléphonie dans les bandes comprises entre 1 606,5 kHz (1 605 kHz Région 2) et 4 000 kHz et entre 4 000 kHz et 27 500 kHz	Características técnicas de los transmisores de banda lateral única utilizados para la radiotelefonía en el servicio móvil marítimo, en las bandas comprendidas entre 1 606,5 kHz (1 605 kHz en la Región 2) y 4 000 kHz y entre 4 000 kHz y 27 500 kHz	8/1010	AR95
M	1174	Characteristics of equipment used for on-board communications in the bands between 450 and 470 MHz	Caractéristiques des appareils utilisés pour les communications de bord dans les bandes de fréquences comprises entre 450 MHz et 470 MHz	Características de los equipos utilizados para las comunicaciones a bordo en las bandas de frecuencias comprendidas entre 450 y 470 MHz	8/1011	AR95
M	1175	Automatic receiving equipment for radiotelegraph and radiotelephone alarm signals	Appareils automatiques destinés à la réception des signaux d'alarme radiotélégraphique et radiotéléphonique	Equipo automático de recepción de las señales de alarma radiotelegráfica y radiotelefónica	8/1012	AR95
M	1176	Technical parameters of radar target enhancers	Caractéristiques techniques des renforceurs d'échos radar	Parámetros técnicos de los dispositivos de mejora de los blancos radar	8/1023	AR95
M	1177	Techniques for measurement of spurious emissions of maritime radar systems	Techniques à utiliser pour la mesure des rayonnements non essentiels des systèmes radar maritimes	Técnicas para la medición de emisiones no esenciales en los sistemas de radar marítimo	8/1024	AR95
M	1178	Use of the maritime radionavigation band 283.5-315 kHz in Region 1 and 285-325 kHz in Regions 2 and 3	Utilisation de la bande attribuée au service de radionavigation maritime (283,5 - 315 kHz en Région 1 et 285 - 325 kHz en Régions 2 et 3)	Utilización de la banda de radionavegación marítima (283,5 - 315 kHz en la Región 1 y 285-325 kHz en las Regiones 2 y3)	8/1022	AR95
M	1179	Procedures for determining the interference coupling mechanisms and mitigation options for systems operating in bands adjacent to and in harmonic relationship with radar stations in the radiodetermination service	Procédures pour la détermination des mécanismes de couplage brouilleur et des possibilités d'atténuation des brouillages pour les systèmes fonctionnant dans des bandes voisines de stations de radars du service de radiorepérage y compris les harmoniques	Procedimientos para determinar los mecanismos de acoplamiento de la interferencia y posibilidades de reducción de la misma en sistemas que funcionan en bandas adyacentes a las de las estaciones de radar del servicio de radiodeterminación y en relación armónica con ellas	8/1025	AR95
M	1180	Availability of communication circuits in the aeronautical mobile-satellite (R) services (AMS(R)S)	Disponibilité des circuits de communication des services mobiles aéronautiques (R) par satellite (AMS(R)S)	Disponibilidad de los circuitos de comunicación en los servicios móviles aeronáuticos por satélite (R) SMAS(R)	8/1036	AR95

M	1181	Minimum performance objectives for narrow-band digital channels using geostationary satellites to serve transportable and vehicular mobile earth stations in the 1-3 GHz range, not forming part of the ISDN	Objectifs minimaux de qualité applicables aux canaux numériques à bande étroite utilisant des satellites géostationnaires pour desservir des stations terriennes mobiles transportables et montées sur véhicule, dans la gamme des fréquences comprises entre 1 et 3 GHz, ne faisant pas partie du réseau RNIS	Objetivos mínimos de calidad de los canales digitales de banda estrecha que utilizan satélites geoestacionarios para dar servicio a estaciones terrenas móviles portátiles y de vehículos en la gama 1-3 GHz y que no forman parte de la RDSI	8/1037	AR95
M	1182	Integration of terrestrial and satellite mobile communication systems	Intégration des systèmes de communication mobiles terrestres de Terre et des systèmes de communication mobiles terrestres par satellite	Integración de los sistemas de comunicaciones móviles terrenales y por satélite	8/1031	AR95
M	1183	Maximum permissible levels of interference in a digital channel of a geostationary network in mobile-satellite service in 1-3 GHz caused by other networks of this service and fixed-satellite service	Niveaux maximaux admissibles du brouillage dans un canal numérique d'un réseau du service mobile par satellite géostationnaire dans la bande 1-3 GHz causé par d'autres réseaux de ce service et du service fixe par satellite	Niveles máximos admisibles de la interferencia en un canal digital de una red de satélites geoestacionarios del servicio móvil por satélite en 1-3 GHz producidos por otras redes de este servicio y del servicio fijo por satélite	8/1033	AR95
M	1184	Technical characteristics of mobile satellite systems in the 1-3 GHz range for use in developing criteria for sharing between the mobile-satellite service (MSS) and other services using common frequencies	Caractéristiques techniques des systèmes mobiles à satellites dans la gamme 1-3 GHz à utiliser pour élaborer des critères pour le partage entre le service mobile par satellite (SMS) et d'autres services utilisant des fréquences communes	Características técnicas de los sistemas móviles por satélite en la banda 1-3 GHz para su utilización en el desarrollo de criterios para la compartición para el servicio móvil por satélite (SMS) y otros servicios que utilizan frecuencias comunes	8/1030	AR95
M	1185	Method for determining coordination distance between ground based mobile earth stations and terrestrial stations operating in the 148.0-149.9 MHz band	Méthode de détermination de la distance de coordination entre stations terriennes mobiles au sol et stations de Terre fonctionnant dans la bande des fréquences comprises entre 148,0 et 149,9 MHz	Método para determinar la distancia de coordinación entre estaciones terrenas móviles terrestres y estaciones terrenales que funcionan en la banda 148,0 - 149,9 MHz	8/1035	AR95
M	1186	Technical considerations for the coordination between MSS networks utilizing code division multiple access (CDMA) and other spread spectrum techniques in the 1-3 GHz band	Considérations techniques pour la coordination entre les réseaux du service mobile par satellite utilisant l'accès multiple par différence de code (AMDC) et d'autres techniques d'étalement du spectre dans la bande des fréquences comprises entre 1 et 3 GHz	Consideraciones técnicas para la coordinación entre las redes del SMS que utilizan el acceso múltiple por división de código (CDMA) y otras técnicas de espectro ensanchado en la banda de 1-3 GHz	8/1032	AR95
M	1187	A method for the calculation of the potentially affected region for a mobile-satellite service (MSS) network in the 1-3 GHz range using circular orbits	Méthode de calcul de la région pouvant être affectée dans le cas d'un réseau du service mobile par satellite (SMS) utilisant des orbites circulaires dans la bande 1-3 GHz	Método de cálculo de la región potencialmente afectada para una red del servicio móvil por satélite (SMS) que funcione en la gama de 1-3 GHz y utilice órbitas circulares	8/1034	AR95

M	1188	**Impact of propagation on the design of non-gso mobile-satellite systems not employing satellite diversity which provide service to handheld equipment**	Influence de la propagation sur la conception des systèmes à satellites mobiles non géostationnaires qui n'utilisent pas la diversité de satellite et qui assurent un service à des équipements portables	Influencia de la propagación en el diseño en sistemas del servicio móvil por satélite con satélites no geoestacionarios que no utilizan diversidad de satélites y proporcionan servicio a equipos portátiles	8/1038	AR95

NOC	SUP	MOD	NEW	Total in force
86	1*	14	22	122

*Rec. UIT-R M. 494

ITU-R Recommendations in force as at
Recommandations de l'UIT-R en vigueur au
Recomendaciones del UIT-R vigentes con fecha de
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Series/Série/Serie

F

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
F	106-1	Voice-frequency telegraphy on radio circuits	Télégraphie harmonique sur circuits radioélectriques	Telegrafía armónica en circuitos radioeléctricos	III	1990
F	162-3	Use of directional transmitting antennas in the fixed service operating in bands below about 30 MHz	Emploi d'antennes à effet directif dans le service fixe fonctionnant dans les bandes de fréquences inférieures à 30 MHz environ	Utilización de antenas transmisoras directivas en el servicio fijo, que funcionan en las bandas de frecuencias por debajo de unos 30 MHz	F, P2	1994
F	240-6	Signal-to-interference protection ratios for various classes of emission in the fixed service below about 30 MHz	Rapport de protection signal/brouillage pour diverses classes d'émission dans le service fixe sur les fréquences inférieures à 30 MHz environ	Relaciones de protección señal/interferencia para las distintas clases de emisión en el servicio fijo por debajo de unos 30 MHz	F, P2	1994
F	246-3	Frequency-shift keying	Modulation par déplacement de fréquence	Manipulación por desplazamiento de frecuencia	III	1990
F	268-1	Interconnection at audio frequencies of radio-relay systems for telephony	Interconnexion aux audiofréquences des faisceaux hertziens de téléphonie	Interconexión en las frecuencias vocales de sistemas de relevadores radioeléctricos para telefonía	IX-I	1990
F	270-2	Interconnection at video signal frequencies of radio-relay systems for television	Interconnexion aux fréquences vidéo des faisceaux hertziens de télévision	Interconexión en las frecuencias de vídeo de los sistemas de relevadores radioeléctricos para televisión	IX-I	1990
F	275-3	Pre-emphasis characteristic for frequency modulation radio-relay systems for telephony using frequency-division multiplex	Caractéristique de préaccentuation pour les faisceaux hertziens de téléphonie à multiplexage par répartition en fréquence et modulation de fréquence (MRF-MF)	Características de preacentuación en los sistemas de relevadores radioeléctricos de modulación de frecuencia para telefonía con multiplaje por distribución de frecuencia	IX-1	1990
F	276-2	Frequency deviation and the sense of modulation for analogue radio-relay systems for television	Excursion de fréquence et sens de modulation pour les faisceaux hertziens analogiques de télévision	Excursión de frecuencia y sentido de modulación en los sistemas de relevadores radioeléctricos analógicos de televisión	IX-1	1990
F	283-5	Radio-frequency channel arrangements for low and medium capacity analogue or digital radio-relay systems operating in the 2 GHz band	Disposition des canaux radioélectriques pour les faisceaux hertziens analogiques ou numériques de faible et moyenne capacités utilisant la bande des 2 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos analógicos o digitales de baja y media capacidad que funcionan en la banda de 2 GHz	F, P1	1994

F	290-3	Maintenance measurements on radio-relay systems for telephony using frequency-division multiplex	Mesures à effectuer pour la maintenance des faisceaux hertziens de téléphonie à multiplexage par répartition en fréquence	Mediciones a efectuar para el mantenimiento de los sistemas de relevadores radioeléctricos para telefonía con multiplaje por distribución de frecuencia	IX-1	1990
F	302-2	Limitation of interference from trans-horizon radio-relay systems	Limitation des brouillages dus aux faisceaux hertziens transhorizon	Limitación de las interferencias causadas por los sistemas de relevadores radioeléctricos transhorizonte	F, P1	1994
F	305	Stand-by arrangements for radio-relay systems for television and telephony	Dispositifs de secours pour les faisceaux hertziens de télévision et de téléphonie	Dispositivos de reserva de los sistemas de relevadores radioeléctricos para telefonía y televisión	IX-1	1990
F	306	Procedure for the international connection of radio-relay systems with different characteristics	Procédure à suivre pour effectuer les interconnexions internationales de faisceaux hertziens de caractéristiques différentes	Procedimiento para la interconexión internacional de sistemas de relevadores radioeléctricos de características distintas	IX-1	1990
F	335-2	Use of radio links in international telephone circuits	Liaisons radiotéléphoniques dans les circuits téléphoniques internationaux	Enlaces radiotelefónicos en los circuitos telefónicos internacionales	III	1990
F	338-2	Bandwidth required at the output of a telegraph or telephone receiver	Largeur de bande nécessaire à la sortie d'un récepteur télégraphique ou téléphonique	Anchura de banda necesaria a la salida de un receptor telegráfico o telefónico	III	1990
F	339-6	Bandwidths, signal-to-noise ratios and fading allowances in complete systems	Largeurs de bande, rapports signal/bruit et marges contre les évanouissements dans l'ensemble du circuit	Anchuras de banda, relaciones señal/ruido y márgenes para el desvanecimiento en sistemas completos	F, P2	1994
F	342-2	Automatic error-correcting system for telegraph signals transmitted over radio circuits	Système de correction automatique des erreurs pour signaux télégraphiques transmis par circuits radioélectriques	Sistema de corrección automática de errores para señales telegráficas transmitidas por circuitos radioeléctricos	F, P2	1994
F	345	Telegraph distortion	Distorsion télégraphique	Distorsión telegráfica	F, P2	1994
F	347	Classification of multi-channel radiotelegraph systems for long-range circuits operating at frequencies below about 30 MHz and the designation of the channels in these systems	Classification des systèmes radiotélégraphiques à plusieurs voies pour liaisons à grande distance employant des fréquences inférieures à 30 MHz environ et désignation des voies dans ces systèmes	Clasificación de los sistemas radiotelegráficos multicanales para circuitos de larga distancia que emplean frecuencias inferiores a unos 30 MHz y designación de los canales en estos sistemas	III	1990
F	348-4	Arrangement of channels in multi-channel single-sideband and independent-sideband transmitters for long-range circuits operating at frequencies below about 30 MHz	Disposition des voies des émetteurs à bande latérale unique et à bandes latérales indépendantes à plusieurs voies pour liaisons à grande distance employant des fréquences inférieures à 30 MHz environ	Disposición de los canales en los transmisores multicanales de banda lateral única y de bandas laterales independientes para circuitos a larga distancia, que trabajan en frecuencias inferiores a 30 MHz aproximadamente	F, P2	1994
F	349-4	Frequency stability required for systems operating in the HF fixed service to make the use of automatic frequency control superfluous	Stabilité de fréquence à exiger des systèmes fonctionnant dans le service fixe en ondes décamétriques pour rendre inutile la commande automatique de fréquence	Estabilidad de frecuencia necesaria en los sistemas que funcionan en el servicio fijo en ondas decamétricas para evitar el empleo del control automático de frecuencia	III	1990

F	380-4	Interconnection at baseband frequencies of radio-relay systems for telephony using frequency-division multiplex	Interconnexion aux fréquences de la bande de base des faisceaux hertziens de téléphonie à multiplexage par répartition en fréquence	Interconexión en las frecuencias de la banda de base de sistemas de relevadores radioeléctricos para telefonía con multiplaje por distribución de frecuencia	IX-1	1990
F	381-2	Conditions relating to line regulating and other pilots and to limits for the residues of signals outside the baseband in the interconnection of radio-relay and line systems for telephony	Conditions relatives aux ondes pilotes de régulation de ligne et aux autres ondes pilotes, et à la limitation des résidus de signaux à l'extérieur de la bande de base, dans l'interconnexion des FH et des systèmes sur fil pour la téléphonie	Condiciones relativas a las señales piloto de regulación de línea y demás señales piloto y a la limitación de las señales residuales fuera de la banda de base en la interconexión de sistemas de relevadores radioeléctricos y de sistemas de líneas para la telefonía	IX-1	1990
F	382-6	Radio-frequency channel arrangements for radio-relay systems operating in the 2 and 4 GHz bands	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans les bandes des 2 et 4 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos que funcionan en las bandas de 2 y 4 GHz	F, P1	1994
F	383-5	Radio-frequency channel arrangements for high capacity radio-relay systems operating in the lower 6 GHz band	Disposition des canaux radioélectriques pour les faisceaux hertziens de grande capacité, fonctionnant dans la partie inférieure de la bande des 6 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos de alta capacidad que funcionan en la parte inferior de la banda de 6 GHz	F, P1	1994
F	384-6	Radio-frequency channel arrangements for medium and high capacity analogue or digital radio-relay systems operating in the upper 6 GHz band	Disposition des canaux radioélectriques pour les faisceaux hertziens analogiques ou numériques de moyenne et grande capacités fonctionnant dans la partie supérieure de la bande des 6 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos analógicos de media y gran capacidad o digitales de gran capacidad que trabajan en la parte superior de la banda de 6 GHz	9/1012	AR95
F	385-6	Radio-frequency channel arrangements for radio-relay systems operating in the 7 GHz band	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans la bande des 7 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos que funcionan en la banda de 7 GHz	F, P1	1994
F	386-4	Radio-frequency channel arrangements for radio-relay systems operating in the 8 GHz band	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans la bande des 8 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos que funcionan en la banda de 8 GHz	F, P1	1994
F	387-7	Radio-frequency channel arrangements for radio-relay systems operating in the 11 GHz band	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans la bande des 11 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos que funcionan en la banda de 11 GHz	9/1013	AR95
F	388	Radio-frequency channel arrangements for trans-horizon radio-relay systems	Disposition des canaux radioélectriques pour les faisceaux hertziens transhorizon	Disposición de los radiocanales para los sistemas de relevadores radioeléctricos transhorizonte	IX-I	1990
F	389-2	Preferred characteristics of auxiliary radio-relay systems operating in the 2, 4, 6 or 11 GHz bands	Caractéristiques préférées des faisceaux hertziens auxiliaires fonctionnant dans les bandes des 2, 4, 6 ou 11 GHz	Características preferidas de los sistemas de relevadores radioeléctricos auxiliares que trabajan en las bandas de 2, 4, 6 u 11 GHz	IX-I	1990
F	390-4	Definitions of terms and references concerning hypothetical reference circuits and hypothetical reference digital paths for radio-relay systems	Définitions des termes et références concernant les circuits fictifs de référence et les conduits numériques fictifs de référence pour les faisceaux hertziens	Definición de términos y referencias relativos a circuitos ficticios de referencia y trayectos digitales ficticios de referencia para sistemas de relevadores radioeléctricos	F, P1	1994

F	391	Hypothetical reference circuit for radio-relay systems for telephony using frequency-division multiplex with a capacity of 12 to 60 telephone channels	Circuit fictif de référence pour faisceaux hertziens de téléphonie à multiplexage par répartition en fréquence ayant une capacité de 12 à 60 voies téléphoniques	Circuito ficticio de referencia para sistemas de relevadores radioeléctricos de telefonía con multiplaje por distribución de frecuencia con una capacidad de 12 a 60 canales telefónicos	IX-1	1990
F	392	Hypothetical reference circuit for radio-relay systems for telephony using frequency-division multiplex with a capacity of more than 60 telephone channels	Circuit fictif de référence pour faisceaux hertziens de téléphonie à multiplexage par répartition en fréquence ayant une capacité supérieure à 60 voies téléphoniques	Circuito ficticio de referencia para sistemas de relevadores radioeléctricos para telefonía con multiplaje por distribución de frecuencia con capacidad superior a 60 canales telefónicos	F, P1	1994
F	393-4	Allowable noise power in the hypothetical reference circuit for radio-relay systems for telephony using frequency-division multiplex	Puissance de bruit admissible sur le circuit fictif de référence, pour les faisceaux hertziens de téléphonie à multiplexage par répartition en fréquence	Potencia de ruido admisible en el circuito ficticio de referencia de sistemas de relevadores radioeléctricos para telefonía con multiplaje por distribución de frecuencia	F, P1	1994
F	395-2	Noise in the radio portion of circuits to be established over real radio-relay links for FDM telephony	Bruit dans la partie radioélectrique de circuits à établir sur des liaisons réelles utilisant des faisceaux hertziens de téléphonie à multiplexage par répartition en fréquence	Ruido en la sección radioeléctrica de circuitos que se establezcan por enlaces reales de relevadores radioeléctricos para telefonía con multiplaje por distribución de frecuencia	IX-1	1990
F	396-1	Hypothetical reference circuit for trans-horizon radio-relay systems for telephony using frequency-division multiplex	Circuit fictif de référence pour faisceaux hertziens transhorizon de téléphonie à multiplexage par répartition en fréquence	Circuito ficticio de referencia para sistemas de relevadores radioeléctricos transhorizonte de telefonía con multiplaje por distribución de frecuencia	IX-1	1990
F	397-3	Allowable noise power in the hypothetical reference circuit of trans-horizon radio-relay systems for telephony using frequency-division multiplex	Puissance de bruit admissible sur le circuit fictif de référence pour faisceaux hertziens transhorizon de téléphonie à multiplexage par répartition en fréquence	Potencia de ruido admisible en el circuito ficticio de referencia de sistemas de relevadores radioeléctricos transhorizonte para transmisión de telefonía con multiplaje por distribución de frecuencia	IX-1	1990
F	398-3	Measurements of noise in actual traffic over radio-relay systems for telephony using frequency-division multiplex	Mesure du bruit en exploitation réelle sur les faisceaux hertziens de téléphonie à multiplexage par répartition en fréquence	Mediciones de sistemas de relevadores radioeléctricos para telefonía con multiplaje por distribución de frecuencia en condiciones de explotación real	IX-1	1990
F	399-3	Measurement of noise using a continuous uniform spectrum signal on frequency-division multiplex telephony radio-relay systems	Mesure du bruit à l'aide d'un signal à spectre continu uniforme sur les faisceaux hertziens de téléphonie à multiplexage par répartition en fréquence	Medición del ruido por medio de una señal de espectro continuo y uniforme en los sistemas de relevadores radioeléctricos para telefonía que utilizan multiplaje por distribución de frecuencia	IX-1	1990
F	400-2	Service channels to be provided for the operation and maintenance of radio-relay systems	Voies de service à prévoir pour l'exploitation et la maintenance des faisceaux hertziens	Tipos de canales de servicio que han de preverse para la explotación y el mantenimiento de los sistemas de relevadores radioeléctricos	IX-1	1990

F	401-2	Frequencies and deviations of continuity pilots for frequency modulation radio-relay systems for television and telephony	Fréquences et excursions de fréquence des ondes pilotes de continuité pour les faisceaux hertziens de télévision et de téléphonie à modulation de fréquence	Frecuencias y excursiones de frecuencia de las señales piloto de continuidad en los sistemas de relevadores radioeléctricos de modulación de frecuencia para televisión y telefonía	IX-1	1990
F	402-2	The preferred characteristics of a single sound channel simultaneously transmitted with a television signal on an analogue radio-relay system	Caractéristiques préférées pour la voie son transmise simultanément avec un signal de télévision sur un faisceau hertzien analogique	Características preferidas de un canal único de sonido transmitido simultáneamente con una señal de televisión por un sistema de relevadores radioeléctricos analógico	IX-1	1990
F	403-3	Intermediate-frequency characteristics for the interconnection of analogue radio-relay systems	Caractéristiques aux fréquences intermédiaires pour l'interconnexion de faisceaux hertziens analogiques	Características de frecuencia intermedia para la interconexión de sistemas de relevadores radioeléctricos analógicos	IX-1	1990
F	404-2	Frequency deviation for analogue radio-relay systems for telephony using frequency-division multiplex	Excursion de fréquence pour les faisceaux hertziens analogiques de téléphonie à multiplexage par répartition en fréquence	Excursión de frecuencia en los sistemas de relevadores radioeléctricos analógicos para telefonía con multiplaje por distribución de frecuencia	IX-1	1990
F	405-1	Pre-emphasis characteristics for frequency modulation radio-relay systems for television	Caractéristique de préaccentuation pour les faisceaux hertziens de télévision à modulation de fréquence	Características de preacentuación de los sistemas de relevadores radioeléctricos de modulación de frecuencia para televisión	IX-1	1990
F	436-4	Arrangement of voice-frequency , frequency-shift telegraph channels over HF radio circuits	Disposition des voies de télégraphie harmonique à modulation par déplacement de fréquence sur les circuits radioélectriques à ondes décamétriques	Disposición de los canales de telegrafía armónica con modulación por desplazamiento de frecuencia en circuitos radioeléctricos en ondas decamétricas	9/1026	AR95
F	444-3	Preferred characteristics for multi-line switching arrangements of analogue radio-relay systems	Caractéristiques préférées pour les dispositifs de commutation à plusieurs canaux des faisceaux hertziens analogiques	Características preferidas para los dispositivos de conmutación de varios radiocanales en los sistemas de relevadores radioeléctricos analógicos	IX-1	1990
F	454-1	Pilot carrier level for HF single-sideband and independent-sideband reduced-carrier systems	Niveau de la porteuse pilote pour les systèmes à bande latérale unique et à bandes latérales indépendantes à porteuse réduite	Nivel de la portadora piloto en los sistemas de banda lateral única y de bandas laterales independientes con portadora reducida	III	1990
F	455-2	Improved transmission system for HF radiotelephone circuits	Système de transmission amélioré pour circuits radiotéléphoniques sur ondes décamétriques	Sistema perfeccionado de transmisión para circuitos radiotelefónicos en ondas decamétricas	RF	1992
F	463-1	Limits for the residues of signals outside the baseband of radio-relay systems for television	Limitation des résidus de signaux à l'extérieur de la bande de base des faisceaux hertziens de télévision	Limitación de los residuos de las señales fuera de la banda de base de sistemas de relevadores radioeléctricos para televisión	IX-1	1990
F	480	Semi-automatic operation on HF radiotelephone circuits. *Devices for remote connection to an automatic exchange by radiotelephone circuits*	Exploitation semi-automatique sur les circuits radiotéléphoniques à ondes décamétriques. *Dispositifs de raccordement distant à un central automatique par circuit radiotéléphonique*	Explotación semiautomática en los circuitos radiotelefónicos en ondas decamétricas. *Dispositivos de conexión a distancia de una central automática por circuito radiotelefónico*	III	1990

F	497-5	Radio-frequency channel arrangements for radio-relay systems operating in the 13 GHz frequency band	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans la bande des 13 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos que funcionan en la banda de 13 GHz	9/1014	AR95
F	518-1	Single-channel simplex ARQ telegraph system	Système télégraphique ARQ simplex à une seule voie	Sistema telegráfico ARQ símplex de un solo canal	F, P2	1994
F	519	Single-channel duplex ARQ telegraph system	Système télégraphique ARQ duplex à une seule voie	Sistema telegráfico ARQ dúplex de un solo canal	F, P2	1994
F	520-2	Use of high frequency ionospheric channel simulators	Utilisation de simulateurs de canal ionosphérique en ondes décamétriques	Empleo de simuladores de canales ionosféricos en ondas decamétricas	F, P2	1994
F	555	Permissible noise in the hypothetical reference circuit of radio-relay systems for television	Bruit admissible sur le circuit fictif de référence des faisceaux hertziens de télévision	Ruido admisible en el circuito ficticio de referencia de sistemas de relevadores radioeléctricos para televisión	F, P1	1994
F	556-1	Hypothetical reference digital path for radio-relay systems which may form part of an integrated services digital network with a capacity above the second hierarchical level	Conduit numérique fictif de référence pour les faisceaux hertziens pouvant faire partie d'un réseau numérique à intégration de services - Systèmes ayant une capacité supérieure au deuxième niveau hiérarchique	Trayecto digital ficticio de referencia para los sistemas de relevadores radioeléctricos que pueden formar parte de una red digital de servicios integrados con una capacidad superior al segundo nivel jerárquico	F, P1	1994
F	557-3	Availability objective for radio-relay systems over a hypothetical reference circuit and a hypothetical reference digital path	Objectif de disponibilité d'un circuit fictif de référence et d'un conduit numérique fictif de référence pour les faisceaux hertziens	Objetivo de disponibilidad en sistemas de relevadores radioeléctricos para un circuito ficticio de referencia y un trayecto digital ficticio de referencia	F, P1	1994
F	592-2	Terminology used for radio-relay systems	Terminologie utilisée dans les faisceaux hertziens	Terminología relativa a los sistemas de relevadores radioeléctricos	F, P1	1994
F	593	Noise in real circuits of multi-channel trans-horizon FM radio-relay systems of less than 2500 km	Bruit dans les circuits réels de faisceaux hertziens transhorizon multivoies à modulation de fréquence de longueur inférieure à 2500 km	Ruido en los circuitos reales de los sistemas de relevadores radioeléctricos transhorizonte multicanales con MF de longitud inferior a 2500 km	IX-1	1990
F	594-3	Allowable bit error ratios at the output of the hypothetical reference digital path for radio-relay systems which may form part of an integrated services digital network	Taux d'erreur binaire admissible, à la sortie du conduit numérique fictif de référence, pour les faisceaux hertziens pouvant faire partie d'un réseau numérique à intégration de services	Proporciones de bits erróneos admisibles a la salida del trayecto digital ficticio de referencia para sistemas de relevadores radioeléctricos que pueden formar parte de una red digital de servicios integrados	F, P1	1994
F	595-4	Radio-frequency channel arrangements for radio-relay systems operating in the 18 GHz frequency band	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans la bande de fréquences des 18 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos que funcionan en la banda de 18 GHz	9/1015	AR95
F	596-1	Interconnection of digital radio-relay systems	Interconnexion de faisceaux hertziens numériques	Interconexión de sistemas de relevadores radioeléctricos digitales	F, P1	1994
F	612	Measurement of reciprocal mixing in HF communication receivers in the fixed service	Mesures du mélange réciproque dans les récepteurs de trafic à ondes décamétriques du service fixe	Medición de la mezcla recíproca en receptores de comunicaciones por ondas decamétricas del servicio fijo	F, P2	1994
F	613	The use of ionospheric channel sounding systems operating in the fixed service at frequencies below about 30 MHz	Emploi des systèmes à sondage des voies ionosphériques fonctionnant dans le service fixe à des fréquences inférieures à environ 30 MHz	Utilización de sistemas de sondeo de los canales ionosféricos del servicio fijo explotados en frecuencias inferiores a unos 30 MHz	F, P2	1994

F	634-3	Error performance objectives for real digital radio-relay links forming part of a high-grade circuit within an integrated service digital network	Objectifs de qualité en matière d'erreur pour les liaisons réelles par faisceaux hertziens numériques faisant partie d'un circuit à qualité élevée dans un réseau numérique à intégration de services	Objetivos en materia de características de error para enlaces de relevadores radioeléctricos digitales reales que forman parte de un circuito de grado alto de calidad dentro de una red digital de servicios integrados	F, P1	1994
F	635-3	Radio-frequency channel arrangements based on a homogeneous pattern for radio-relay systems operating in the 4 GHz band	Disposition des canaux radioélectriques fondée sur un plan homogène pour les faisceaux hertziens fonctionnant dans la bande des 4 GHz	Disposición de radiocanales basada en un plan homogéneo para sistemas de relevadores radioeléctricos digitales que funcionan en la banda de 4 GHz	9/1010	AR95
F	636-3	Radio-frequency channel arrangements for radio-relay systems operating in the 15 GHz band	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans la bande des 15 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos que funcionan en la banda de 15 GHz	F, P1	1994
F	637-2	Radio-frequency channel arrangements for radio-relay systems operating in the 23 GHz band	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans la bande de fréquences des 23 GHz	Disposición de radiocanales para sistemas de radioenlaces que funcionan en la banda de 23 GHz	F, P1	1994
F	695	Availability objectives for real digital radio-relay links forming part of a high-grade circuit within an integrated services digital network	Objectifs de disponibilité pour les liaisons réelles par faisceaux hertziens numériques faisant partie d'un circuit à qualité élevée dans un réseau numérique à intégration de services	Objetivos de disponibilidad para enlaces de relevadores radioeléctricos digitales reales que forman parte de un circuito de grado alto de calidad dentro de una red digital de servicios integrados	F, P1	1994
F	696-1	Error performance and availability objectives for hypothetical reference digital sections utilizing digital radio-relay systems forming part or all of the medium-grade portion of an ISDN connection	Objectifs de qualité en matière d'erreur et de disponibilité pour des sections numériques fictives de référence utilisant les faisceaux hertziens numériques et formant une fraction ou la totalité de la partie à qualité moyenne d'une communication RNIS	Objetivos de característica de error y de disponibilidad para secciones digitales ficticias de referencia establecidas mediante sistemas de radioenlaces que constituyen un tramo o la totalidad de la parte de grado medio de una conexión de la RDSI	F, P1	1994
F	697-1	Error performance and availability objectives for the local-grade portion at each end of an ISDN connection utilizing digital radio-relay systems	Objectifs de qualité en matière d'erreur et de disponibilité pour la section de qualité locale à chaque extrémité d'une communication RNIS utilisant des faisceaux hertziens numériques	Objetivos de calidad en términos de errores y de disponibilidad para la parte de grado local en cada extremo de una conexión de RDSI que utiliza sistemas de relevadores radioeléctricos digitales	F, P1	1994
F	698-2	Preferred frequency bands for trans-horizon radio-relay systems	Bandes de fréquences préférées pour les faisceaux hertziens transhorizon	Bandas de frecuencias preferidas para los sistemas de relevadores radioeléctricos transhorizonte	F, P1	1994
F	699-3	Reference radiation patterns for line-of-sight radio-relay system antennas for use in coordination studies and interference assessment in the frequency range from 1 to about 40 GHz	Diagrammes de rayonnement de référence pour antennes de faisceaux hertziens en visibilité directe à utiliser pour les études de coordination et l'évaluation du brouillage dans la gamme de fréquences comprise entre 1 et environ 40 GHz	Diagramas de radiación de referencia de antenas de sistemas de relevadores radioeléctricos con visibilidad directa para utilizarlos en los estudios de coordinación y en la evaluación de la interferencia en la gama de frecuencias de 1 GHz a unos 40 GHz	9/1018	AR95

F	700-2	Error performance and availability measurement algorithm for digital radio-relay links at the system bit rate interface	Algorithme de mesure de la qualité en matière d'erreur et de la disponibilité pour les liaisons de faisceaux hertziens numériques à l'interface fontionnant au débit binaire du système	Algoritmo para medir característica de error y la disponibilidad de los radioenlaces de sistemas de relevadores radioeléctricos digitales en la interfaz a la velocidad binaria del sistema	F, P1	1994
F	701-1	Radio-frequency channel arrangements for analogue and digital point-to-multipoint radio systems operating in frequency bands in the range 1.427 to 2.690 GHz (1.5, 1.8, 2.0, 2.2, 2.4 and 2.6 GHz)	Dispositions des canaux radioélectriques pour les systèmes analogiques et numériques point à multipoint, fonctionnant dans des bandes de fréquences de la gamme 1,427-2,690 GHz (1,5; 1,8; 2,0; 2,2; 2,4 et 2,6 GHz)	Disposiciones de radiocanales para sistemas radioeléctricos analógicos y digitales punto a multipunto que funcionan en bandas de frecuencias de la gama 1,427 a 2,690 GHz (1,5; 1,8; 2,0; 2,2; 2,4 y 2,6 GHz)	F, P1	1994
F	745	CCIR Recommendations for analogue radio-relay systems	Recommandations du CCIR relatives aux faisceaux hertziens analogiques	Recomendaciones del CCIR relativas a los sistemas de relevadores radioeléctricos analógicos	F, P1	1994
F	746-2	Radio-frequency channel arrangements for radio-relay systems	Dispositions des canaux radioélectriques pour les faisceaux hertziens	Disposición de radiocanales para sistemas de relevadores radioeléctricos	9/1008	AR95
F	747	Radio-frequency channel arrangements for radio-relay systems operating in the 10 GHz band	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans la bande des 10 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos que funcionan en la banda de 10 GHz	F, P1	1994
F	748-2	Radio-frequency channel arrangements for radio-relay systems operating in the 25, 26 and 28 GHz	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans les bandes de fréquences des 25, 26 et 28 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos que funcionan en las bandas 25, 26 y 28 GHz	9/1016	AR95
F	749-1	Radio-frequency channel arrangements for radio-relay systems in the 38 GHz band	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans la bande des 38 GHz	Disposiciones de radiocanales para sistemas de relevadores radioeléctricos que funcionan en la banda de 38 GHz	F, P1	1994
F	750-2	Architectures and functional aspects of radio-relay systems for SDH-based networks	Architectures et caractéristiques fonctionnelles des faisceaux hertziens pour réseaux utilisant la hiérarchie numérique synchrone	Arquitectura y aspectos funcionales de los sistemas de relevadores radioeléctricos para las redes basadas en la jerarquía digital síncrona	9/1017	AR95
F	751-1	Transmission characteristics and performance requirements of radio-relay systems for SDH-based networks	Caractéristiques de transmission et spécifications en matière de qualité des faisceaux hertziens pour réseaux utilisant la hiérarchie numérique synchrone (SDH)	Características de transmisión y requisitos de calidad de funcionamiento de los sistemas de relevadores radioeléctricos para las redes basadas en la jerarquía digital síncrona	F, P1	1994
F	752-1	Diversity techniques for radio-relay systems	Techniques de diversité pour les faisceaux hertziens	Técnicas de diversidad para sistemas de relevadores radioeléctricos	F, P1	1994
F	753	Preferred methods and characteristics for the supervision and protection of digital radio-relay systems	Méthodes et caractéristiques préférées pour la surveillance et la protection des faisceaux hertziens numériques	Métodos y características preferibles para la supervisión y protección de sistemas de relevadores radioeléctricos digitales	F, P1	1994
F	754	Radio-relay systems in bands 8 and 9 for the provision of telephone trunk connections in rural areas	Faisceaux hertziens fonctionnant dans les bandes 8 et 9, destinés à assurer des communications téléphoniques interurbaines dans les zones rurales	Sistemas de relevadores radioeléctricos en las bandas 8 y 9 para la provisión de conexiones interurbanas telefónicas en las zonas rurales	F, P1	1994

F	755-1	Point-to-multipoint systems used in the fixed service	Systèmes point à multipoint utilisés dans le service fixe	Sistemas punto a multipunto utilizados en el servicio fijo	F, P1	1994
F	756	TDMA point-to-multipoint systems used as radio concentrators	Systèmes AMRT point à multipoint utilisés comme concentrateurs radioélectriques	Sistemas AMDT punto a multipunto utilizados como concentradores radioeléctricos	F, P1	1994
F	757	Basic system requirements and performance objectives for cellular type mobile systems	Caractéristiques de base et objectifs de qualité des systèmes mobiles de type cellulaire utilisés comme systèmes fixes	Requisitos básicos de sistemas y objetivos de calidad de funcionamiento para los sistemas móviles de tipo celular utilizados como sistemas fijos	F, P1	1994
F	758	Considerations in the development of criteria for sharing between the terrestrial fixed service and other services	Considérations relatives à la mise au point de critères de partage entre le service fixe de Terre et d'autres services	Consideraciones relativas a la elaboración de criterios para la compartición entre el servicio fijo terrenal y otros servicios	F, P1	1994
F	759	The use of frequencies in the band 500 to 3000 MHz for radio-relay systems	Utilisation des fréquences dans la bande 500-3000 MHz pour les faisceaux hertziens	Utilización de frecuencias en la banda de 500 a 3000 MHz para sistemas de relevadores radioeléctricos	F, P1	1994
F	760-1	Protection of terrestrial line-of-sight radio-relay systems against interference from the broadcasting-satellite service in the bands near 20 GHz	Protection des faisceaux hertziens de Terre en visibilité directe contre les brouillages causés par le service de radiodiffusion par satellite dans les bandes au voisinage de 20 GHz	Protección de los sistemas de relevadores radioeléctricos terrenales con visibilidad directa contra las interferencias causadas por el servicio de radiodifusión por satélite en las bandas cerca de 20 GHz	F, P1	1994
F	761	Frequency sharing between the fixed service and passive sensors in the band 18.6 to 18.8 GHz	Partage des fréquences entre le service fixe et les capteurs passifs dans la bande 18,6-18,8 GHz	Compartición de frecuencias entre sistemas del servicio fijo y los sensores pasivos en la banda 18,6-18,8 GHz	F, P1	1994
F	762-2	Main characteristics of remote control and monitoring systems for HF receiving and transmitting stations	Caractéristiques principales des systèmes de télécommande et télésurveillance pour stations d'émission et de réception en ondes décamétriques	Características principales de los sistemas de telemando y televigilancia para estaciones receptoras y transmisoras en ondas decamétricas	9/1023	AR95
F	763-2	Data transmission over HF circuits using phase-shift keying	Transmission de données sur les circuits à ondes décamétriques utilisant la modulation par déplacement de phase	Transmisión de datos por circuitos en ondas decamétricas que utilizan modulación por desplazamiento de fase	9/1027	AR95
F	764-1	Minimum requirements for HF radio systems using a packet transmission protocol	Caractéristiques minimales des systèmes radioélectriques à ondes décamétriques utilisant un protocole de transmission par paquets	Requisitos mínimos de los sistemas radioeléctricos en ondas decamétricas que utilizan un protocolo de transmisión por paquetes	F, P2	1994
F	1092	Error performance objectives for constant bit rate digital path at or above the primary rate carried by digital radio-relay systems which may form part of the international portion of a 27 500 km hypothethical reference path	Objectifs de qualité en matière d'erreur pour les conduits numériques à débit binaire constant égal ou supérieur au débit primaire utilisant des faisceaux hertziens numériques pouvant faire partie de la section internationale d'un conduit fictif de référence de 27 500 km	Objetivos de característica de error de los trayectos digitales de velocidad binaria constante igual o superior a la velocidad primaria en sistemas de relevadores radioélectricos que pueden formar parte del tramo internacional de un trayecto ficticio de referencia de 27 500 km	F, P1	1994
F	1093	Effects of multipath propagation on the design and operation of line-of-sight digital radio-relay systems	Effets de la propagation par trajets multiples sur la conception et le fonctionnement des faisceaux hertziens numériques en visibilité directe	Efectos de la propagación por trayectos múltiples en el diseño y funcionamiento de los sistemas de radioenlaces digitales con visibilidad directa	F, P1	1994

F	1094-1	Maximum allowable error performance and availability degradations to digital radio-relay systems arising from interference from emissions and radiations from other sources	Dégradations maximales admissibles de la qualité en matière d'erreur et de disponibilité pour les faisceaux hertziens numériques, dues aux brouillages provenant d'émissions et de rayonnements d'autres sources	Valores máximos admisibles de las degradaciones de la característica de error y de la disponibilidad en los sistemas de radioenlaces digitales provocadas por la interferencia procedente de emisiones y radiaciones de otras fuentes	9/1006	AR95
F	1095	A procedure for determining coordination area between radio-relay stations of the fixed service	Procédure de détermination de la zone de coordination entre des stations hertziennes du service fixe	Procedimiento para determinar la zona de coordinación entre estaciones de radioenlaces del servicio fijo	F, P1	1994
F	1096	Methods of calculating line-of-sight interference into radio-relay systems to account for terrain scattering	Méthodes de calcul du brouillage en visibilité directe des faisceaux hertziens compte tenu de la diffusion par la terrain	Métodos de cálculo de la interferencia con visibilidad directa causada a sistemas de relevadores radioeléctricos que han de utilizarse para tener en cuenta la dispersión en el terreno	F, P1	1994
F	1097	Interference mitigation options to enhance compatibility between radar systems and digital radio-relay systems	Possibilités d'atténuation des brouillages pour améliorer la compatibilité entre les systèmes radar et les faisceaux hertziens numériques	Posibilidades de reducción de la interferencia para aumentar la compatibilidad entre los sistemas de radar y los sistemas de radioenlaces digitales	F, P1	1994
F	1098-1	Radio-frequency channel arrangements for radio-relay systems in the 1 900-2 300 MHz band	Dispositions des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans la bande 1 900-2 300 MHz	Disposiciones de radiocanales para sistemas de relevadores radioeléctricos en la banda 1 900-2 300 MHz	9/1009	AR95
F	1099-1	Radio-frequency channel arrangements for high-capacity digital radio-relay systems in the 5 GHz (4 400-5 000 MHz) band	Dispositions des canaux radioélectriques pour les faisceaux hertziens numériques de grande capacité fonctionnant dans la bande des 5 GHz (4 400-5 000 MHz)	Disposiciones de radiocanales para sistemas de relevadores radioeléctricos digitales de gran capacidad en la banda de 5 GHz (4 400-5 000 MHz)	9/1011	AR95
F	1100	Radio-frequency channel arrangements for radio-relay systems operating in the 55 GHz band	Disposition des canaux radioélectriques pour les faisceaux hertziens fonctionnant dans la bande des 55 GHz	Disposición de radiocanales para sistemas de relevadores radioeléctricos que funcionan en la banda de 55 GHz	F, P1	1994
F	1101	Characteristics of digital radio-relay systems below about 17 GHz	Caractéristiques des faisceaux hertziens numériques fonctionnant à des fréquences inférieures à 17 GHz environ	Características de los sistemas de relevadores radioeléctricos digitales por debajo de unos 17 GHz	F, P1	1994
F	1102	Characteristics of radio-relay systems operating in frequency bands above about 17 GHz	Caractéristiques des faisceaux hertziens numériques fonctionnant dans les bandes de fréquences supérieures à environ 17 GHz	Características de los sistemas de relevadores radioeléctricos digitales en las bandas de frecuencias superiores a 17 GHz	F, P1	1994
F	1103	Radio-relay systems operating in bands 8 and 9 for the provision of subscriber telephone connections in rural areas	Faisceaux hertziens de raccordement des abonnés des zones rurales au service téléphonique, fonctionnant dans les bandes 8 et 9	Sistemas de relevadores radioeléctricos en las bandas 8 y 9 utilizados para establecer conexiones telefónicas de abonado en zonas rurales	F, P1	1994
F	1104	Requirements for point-to-multipoint radio systems used in the local grade portion of a ISDN connection	Caractéristiques des systèmes radioélectriques point-multipoint utilisés pour la connexion RNIS dans la portion de qualité locale du réseau	Requisitos para los sistemas punto a multipunto utilizados en la parte de "grado local" de una conexión RDSI	F, P1	1994

F	1105	Transportable fixed radiocommunications equipment for relief operations	Equipements transportables pour les radiocommunications fixes destinées aux opérations de secours	Equipo transportable de radiocomunicaciones fijas para operaciones de socorro	F, P1	1994
F	1106	Effects of propagation on the design and operation of trans-horizon radio-relay systems	Influence de la propagation sur la conception et le fonctionnement des faisceaux hertziens transhorizon	Efectos de la propagación en el diseño y explotación de sistemas de relevadores radioeléctricos transhorizonte	F, P1	1994
F	1107	Probabilistic analysis for calculating interference into the fixed service from satellites occupying the geostationary orbit	Methodes probabilistes permettant de calculer les brouillages causés au service fixe par des satellites en orbite géostationnaire	Análisis probabilista para calcular la interferencia al servicio fijo causada por satélites que ocupan la órbita geoestacionaria	F, P1	1994
F	1108-1	Determination of the criteria to protect fixed service receivers from the emissions of space stations operating in non-geostationary orbits in shared frequency bands	Détermination des critères nécessaires à la protection des récepteurs du service fixe des émissions de stations spatiales opérant sur des orbites non géostationnaires dans des bandes de fréquences partagées	Determinación de los criterios para proteger los receptores del servicio fijo de las emisiones procedentes de estaciones espaciales situadas en órbitas de satélites no geoestacionarios y que funcionan en bandas de frecuencia compartidas	9/1020	AR95
F	1109	ITU-Recommendations relating to systems in the fixed service operating at frequencies below about 30 MHz which are not reprinted	Recommandations UIT-R relatives aux systèmes du service fixe fonctionnant à des fréquences inférieures à 30 MHz environ qui ne seront pas rééditées	Recomendaciones del UIT-R que no se vuelven a publicar relacionadas con sistemas del servicio fijo que funcionan en frecuencias inferiores a unos 30 MHz	F, P2	1994
F	1110-1	Adaptive radio systems for frequencies below about 30 MHz	Systèmes radioélectriques adaptatifs pour des fréquences inférieures à 30 MHz environ	Sistemas radioeléctricos adaptables para frecuencias inferiores a unos 30 MHz	9/1021	AR95
F	1111-1	Improved Lincompex system for HF radiotelephone circuits	Système Lincompex amélioré pour circuits radiotéléphoniques sur ondes décamétriques	Sistema Lincompex perfeccionado para circuitos radiotelefónicos en ondas decamétricas	9/1024	AR95
F	1112-1	Digitized speech transmissions for systems operating below about 30 MHz	Transmission de signaux vocaux numérisés sur des systèmes fonctionnant à des fréquences inférieures à 30 MHz environ	Transmisión de señales vocales digitalizadas en sistemas que funcionan por debajo de unos 30 MHz	9/1025	AR95
F	1113	Radio systems employing meteor-burst propagation	Systèmes radioélectriques utilisant la propagation par impulsions météoriques	Sistemas radioeléctricos que emplean propagación por impulsos meteóricos	F, P2	1994
F	1189	Error-performance objectives for constant bit rate digital paths at or above the primary rate carried by digital radio-relay systems which may form part or all of the national portion of a 27 500 km hypothetical reference path	Objectifs en matière de caractéristique d'erreur pour les conduits numériques à débit binaire constant égal ou supérieur au débit primaire acheminé par des faisceaux hertziens numériques pouvant constituer tout ou partie de la section nationale d'un conduit fictif de référence de 27 500 km	Objetivos de característica de error para los trayectos digitales de velocidad binaria constante que funcionan a velocidad primaria o superior establecidos por sistemas de radioenlaces digitales que pueden constituir una parte o la totalidad del tramo nacional de un trayecto ficticio de referencia de 27 500 km	9/1005	AR95
F	1190	Protection criteria for digital radio-relay systems to ensure compatibility with radar systems in the radiodetermination service	Critères de protection applicables aux faisceaux hertziens numériques propres à assurer la compatibilité électromagnétique avec les systèmes radar du service de radiorepérage	Criterios de protección en sistemas de radioenlaces digitales para asegurar la compatibilidad con los sistemas de radar en el servicio de radiodeterminación	9/1007	AR95

F	1191	Bandwidths and unwanted emissions of digital radio-relay systems	Largeurs de bande et rayonnements non désirés des faisceaux hertziens numériques	Anchuras de banda y emisiones no deseadas de los sistemas de relevadores radioeléctricos	9/1019	AR95
F	1192	Traffic capacity of automatically controlled radio systems and networks in the HF fixed service	Capacité d'écoulement du trafic des systèmes et réseaux radioélectriques a commande automatique dans le service fixe en ondes décamétriques	Capacidad de tráfico de los sistemas radioeléctricos controlados automáticamente y de las redes del servicio fijo por ondas decamétricas	9/1022	AR95

NOC	SUP	MOD	NEW	Total in force
100	0	19	4	123

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Series/Série/Serie

SF

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
SF	355-4	Frequency sharing between systems in the fixed-satellite service and radio-relay systems in the same frequency bands	Partage de fréquences entre systèmes du service fixe par satellite et par faisceaux hertziens fonctionnant dans la même bande de fréquences	Compartición de frecuencias entre sistemas del servicio fijo por satélite y sistemas de relevadores radioeléctricos que funcionan en la misma banda de frecuencias	SF	1994
SF	356-4	Maximum allowable values of interference from line-of-sight radio-relay systems in a telephone channel of a system in the fixed-satellite service employing frequency modulation, when the same frequency bands are shared by both systems	Valeurs maximales admissibles des brouillages dus aux faisceaux hertziens à visibilité directe dans une voie téléphonique d'un système du service fixe par satellite utilisant la modulation de fréquence, ces systèmes utilisant en partage les mêmes bandes de fréquences	Valores máximos admisibles de interferencia debidos a los sistemas de relevadores radioeléctricos con visibilidad directa en un canal telefónico de un sistema del servicio fijo por satélite que utiliza la modulación de frecuencia, cuando ambos sistemas comparten las mismas bandas de frecuencias	SF	1994
SF	357-3	Maximum allowable values of interference in a telephone channel of an analogue angle-modulated radio-relay system sharing the same frequency bands as systems in the fixed-satellite service	Valeurs maximales admissibles des brouillages dans une voie téléphonique d'un faisceau hertzien analogique à modulation angulaire, partageant la même bande de fréquences que des systèmes du service fixe par satellite	Valores máximos admisibles de interferencia en un canal telefónico de un sistema de relevadores radioeléctricos analógico con modulación angular que comparte las mismas bandas de frecuencias que los sistemas del servicio fijo por satélite	SF	1994
SF	358-5	Maximum permissible values of power flux-density at the surface of the Earth produced by satellites in the fixed-satellite service using the same frequency bands above 1 GHz as line-of-sight radio-relay systems	Valeurs maximales admissibles de la puissance surfacique produite à la surface de la Terre par des satellites du service fixe par satellite utilisant les mêmes bandes de fréquences que les faisceaux hertziens en visibilité directe au-dessus de 1 GHz	Valores máximos admisibles de la densidad de flujo de potencia producida en la superficie de la Tierra por satélites del servicio fijo por satélite que comparten las mismas bandas de frecuencias superiores a 1 GHz, con los sistemas de relevadores radioeléctricos con visibilidad directa	4-9/1005	AR95
SF	406-8	Maximum equivalent isotropically radiated power of radio-relay system transmitters operating in the frequency bands shared with the fixed-satellite service	Valeur maximale de la puissance isotrope rayonnée équivalente des émetteurs de faisceaux hertziens fonctionnant dans des bandes de fréquences partagées avec le service fixe par satellite	Valor máximo de la potencia isótropa radiada equivalente de los transmisores de sistemas de relevadores radioeléctricos que comparten bandas de frecuencias con el servicio fijo por satélite	SF	1994

SF	558-2	Maximum allowable values of interference from terrestrial radio links to systems in the fixed-satellite service employing 8-bit PCM encoded telephony and sharing the same frequency bands	Valeurs maximales admissibles du brouillage causé par des faisceaux hertziens de Terre à des systèmes du service fixe par satellite transmettant la téléphonie avec codage MIC à 8 bits et partageant les mêmes bandes de fréquences	Valores máximos permisibles de interferencia producida por radioenlaces terrenales a sistemas del servicio fijo por satélite, utilizados para la transmisión de telefonía codificada por MIC de 8 bits y que comparten las mismas bandas de frecuencias	SF	1994
SF	615	Maximum allowable values of interference from the fixed-satellite service into terrestrial radio-relay systems which may form part of an ISDN and share the same frequency band below 15 GHz	Valeurs maximales admissibles des brouillages causés par les systèmes du service fixe par satellite aux faisceaux hertziens numériques de Terre qui pourraient faire partie du RNIS et utilisant en partage la même bande de fréquences au-dessous de 15 GHz	Valores máximos admisibles de la interferencia producida por sistemas del servicio fijo por satélite a los sistemas terrenales de relevadores radioeléctricos que pueden formar parte de una RDSI y que comparten las mismas bandas de frecuencias por debajo de 15 GHz	SF	1994
SF	674	Power flux-density values to facilitate the application of Article 14 for FSS in relation to the fixed-satellite service in the 11.7-12-2 GHz band in Region 2	Valeurs de puissance surfacique propres à faciliter l'application de l'article 14 lorsque le service fixe par satellite affecte le service fixe dans la bande 11,7 à 12,2 GHz dans la Région 2	Valores de densidad de flujo de potencia para facilitar la aplicación del artículo 14 en el caso en que el servicio fijo por satélite afecte al servicio fijo en la banda de 11,7-12,2 GHz en la Región 2	SF	1994
SF	675-3	Calculation of the maximum power density (averaged over 4 kHz) of an angle-modulated carrier	Calcul de la densité maximale de puissance (moyenne dans une bande de 4 kHz) d'une onde porteuse à modulation angulaire	Cálculo de la densidad de potencia máxima (valor medio en una banda de 4 kHz) de una portadora con modulación angular	SF	1994
SF	765	Intersection of radio-relay antenna beams with orbits used by space stations in the fixed-satellite service	Intersection des lobes des antennes de faisceaux hertziens avec les orbites des stations spatiales du service fixe par satellite	Intersección de haces de antenas de sistemas de relevadores radioeléctricos con las órbitas de las estaciones espaciales del servicio fijo por satélite	SF	1994
SF	766	Methods for determining the effects of interference on the performance and the availability of terrestrial radio-relay systems and systems in the fixed-satellite service	Méthodes de détermination des effets du brouillage sur la qualité et la disponibilité des faisceaux hertziens de Terre et des systèmes du service fixe par satellite	Métodos para determinar los efectos de la interferencia en la calidad de funcionamiento y la disponibilidad de los sistemas de relevadores radioeléctricos terrenales y en los sistemas del servicio fijo por satélite	SF	1994
SF	1004	Maximum equivalent isotropically radiated power transmitted towards the horizon by earth stations of the fixed-satellite service sharing frequency bands with the fixed service	Puissance isotrope rayonnée équivalente maximale émise en direction de l'horizon par des stations terriennes du service fixe par satellite utilisant des bandes de fréquences en partage avec le service fixe	Valor máximo de la potencia isótropa radiada equivalente transmitida hacia el horizonte por las estaciones terrenas del servicio fijo por satélite que comparten bandas de frecuencias con el servicio fijo	SF	1994
SF	1005	Sharing between the fixed service and the fixed-satellite service with bidirectional usage in bands above 10 GHz currently unidirectionally allocated	Partage de fréquences entre le service fixe et le service fixe par satellite avec utilisation bidirectionnelle dans les bandes supérieures à 10 GHz actuellement attribuées pour utilisation unidirectionnelle	Compartición de frecuencias entre el servicio fijo y el servicio fijo por satélite con utilización bidireccional en bandas por encima de 10 GHz actualmente atribuidas para funcionamiento unidireccional	SF	1994

SF	1006	Determination of the interference potential between earth stations of the fixed-satellite service and stations in the fixed service	Détermination des possibilités de brouillage entre stations terriennes du service fixe par satellite et stations du service fixe	Determinación de la interferencia potencial entre estaciones terrenas del servicio fijo por satélite y estaciones del servicio fijo	SF	1994
SF	1008-1	Possible use by space stations in the fixed-satellite service of orbits slightly inclined with respect to the geostationary-satellite orbit in bands shared with the fixed service	Possibilités d'utilisation par des stations spatiales du service fixe par satellite d'orbites légèrement inclinées par rapport à l'orbite des satellites géostationnaires dans des bandes utilisées en partage avec le service fixe	Posible utilización por las estaciones espaciales del servicio fijo por satélite de órbitas ligeramente inclinadas con respecto a la órbita de los satélites geoestacionarios en bandas compartidas con el servicio fijo	4-9/1006	AR95
SF	1193	Carrier-to-interference calculations between earth stations in the fixed-satellite service and radio-relay systems	Calculs des rapports porteuse sur brouillage entre les stations terriennes du service fixe par satellite et les faisceaux hertziens	Cálculo de la relación portadora/interferencia entre estaciones terrenas del servicio fijo por satélite y sistemas de radioenlaces	4-9/1007	AR95

NOC	SUP	MOD	NEW	Total in force
13	0	2	1	16

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Series/Série/Serie

BS

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
BS	48-2	Choice of frequency for sound-broadcasting in the Tropical Zone	Choix des fréquences pour la radiodiffusion sonore dans la Zone tropicale	Elección de frecuencias para la radiodifusión en la Zona Tropical	BS	1994
BS	80-3	Transmitting antennas in HF broadcasting	Antennes d'émission en radiodiffusion (B.dam)	Antenas de emisión para radiodifusión en ondas decamétricas	BS	1994
BS	139-3	Transmitting antennas for sound broadcasting in the Tropical Zone	Antennes d'émission pour la radiodiffusion sonore dans la Zone tropicale	Antenas transmisoras para la radiodifusión en la Zona Tropical	BS	1994
BS	215-2	Maximum transmitter powers for broadcasting in the Tropical Zone	Puissances maximales des émetteurs de radiodiffusion sonore dans la Zone tropicale	Límites de potencia de los transmisores de radiodifusión sonora en la Zona Tropical	BS	1994
BS	216-2	Protection ratio for sound broadcasting in the Tropical Zone	Rapport de protection pour la radiodiffusion sonore dans la Zone tropicale	Relación de protección para la radiodifusión sonora en la Zona Tropical	BS	1994
BS	411-4	Fading allowances in HF broadcasting	Marges contre les évanouissements en radiodiffusion (B.dam)	Márgenes contra los desvanecimientos en radiodifusión (ondas decamétricas)	BS	1994
BS	412-7	Planning standards for FM sound broadcasting at VHF	Normes de planification pour la radiodiffusion sonore à modulation de fréquence en ondes métriques	Normas para la planificación de la radiodifusión sonora con modulación de frecuencia en ondas métricas	10/1006	AR95
BS	415-2	Minimum performance specifications for low-cost sound-broadcasting receivers	Spécifications des caractéristiques minimales des récepteurs de radiodiffusion sonore à prix modique	Especificaciones mínimas de los receptores de radiodifusión sonora de precio módico	BS	1994
BS	450-2	Transmission standards for FM sound broadcasting at VHF	Normes d'émission pour la radiodiffusion sonore à modulation de fréquence en ondes métriques	Normas de transmisión para radiodifusión sonora con modulación de frecuencia en ondas métricas	10/1007	AR95
BS	467	Technical characteristics to be checked for frequency-modulation stereophonic broadcasting. *Pilot-tone system*	Caractéristiques techniques des émissions de radiodiffusion stéréophonique à modulation de fréquence qu'il convient de contrôler. *Système à fréquence pilote*	Características técnicas de las transmisiones de radiodifusión estereofónica con modulación de frecuencia que han de ser controladas. *Sistema de frecuencia piloto*	BS	1994
BS	468-4	Measurement of audio-frequency noise voltage level in sound broadcasting	Mesure du niveau de tension des bruits audiofréquence en radiodiffusion sonore	Medición del nivel de tensión del ruido de audiofrecuencia en radiodifusión sonora	BS	1994
BS	498-2	Ionospheric cross-modulation in the LF and MF broadcasting bands	Transmodulation ionosphérique en radiodiffusion en ondes kilométriques (B.km) et hectométriques (B.hm)	Transmodulación ionosférica en las bandas de radiodifusión de ondas kilométricas y hectométricas	BS	1994

BS	559-2	Objective measurement of radio-frequency protection ratios in LF, MF and HF broadcasting	Mesure objective des rapports de protection RF en radiodiffusion (B.km, B.hm et B.dam)	Medición objetiva de las relaciones de protección en radiofrecuencia en las bandas de radiodifusión por ondas kilométricas, hectométricas y decamétricas	BS	1994
BS	560-3	Radio-frequency protection ratios in LF, MF, and HF broadcasting	Rapports de protection RF en radiodiffusion en ondes kilométriques, hectométriques et décamétriques	Relaciones de protección RF en radiodifusión (ondas kilométricas, hectométricas y decamétricas)	BS	1994
BS	561-2	Definitions of radiation in LF, MF and HF broadcasting bands	Définitions du rayonnement en radiodiffusion (B.km, B.hm et B.dam)	Definiciones de la radiación en radiodifusión (ondas kilométricas, hectométricas y decamétricas)	BS	1994
BS	562-3	Subjective assessment of sound quality	Evaluation subjective de la qualité du son	Evaluación subjetiva de la calidad del sonido	BS	1994
BS	597-1	Channel spacing for sound broadcasting in band 7 (HF)	Espacement des canaux pour la radiodiffusion sonore dans la bande 7 (ondes décamétriques)	Separación entre canales para la radiodifusión sonora en la banda 7 (ondas decamétricas)	BS	1994
BS	598-1	Factors influencing the limits of amplitude-modulation sound-broadcasting coverage in band 6 (MF)	Facteurs influençant la couverture en radiodiffusion sonore à modulation d'amplitude dans la bande 6 (ondes hectométriques)	Factores que influyen en los límites de la zona de cobertura en radiodifusión sonora con modulación de amplitud en la banda 6 (ondas hectométricas)	BS	1994
BS	599	Directivity of antennas for the reception of sound broadcasting in band 8 (VHF)	Directivité des antennes de réception de radiodiffusion sonore dans la bande 8 (ondes métriques)	Directividad de las antenas de recepción en radiodifusión sonora en la banda 8 (ondas métricas)	BS	1994
BS	638	Terms and definitions used in frequency planning for sound broadcasting	Termes et définitions utilisés dans la planification des fréquences pour la radiodiffusion sonore et télévisuelle	Términos y definiciones utilizados en la planificación de frecuencias para radiodifusión sonora	BS	1994
BS	639	Necessary bandwidth of emission in LF, MF and HF broadcasting	Largeur de bande nécessaire à l'émission pour la radiodiffusion à ondes kilométriques, hectométriques et décamétriques	Anchura de banda necesaria para la emisión en radiodifusión (ondas kilométricas, hectométricas y decamétricas)	BS	1994
BS	640-2	Single-sideband (SSB) system for HF broadcasting	Système à bande latérale unique (BLU) en radiodiffusion à ondes décamétriques	Sistema de banda lateral única (BLU) para la radiodifusión en ondas decamétricas	BS	1994
BS	641	Determination of radio-frequency protection ratios for frequency-modulated sound broadcasting	Détermination des rapports de protection RF en radiodiffusion sonore à modulation de fréquence	Determinación de la relación de protección en radiofrecuencia en la radiodifusión sonora con modulación de frecuencia	BS	1994
BS	642-1	Limiters for high-quality sound-programme signals	Limiteurs pour signaux de programmes radiophoniques de haute qualité	Limitadores para las señales de programas radiofónicos de alta calidad	BS	1994
BS	643-2	System for automatic tuning and other applications in FM radio receivers for use with the pilot-tone system	Système destiné à l'accord automatique ainsi qu'à d'autres fonctions dans les récepteurs de radiodiffusion MF et utilisable avec le système à fréquence pilote	Sistema para la sincronización automática y otras aplicaciones en los receptores radiofónicos con modulación de frecuencia para su utilización con el sistema de frecuencia piloto	10/1008	AR95
BS	644-1	Audio quality parameters for the performance of a high-quality sound-programme transmission chain	Caractéristiques de qualité en audiofréquence applicables à une chaîne de transmission radiophonique de haute qualité	Parámetros de calidad en audiofrecuencia de una cadena de transmisión radiofónica de alta calidad	BS	1994

BS	645-2*	Test signals and metering to be used on international sound-programme connections	Signaux d'essai et instruments de mesure pour les liaisons radiophoniques internationales	Señales de prueba y métodos de medida para los enlaces radiofónicos internacionales	BS	1994
BS	646-1	Source encoding for digital sound signals in broadcasting studios	Codage à la source des signaux audionumériques dans les studios de radiodiffusion	Codificación en la fuente de las señales de sonido digitales en los estudios de producción de radiodifusión	BS	1994
BS	647-2	A digital audio interface for broadcasting studios	Interface audionumérique pour les studios de radiodiffusion	Interfaz audio digital para los estudios de radiodifusión	BS	1994
BS	702-1	Synchronization and multiple frequency use per programme in HF broadcasting	Synchronisation et utilisation de fréquences multiples par programme dans la radiodiffusion en ondes décamétriques	Sincronización y utilización de múltiples frecuencias por programa en la radiodifusión por ondas decamétricas	BS	1994
BS	703	Characteristics of AM sound broadcasting reference receivers for planning purposes	Caractéristiques de récepteurs de référence de radiodiffusion sonore à modulation d'amplitude à des fins de planification	Características de los receptores de referencia de radiodifusión sonora con modulación de amplitud para fines de planificación	BS	1994
BS	704	Characteristics of FM sound broadcasting reference receivers for planning purposes	Caractéristiques des récepteurs de référence de radiodiffusion sonore en modulation de fréquence à des fins de planification	Características de los receptores de referencia de radiodifusión sonora con modulación de frecuencia para fines de planificación	BS	1994
BS	705-1	HF transmitting and receiving antennas characteristics and diagrams	Caractéristiques et diagrammes de rayonnement des antennes d'émission et de réception en ondes décamétriques	Características y diagramas de las antenas transmisoras y receptoras en ondas decamétricas	10/1005**	AR95
BS	706-1	Data system in monophonic AM sound broadcasting (AMDS)	Système de diffusion de données en radiodiffusion sonore monophonique en modulation d'amplitude (AMDS)	Sistema de transmisión de datos en radiodifusión sonora monofónica con modulación de amplitud (AMDS)	BS	1994
BS	707-2	Transmission of multi-sound in terrestrial television systems PAL B, G, H, and I, and SECAM L	Emission de plusieurs voies son dans les systèmes de télévision de Terre PAL B, G, H et I et SECAM L	Transmisión de varios canales de sonido en sistemas de televisión terrenales PAL B, G, H, I y SECAM L	10/1009	AR95
BS	708	Determination of the electro-acoustical properties of studio monitor headphones	Détermination des propriétés électroacoustiques des casques de contrôle pour studio	Determinación de las características electroacústicas de los auriculares de control utilizados en estudios	BS	1994
BS	773	Radio-frequency protection ratios required by FM sound broadcasting in the band between 87.5 MHz and 108 MHz against interference from D/SECAM television transmissions	Rapports de protection RF nécessaires pour la radiodiffusion sonore MF dans la bande 87,5 à 108 MHz, relatifs aux brouillages dus aux émissions de télévision D/SECAM	Relaciones de protección en radiofrecuencia para la radiodifusión sonora MF en la banda 87,5 MHz-108 MHz contra la interferencia procedente de emisiones de televisión D/SECAM	BS	1994

* Radiocommunication Study Group 10 and Telecommunication Standardization Studgy Group 9 will coordinate the future development of this Recommendation.
La Commission d'études 10 des radiocommunications et la Commission d'études 9 de la Normalisation des télécommunications coordonneront le future développement de cette Recommandation.
La Comisión de Estudio 10 de Radiocomunicaciones y la Comisión de Estudio 9 de Normalización de las Telecomunicaciones coordinarán el futuro desarrollo de esta Recomendación.

** To be published separately, with diskette computer programme./A publier séparément, accompagnée d'un programme informatique sur disquette./Se publicará por separado con un programa informático en disquete.

BS	774-2	Service requirements for digital sound broadcasting to vehicular, portable and fixed receivers using terrestrial transmitters in the VHF/UHF bands	Exigences de service pour la radiodiffusion sonore numérique à destination de récepteurs fixes, portatifs ou placés à bord de véhicules au moyen d'émetteurs de Terre en ondes métriques et décimétriques	Necesidades del servicio relativo a la radiodifusión sonora digital para receptores a bordo de vehículos, portátiles y fijos, mediante transmisores terrenales, en las bandas de ondas métricas y decimétricas	10/1010	AR95
BS	775-1	Multi-channel stereophonic sound system with and without accompanying picture	Système de son stéréophonique multicanal avec ou sans image associée	Sistema de sonido estereofónico multicanal con y sin acompañamiento de imagen	BS	1994
BS	776	Format for user data channel of the digital audio interface	Format de la voie de données d'utilisateur dans l'interface audionumérique	Formato para el canal de datos de usuario de la interfaz audio digital	BS	1994
BS	1114-1	Systems for terrestrial digital sound broadcasting to vehicular, portable and fixed receivers in the frequency range 30-3 000 MHz	Systèmes de radiodiffusion sonore numérique de Terre à destination de récepteurs fixes, portatifs ou placés à bord de véhicules, fonctionnant dans la gamme de fréquences de 30-3 000 MHz	Sistemas de radiodifusión sonora digital terrenal para receptores de vehículos, portátiles y fijos en la gama de frecuencias 30-3 000 MHz	10/1011	AR95
BS	1115	Low bit-rate audio coding	Codage audio à faible débit binaire	Codificación del sonido a baja velocidad binaria	BS	1994
BS	1116	Methods for the subjective assessment of small impairments in audio systems including multichannel sound systems	Méthodes d'évaluation subjective des dégradations faibles dans les systèmes audio y compris les systèmes sonores multivoies	Métodos para la evaluación subjetiva de pequeñas degradaciones en los sistemas de audio incluyendo los sistemas de sonido multicanal	BS	1994
BS	1194	System for multiplexing FM sound broadcasts with a sub-carrier data channel having a relatively large transmission capacity for stationary and mobile reception	Système de multiplexage de signaux de radiodiffusion sonore MF avec une voie de données sur sous-porteuse ayant une grande capacité de transmission pour réception fixe et mobile	Sistema de multiplexión de emisiones de radiodifusión sonora con modulación de frecuencia con canal de datos en subportadora y capacidad de transmisión relativamente elevada para recepción fija y móvil	10/1012 + Corr 1	AR95
BS	1195	Transmitting antenna characteristics at VHF and UHF	Caractéristiques des antennes d'emission en ondes métriques et décimétriques	Características de antenas transmisoras en ondas métricas y decimétricas	10/1013	AR95
BS	1196	Audio coding for digital terrestrial television broadcasting	Codage audio pour la radiodiffusion de télévision numérique par voie de Terre	Codificación de audio para la radiodifusión de la televisión terrenal digital	10/1014, 10/1001	AR95

NOC	SUP	MOD	NEW	Total in force
36	0	7	3	46

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Series/Série/Serie

BT

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
BT	266-1	Phase pre-correction of television transmitters	Précorrection de phase des émetteurs de télévision	Precorrección de fase de los transmisores de televisión	BT	1994
BT	417-4	Minimum field strengths for which protection may be sought in planning a television service	Valeurs minimales du champ pour lesquelles on peut être amené à prévoir une protection lorsqu'on établit les plans d'un service de télévision	Intensidad de campo mínima que puede ser necesario proteger al establecer los planes de un servicio de televisión	BT	1994
BT	419-3	Directivity and polarization discrimination of antennas in the reception of television broadcasting	Directivité et discrimination des polarisations des antennes de réception en radiodiffusion télévisuelle	Directividad y discriminación por polarización de las antenas para recepción en la radiodifusión de televisión	BT	1994
BT	470-4	Television systems	Systèmes de télévision	Sistemas de televisión	11/1005	AR95
BT	471-1	Nomenclature and description of colour bar signals	Nomenclature et description des signaux de barre de couleur	Nomenclatura y descripción de las señales de barra de color	BT	1994
BT	472-3	Video-frequency characteristics of a television system to be used for the international exchange of programmes between countries that have adopted 625-line colour or monochrome systems	Caractéristiques en vidéofréquence d'un système de télévision à utiliser pour l'échange international des programmes entre les pays qui ont adopté des systèmes en couleur ou monochromes à 625 lignes	Características en videofrecuencia de un sistema de televisión para intercambio internacional de programas entre países que han adoptado sistemas en blanco y negro o en color de 625 líneas	BT	1994
BT	500-7	Methodology for the subjective assessment of the quality of television pictures	Méthodologie d'évaluation subjective de la qualité des images de télévision	Métodología para la evaluación subjetiva de la calidad de las imágenes de televisión	11/1030	AR95
BT	565	Protection ratios for 625-line television against radionavigation transmitters operating in the shared bands between 582 and 606 MHz	Rapports de protection de la télévision à 625 lignes contre les émetteurs de radionavigation fonctionnant dans les bandes partagées entre 582 et 606 MHz	Relaciones de protección para la televisión de 625 líneas contra los transmisores de radionavegación que trabajan en la banda compartida comprendida entre 582 y 606 MHz	BT	1994
BT	601-5	Studio encoding parameters of digital television for standard 4:3 and wide-screen 16:9 aspect ratios	Paramètres de codage en studio de la télévision numérique pour des formats standards d'image 4:3 (normalisé) et 16:9 (écran panoramique)	Parámetros de codificación de televisión digital para estudios con formatos de imagen normal 4:3 de pantalla ancha 16:9	11/1015	AR95
BT	653-2	Teletext systems	Systèmes de télétexte	Sistemas de teletexto	BT	1994
BT	654	Subjective quality of television pictures in relation to the main impairments of the analogue composite television signal	Qualité subjective des images de télévision en relation avec les principales dégradations du signal de télévision composite analogique	Calidad subjetiva de las imágenes de televisión en relación con las principales degradaciones de la señal de televisión compuesta analógica	BT	1994

BT	655-4	Radio-frequency protection ratios for AM vestigial sideband terrestrial television systems	Rapports de protection en radiofréquence pour les systèmes de télévision de Terre à modulation d'amplitude à bande latérale résiduelle	Relaciones de protección en radiofrecuencia para sistemas de televisión terrenal con modulación de amplitud de banda lateral residual	11/1029	AR95
BT	656-3	Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:2:2 level of Recommendation ITU-R BT.601 [Part A]	Interfaces pour les signaux vidéo numériques en composantes dans les systèmes de télévision à 525 lignes et à 625 lignes fonctionnant au niveau 4:2:2 de la Recommandation UIT-R BT.601 [Partie A]	Interfaces para las señales de vídeo con componentes digitales en sistemas de televisión de 525 líneas y 625 líneas que funcionan en el nivel 4:2:2 de la Recomendación UIT-R BT.601 [Parte A]	11/1016	AR95
BT	709-2	Parameter values for the HDTV standards for production and international programme exchange	Valeurs des paramètres des normes de TVHD pour la production et l'échange international des programmes	Valores de los parámetros de la norma de TVAD para la producción y el intercambio internacional de programas	11/1006	AR95
BT	710-2	Subjective assessment methods for image quality in high-definition television	Méthodes d'évaluation subjective de la qualité d'image de télévision à haute définition	Métodos de evaluación subjetiva de la calidad de las imágenes en sistemas de televisión de alta definición	BT	1994
BT	711-1	Synchronizing reference signals for the component digital studio	Signaux de synchronisation de référence pour studio numérique en composantes	Señales de sincronización de referencia para los estudios de televisión con componentes digitales	BT	1994
BT	796	Parameters for enhanced compatible coding systems based on 625-line PAL and SECAM television systems	Caractéristiques des systèmes de codage améliorés compatibles fondés sur les systèmes de télévision PAL et SECAM 625 lignes	Parámetros para sistemas de codificación compatible mejorados basados en los sistemas de televisión PAL y SECAM de 625 líneas	BT	1994
BT	797-1	Parameters for 4:3 enhanced television systems that are NTSC-compatible	Caractéristiques des systèmes de télévision améliorée de format 4:3 compatibles avec le NTSC	Parámetros de sistemas de televisión mejorada de formato 4:3 que son compatibles con el sistema NTSC	BT	1994
BT	798-1	Digital terrestrial television broadcasting in the VHF/UHF bands	Radiodiffusion télévisuelle numérique de Terre dans les bandes d'ondes métriques et décimétriques	Radiodifusión terrenal de TV digital en las bandas de ondas métricas y decimétricas	BT	1994
BT	799-2	Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:4:4 level of Recommendation ITU-R BT.601 [Part A]	Interfaces pour les signaux vidéo numériques en composantes dans les systèmes de télévision à 525 lignes et à 625 lignes fonctionnant au niveau 4:4:4 de la Recommandation UIT-R BT.601 [Partie A]	Interfaces para las señales de vídeo con componentes digitales en sistemas de televisión de 525 líneas y 625 líneas que funcionan en el nivel 4:4:4 de la Recomendación UIT-R BT.601 [Parte A]	11/1017	AR95
BT	800-2	User requirements for the transmission through contribution and primary distribution networks of digital television signals defined according to the 4:2:2 standard of Recommendation ITU-R BT.601 [Part A]	Besoins des usagers pour la transmission sur des réseaux de contribution et de distribution primaire des signaux de télévision numérique conformes à la norme 4:2:2 de la Recommandation UIT-R BT.601 [Partie A]	Requisitos de usuario para la transmisión por redes de contribución y de distribución primaria de señales digitales de televisión definidas conforme a la norma 4:2:2 de la Recomendación UIT-R BT.601 [Parte A]	11/1018	AR95
BT	801-1	Test signals for digitally encoded colour television signals conforming with Recommendations ITU-R BT.601 [Part A] and ITU.R BT.656	Signaux d'essai pour signaux de télévision couleur codés en numérique et conformes aux Recommandations UIT-R BT.601 [Partie A] et UIT-R BT.656	Señales de prueba para señales de televisión en color con codificación digital conformes a las Recomendaciones UIT-R BT.601 [Parte A] y UIT-R BT.656	11/1021	AR95

BT	802-1	Test pictures and sequences for subjective assessments of digital codecs conveying signals produced according to Recommendation ITU-R BT.601	Images et séquences d'essai pour l'évaluation subjective des codecs numériques véhiculant des signaux produits conformément à la Recommandation UIT-R BT.601	Imágenes y secuencias de prueba para las evaluaciones subjetivas de códecs digitales que cursan señales producidas conforme a la Recomendación UIT-R BT.601	BT	1994
BT	803	The avoidance of interference generated by digital television studio equipment	Mesures visant à éviter les brouillages produits par l'équipement de studio de télévision numérique	Medidas para evitar la interferencia generada por los equipos de televisión digital de estudio	BT	1994
BT	804	Characteristics of TV receivers essential for frequency planning with PAL/SECAM/NTSC television systems	Caractéristiques des récepteurs de télévision essentielles pour la planification des fréquences avec les systèmes de télévision PAL/SECAM/NTSC	Características de los receptores de televisión que resultan esenciales para la planificación de frecuencias de los sistemas de televisión PAL/SECAM/NTSC	BT	1994
BT	805	Assessment of impairment caused to television reception by a wind turbine	Evaluation des dégradations de la réception de la télévision dues aux éoliennes	Efecto de la degradación causada a la recepción de televisión por una turbina eólica	BT	1994
BT	806	Common channel raster for the distribution of D-MAC, D2-MAC and HD-MAC signals in collective antenna and cable distribution systems	Gabarit de canal commun pour la distribution des signaux D-MAC, D2-MAC et HD-MAC sur les systèmes d'antennes collectives et de distribution par câble	Canalización común para la distribución de señales D-MAC, D2-MAC y HD-MAC en sistemas de antenas colectivas y de distribución por cable	BT	1994
BT	807	Reference model for data broadcasting	Modèle de référence pour la radiodiffusion de données	Modelo de referencia para la radiodifusión de datos	BT	1994
BT	808	The broadcasting of time and date information in coded form	Radiodiffusion d'informations codées d'heure et de date	Radiodifusión de información codificada de hora y fecha	BT	1994
BT	809	Programme delivery control (PDC) system for video recording	Système de commande de messagerie de programmes (PDC) pour l'enregistrement vidéo	Sistema de control de entrega de programas (CEP) para grabaciones de vídeo	BT	1994
BT	810	Conditional-access broadcasting systems	Systèmes de radiodiffusion à accès conditionnel	Sistemas de radiodifusión de acceso condicional	BT	1994
BT	811-1	The subjective assessment of enhanced PAL and SECAM systems	Evaluation subjective des systèmes de télévision PAL et SECAM améliorés	Evaluación subjetiva de los sistemas PAL y SECAM mejorados	BT	1994
BT	812	Subjective assessment of the quality of alphanumeric and graphic pictures in Teletext and similar services	Evaluation subjective de la qualité des images alphanumériques et graphiques en télétexte et dans des services similaires	Evaluación subjetiva de la calidad de las imágenes alfanuméricas y gráficas en servicios de teletexto y similares	BT	1994
BT	813	Methods for objective picture quality assessment in relation to impairments from digital coding of television signals	Méthodes d'évaluation objective de la qualité de l'image en fonction des dégradations qui résultent du codage numérique des signaux de télévision	Métodos de evaluación de la calidad de la imagen en relación con las degradaciones debidas a la codificación digital de las señales de televisión	BT	1994
BT	814-1	Specifications and alignment procedures for setting of brightness and contrast of displays	Spécifications et méthodes de réglage de la brillance et du contraste des dispositifs de visualisation	Especificaciones y procedimientos de ajuste para establecer el brillo y el contraste en las pantallas	BT	1994
BT	815-1	Specification of a signal for measurement of the contrast ratio of displays	Spécification d'un signal de mesure du contraste des dispositifs de visualisation	Especificación de una señal para medir la relación de contraste de las pantallas	BT	1994

BT	1117-1	Studio format parameters for enhanced 16:9 625-line television systems (D-and D2-MAC, PALplus, enhanced SECAM)	Caractéristiques du format studio pour les systèmes de télévision améliorée à 625 lignes de format 16:9 (D-MAC et D2-MAC, PALplus, Super SECAM)	Parámetros del formato de estudio para los sistemas de televisión mejorada 16:9 de 625 líneas (D-MAC y D2-MAC, PALplus, SECAM mejorado)	11/1007	AR95
BT	1118	Enhanced compatible widescreen television based on conventional television systems	Télévision compatible améliorée à écran large utilisant des systèmes de télévision classiques	Televisión mejorada compatible de pantalla ancha basada en los sistemas de televisión convencionales	BT	1994
BT	1119-1	Widescreen signalling for broadcasting (*Signalling for widescreen and other enhanced television parameters*)	Signalisation «écran large» pour la radiodiffusion (*signalisation pour les caractéristiques «écran large» ou autres de télévision améliorée*)	Señalización de pantalla ancha para la radiodifusión (*Señalización para pantalla ancha y otros parámetros de la televisión mejorada*)	11/1008	AR95
BT	1120	Digital interfaces for 1125/60/2:1 and 1250/50/2:1 HDTV studio signals	Interfaces numériques pour les signaux de TVHD en studio 1125/60/2:1 et 1250/50/2:1	Interfaces digitales para las señales de estudio de TVAD de los sistemas 1125/60/2:1 y 1250/50/2:1	BT	1994
BT	1121-1	User requirements for the transmission through contribution and primary distribution network of digital HDTV signals	Besoins des usagers pour la transmission sur des réseaux de contribution ou de distribution primaire de signaux de TVHD numériques	Requisitos de usuario para la transmisión de señales digitales de televisión de alta definición a través de redes de contribución y de distribución primaria	11/1019	AR95
BT	1122-1	User requirements for emission and secondary distribution systems for SDTV, HDTV and hierarchical coding schemes	Besoins des usagers pour les systèmes d'émission et de distribution secondaire de TVDN, TVHD et les schémas de codage hiérarchique	Requisitos de usuario para los sistemas de emisión y de distribución secundaria con esquemas de codificación para televisión convencional, TVAD y televisión jerárquica	11/1020	AR95
BT	1123	Planning methods for 625-line terrestrial television in VHF/UHF bands	Méthodes de planification pour la télévision de Terre (systèmes à 625 lignes) dans les bandes métriques et decimétriques	Métodos de planificación para la televisión terrenal de 625 líneas en las bandas de ondas métricas (VHF) y decimétricas (UHF)	BT	1994
BT	1124-1	Reference signals for ghost cancelling in television	Signaux de référence pour l'annulation d'images fantômes en télévision	Señales de referencia para la compensación de imágenes fantasma en la televisión	11/1001	AR-95
BT	1125	Basic objectives for the planning and implementation of digital terrestrial television broadcasting systems	Objectifs fondamentaux de la planification et de la mise en oeuvre des systèmes de radiodiffusion de télévision numérique de Terre	Objetivos básicos para la planificación y realización de sistemas de radiodifusión terrenal de televisión digital	BT	1994
BT	1126	Data transmission protocols and transmission control scheme for data broadcasting systems using a data channel in satellite television broadcasting	Protocoles de transmission de données et schéma de contrôle de la transmission pour les systèmes de radiodiffusion de données utilisant un canal de données de radiodiffusion télévisuelle par satellite	Protocolos de transmisión de datos y métodos de control de la transmisión para los sistemas de radiodifusión de datos que utilizan un canal de datos de radiodifusión de televisión por satélite	BT	1994
BT	1127	Relative quality requirements of television broadcast systems	Exigences de qualité relative des systèmes de radiodiffusion télévisuelle	Requisitos en materia de calidad relativa de los sistemas de televisión	BT	1994
BT	1128-1	Subjective assessment of conventional television systems	Évaluation subjective des systèmes de télévision classiques	Evaluación subjetiva de los sistemas de televisión convencional	11/1031	AR95
BT	1129-1	Subjective assessment of standard definition digital television (SDTV) systems	Évaluation subjective des systèmes de télévision numérique à définition standard (TVDS)	Evaluación subjetiva de sistemas de televisión digital con definición normalizada	11/1032	AR95

BT	1197	Enhanced wide-screen PAL TV transmission system (the PALplus system)	Système PAL de télévision améliorée à l'écran large (système PALplus)	Sistema de transmisión de televisión PAL de pantalla ancha mejorada (sistema PALplus)	11/1009	AR95
BT	1198	Stereoscopic television based on R- and L-eye two channel signals	Télévision stéréoscopique basée sur deux voies oeil droit et oeil gauche	Televisión estereoscópica basada en dos señales de canal de ojo derecho y ojo izquierdo	11/1010	AR95
BT	1199	Use of bit-rate reduction in the HDTV studio environment	Utilisation de la réduction du débit binaire dans l'environnement d'un studio de TVHD	Empleo de reducción de la velocidad binaria en el entorno del estudio de televisión de alta definición	11/1011	AR95
BT	1200	Target standard for digital video systems for the studio and for international programme exchange	Norme ciblée relative aux systèmes vidéo numériques utilisés en studio et pour l'échange international de programmes	Norma objetivo para los sistemas de vídeo digitales destinados a los estudios y al intercambio internacional de programas	11/1012	AR95
BT	1201	Extremely high resolution imagery	Imagerie à ultra-haute résolution	Imagenes de muy alta resolución	11/1013	AR95
BT	1202	Displays for future television systems	Écrans pour les futurs systèmes de télévision	Pantallas para futuros sistemas de televisión	11/1014	AR95
BT	1203	User requirements for generic bit-rate reduction coding of digital TV signals (SDTV, EDTV and HDTV) for an end-to-end television system	Besoins des usagers en matière de systèmes génériques de codage à réduction de débit binaire des signaux de télévision numérique (TVDN, TVDA, TVHD) pour un système de télévision de bout en bout	Requisitos de usuario para la codificación genérica con reducción de velocidad binaria de señales digitales de televisión (convencional, con definición ampliada y de alta definición) para un sistema de televisión de extremo a extremo	11/1022	AR95
BT	1204	Measuring methods for digital video equipment with analogue input/output	Méthodes de mesure pour des équipements vidéo numériques à entrée/sortie analogiques	Métodos de medición de equipos videodigitales con entrada/salida analógica	11/1023	AR95
BT	1205	User requirements for the quality of baseband SDTV and HDTV signals when transmitted by digital satellite news gathering (SNG)	Besoins des usagers concernant la qualité des signaux de TVDN et de TVHD en bande de base transmis par des moyens de reportages d'actualités par satellite (RAS) numériques	Requisitos de usuario para la calidad de las señales de televisión de definición convencional y de alta definición en banda base transmitidas mediante periodismo electrónico por satélite digital (SNG)	11/1024	AR95
BT	1206	Spectrum shaping limits for digital terrestrial television broadcasting	Limites de mise en forme du spectre pour la radiodiffusion télévisuelle numérique de Terre	Limites de conformación del espectro para la radiodifusión de televisión terrenal	11/1025	AR95
BT	1207	Data access methods for digital terrestrial television broadcasting	Méthodes d'accès aux données pour la radiodiffusion télévisuelle numérique de Terre	Métodos de acceso a las señales de radiodifusión de televisión terrenal digital	11/1026	AR95

BT	1208	Video coding for digital terrestrial television broadcasting	Codage vidéo pour la radiodiffusion télévisuelle numérique de Terre	Codificación vídeo para la radiodifusión de televisión terrenal digital	11/1027	AR95
BT	1209	Service multiplex methods for digital terrestrial television broadcasting	Méthodes de multiplexage des services pour la radiodiffusion de télévision numérique de Terre	Métodos múltiplex de servicio para la radiodifusión de televisión terrenal digital	11/1028	AR95
BT	1210	Test materials to be used in subjective assessment	Images d'essai à utiliser pour les évaluations subjectives	Materiales de prueba a utilizar en las evaluaciones subjetivas	11/1033	AR95

NOC	SUP	MOD	NEW	Total in force
34	0	15	14	63

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Series/Série/Serie

BO

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
BO	566-3	Terminology relating to the use of space communication techniques for broadcasting	Terminologie relative aux radiocommunications spatiales pour la radiodiffusion	Terminología relativa al empleo de técnicas de radiocomunicaciones espaciales para la radiodifusión	BO	1994
BO	600-1	Standardized set of test conditions and measurement procedures for the subjective and objective determination of protection ratios for television in the terrestrial broadcasting and the broadcasting-satellite services	Ensemble normalisé et conditions d'essai et de méthodes de mesure pour la détermination subjective et objective des rapports de protection en télévision dans les services de radiodiffusion de Terre et de radiodiffusion par satellite	Serie normalizada de condiciones de prueba y procedimientos de medida para la determinación subjetiva y objetiva de las relaciones de protección para televisión en los servicios de radiodifusión terrenal y de radiodifusión por satélite	BO	1994
BO	650-2	Standards for conventional television systems for satellite broadcasting in the channels defined by appendix 30 of the Radio Regulations	Normes applicables aux systèmes de télévision conventionnelle pour la radiodiffusion par satellite dans les canaux définis par l'appendice 30 du Règlement des radiocommunications	Normas relativas a los sistemas de televisión convencional para la radiodifusión por satélite en los canales definidos por el apéndice 30 del Reglamento de Radiocomunicaciones	BO	1994
BO	651	Digital PCM coding for the emission of high-quality sound signals in satellite broadcasting (15 kHz nominal bandwidth)	Codage numérique MIC pour l'émission de signaux audio de haute qualité en radiodiffusion par satellite (bande passante nominale 15 kHz)	Codificación digital MIC para la transmisión de señales de sonido de alta calidad en la radiodifusión por satélite (anchura de banda nominal de 15 kHz)	BO	1994
BO	652-1	Reference patterns for earth-station and satellite antennas for the broadcasting-satellite service in the 12 GHz band and for the associated feeder links in the 14 GHz and 17 GHz bands	Diagramme de référence des antennes de stations terriennes et de satellites pour le service de radiodiffusion par satellite dans la bande des 12 GHz et les liaisons de connexion associées dans les bandes des 14 et 17 GHz	Diagramas de radiación de referencia de las antenas de estación terrena y de satélite para el servicio de radiodifusión por satélite en la banda de 12 GHz y para los enlaces de conexión asociados en las bandas de 14 GHz y 17 GHz	BO	1994
BO	712-1	High-quality sound/data standards for the broadcasting-satellite service in the 12 GHz band	Normes du son de haute qualité et des données pour le service de radiodiffusion par satellite dans la bande des 12 GHz	Normas de transmisión de sonido de alta calidad y de datos para el servicio de radiodifusión por satélite en la banda de 12 GHz	BO	1994
BO	786	MUSE system for HDTV broadcasting-satellite services	Système MUSE pour les services de radiodiffusion de TVHD par satellite	Sistema MUSE para servicios de radiodifusión de televisión de alta definición por satélite	BO	1994
BO	787	MAC/packet based system for HDTV broadcasting-satellite services	Système MAC/paquets pour les services de radiodiffusion de TVHD par satellite	Sistema basado en MAC/paquetes para servicios de radiodifusión por satélite TVAD	BO	1994

BO	788-1	Coding rate for virtually transparent studio quality HDTV emissions in the broadcasting-satellite service	Vitesse de codage de signaux de TVHD permettant d'obtenir une qualité quasi-studio dans le service de radiodiffusion par satellite	Velocidad de codificación de las emisiones de televisión de alta definición con calidad de estudio virtualmente transparentes del servicio de radiofusión por satélite	BO	1994
BO	789-2	Service for digital sound broadcasting to vehicular, portable and fixed receivers for broadcasting-satellite service (sound) in the frequency range 1 400 - 2 700 MHz	Besoins du service de radiodiffusion sonore numérique par satellite (SRS) à destination des récepteurs à bord de véhicules, portatifs et fixes dans la gamme de fréquences 1 400 - 2 700 MHz	Necesidades del servicio de radiodifusión sonora digital para los receptores de vehículos, portátiles y fijos del servicio de radiodifusión por satélite (sonora) en la gama de frecuencias 1 400 - 2 700 MHz	10-11/1005	AR95
BO	790	Characteristics of receiving equipment and calculation of receiver figure-of-merit (*G/T*) for the broadcasting-satellite service	Caractéristiques des équipements de réception et calcul du facteur de qualité des récepteurs (*G/T*) pour le service de radiodiffusion par satellite	Características del equipo receptor y cálculo del factor de calidad (*G/T*) de los receptores del servicio de radiodifusión por satélite	BO	1994
BO	791	Choice of polarization for the broadcasting-satellite service	Choix de la polarisation pour le service de radiodiffusion par satellite	Elección de la polarización en el servicio de radiodifusión por satélite	BO	1994
BO	792	Interference protection ratios for the broadcasting-satellite service (television) in the 12 GHz band	Rapports de protection contre les brouillages dans le service de radiodiffusion par satellite (télévision) dans la bande des 12 GHz	Relaciones de protección contra la interferencia en el servicio de radiodifusión (televisión) por satélite en la banda de 12 GHz	BO	1994
BO	793	Partitioning of noise between feeder links for the broadcasting-satellite service (BSS) and BSS down links	Répartition de bruit entre les liaisons de connexion du service de radiodiffusion par satellite (SRS) et les liaisons descendantes du SRS	Distribución del ruido entre los enlaces de conexión del servicio de radiodifusión por satélite (SRS) y los enlaces descendentes	BO	1994
BO	794	Techniques for minimizing the impact on the overall BSS system performance due to rain along the feeder-link path	Techniques visant à réduire l'effet que produit la pluie le long du trajet de la liaison de connexion sur la qualité globale des systèmes du SRS	Técnicas para reducir al mínimo el efecto de la influencia de la lluvia sobre el enlace de conexión respecto a las características generales de los sistemas del servicio de radiodifusión por satélite	BO	1994
BO	795	Techniques for alleviating mutual interference between feeder links to the BSS	Techniques propres à réduire les brouillages mutuels entre liaisons de connexion du SRS	Técnicas para reducir la interferencia mutua entre los enlaces de conexión del servicio de radiodifusión por satélite (SRS)	BO	1994
BO	1130-1	System for digital sound broadcasting to vehicular, portable and fixed receivers for broadcasting service satellite (sound) bands in the frequency range 1 400-2 700 MHz	Système de radiodiffusion sonore numérique par satellite (SRS) à destination des récepteurs à bord de véhicules, portatifs et fixes dans la gamme de fréquences 1 400-2 700 MHz	Sistema de radiodifusión sonora digital para los receptores de vehículos, portátiles y fijos del servicio de radiodifusión (sonora) por satélite en la gama de frecuencias 1 400-2 700 MHz	10-11/1006	AR95
BO	1211	Digital multi-programme emission systems for television, sound and data services for satellites operating in the 11/12 GHz frequency range	Systèmes numériques d'émission multiprogramme de télévision, son et données pour satellites exploités dans la gamme de fréquences 11/12 GHz	Sistemas de transmisión digital multiprograma en servicios de televisión, sonido y datos mediante satélites que funcionan en la gama de frecuencias 11/12 GHz	10-11/1007	AR95

BO	1212	Calculation of total interference between geostationary-satellite networks in the broadcasting-satellite service	Calcul du brouillage total entre réseaux à satellite géostationnaire dans le service de radiodiffusion par satellite	Cálculo de la interferencia total entre las redes de satélites geoestacionarios del servicio de radiodifusión por satélite	10-11/1008	AR95
BO	1213	Reference receiving earth station antenna patterns for replanning purposes to be used in the revision of the WARC-77 BSS plans for Regions 1 and 3	Diagramme de référence pour antenne de station terrienne de réception à utiliser pour la replanification lors de la révision des plans du SRS (CAMR-77) pour les Régions 1 et 3	Diagramas de antena de estación terrena receptora de referencia que deben de utilizarse en la revisión de los planes para el SRS en las Regiones 1 y 3 establecidos por la CAMR-77	10-11/1009	AR95

NOC	SUP	MOD	NEW	Total in force
15	0	2	3	20

ITU-R Recommendations in force as at
Recommandations de l'UIT-R en vigueur au
Recomendaciones del UIT-R vigentes con fecha de
21/10/95

Series/Série/Serie

BR

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
BR	265-7	Standards for the international exchange of programmes on film for television use	Normes pour l'échange international de programmes sur film pour utilisation en télévision	Normas para el intercambio internacional de programas grabados en película para utilizar en televisión	BR	1994
BR	407-4	International exchange of sound programmes recorded in analogue form	Echange international de programmes de radiodiffusion sonore enregistrés sous forme analogique	Intercambio internacional de programas de radiodifusión sonora grabados en forma analógica	BR	1994
BR	408-6	Standards of sound recording on magnetic tape for the international exchange of programmes	Normes d'enregistrement du son sur bande magnétique pour l'échange international des programmes	Normas de grabación del sonido en cinta magnética para el intercambio internacional de programas	BR	1994
BR	469-6	Analogue composite television tape recording. *Standards for the international exchange of television programmes on magnetic tape*	Enregistrement sur bande magnétique de la télévision analogique composite. *Normes pour l'échange international de programmes de télévision sur bande magnétique*	Grabación en cinta magnética de programas de televisión analógicos compuestos. *Normas para el intercambio internacional de programas de televisión grabados en cinta magnética*	BR	1994
BR	501-2	Appraisal of programmes on colour film intended for television use	Evaluation des programmes enregistrés sur des films couleur destinés à être utilisés en télévision	Evaluación de programas grabados en película en color para utilizar en televisión	BR	1994
BR	602-3	Exchange of television recordings for programme evaluation	Echange d'enregistrements de télévision pour l'évaluation des programmes	Intercambio de grabaciones de televisión para la evaluación de programas	BR	1994
BR	648	Digital recording of audio signals	Enregistrement numérique des signaux audio	Grabación digital de señales de audio	BR	1994
BR	649-1	Measuring methods for analogue audio tape recordings	Méthodes de mesure applicables aux enregistrements sonores analogiques sur bandes magnétiques	Métodos de medición para grabaciones sonoras analógicas en cinta magnética	BR	1994
BR	657-2	Digital television tape recording. *Standards for the international exchange of television programmes on magnetic tape*	Enregistrement sur bande magnétique de la télévision numérique. *Normes pour l'échange international de programmes de télévision sur bande magnétique*	Grabación digital de programas de televisión en cinta magnética. *Normas para el intercambio internacional de programas de televisión grabados en cinta magnética*	BR	1994
BR	713	Recording of HDTV images on film	Enregistrement d'images de TVHD sur film	Grabación de imágenes de TVAD en película cinematográfica	BR	1994
BR	714-1	International exchange of programmes electronically produced by means of high-definition television	Echange international de programmes produits électroniquement en télévision à haute définition	Intercambio internacional de programas producidos electrónicamente con medios de televisión de alta definición	BR	1994

BR	715	International exchange of ENG recordings	Echange international d'enregistrements de reportages électroniques d'actualités	Intercambio internacional de grabaciones de reportajes electrónicos de noticias	BR	1994
BR	716-2	Area of 35 mm motion picture film used in HDTV telecines	Surface des films cinématographiques 35 mm explorée par les télécinémas de TVHD	Zona de la película cinematográfica de 35 mm utilizada por los telecines de TVAD	BR	1994
BR	777-2	International exchange of digital audio recordings	Echange international d'enregistrements audionumériques	Intercambio internacional de grabaciones audio digitales	10-11/1010	AR95
BR	778-1	Analogue component television tape recording. *Standards for the international exchange of television programmes on magnetic tapes*	Enregistrement sur bande de signaux de télévision en composantes analogiques. *Normes pour l'échange international de programmes de télévision sur bande magnétique*	Grabación en cinta magnética de programas de televisión de componentes analógicas. *Normas para el intercambio internacional de programas de televisión grabados en cinta magnética*	BR	1994
BR	779	Operating practices for 4:2:2 digital television recording	Pratiques d'exploitation recommandées pour l'enregistrement de télévision numérique 4:2:2	Prácticas operativas para la grabación de televisión digital de relación 4:2:2	BR	1994
BR	780	Time and control code standards for the international exchange of television programmes on magnetic tapes	Normes du code temporel de commande pour l'échange international de programmes de télévision sur bandes magnétiques	Normas de códigos de tiempo y control para el intercambio internacional de programas de televisión en cinta magnética	BR	1994
BR	781-1	HDTV telecine colour balance for film programmes	Equilibre colorimétrique des télécinémas de TVHD pour les programmes sur film	Balance de color del telecine de TVAD para programas en película	BR	1994
BR	782-1	Area of 35 mm print film used for 4:3 conventional television systems	Surface des copies d'exploitation 35 mm explorée par les systèmes de télévision classique 4:3	Zona de película en copia de distribución de 35 mm utilizada para los sistemas de televisión convencional 4:3	BR	1994
BR	783-1	Area of 35 mm release print film used for conventional 16:9 television systems	Surface des copies d'exploitation 35 mm explorée par les systèmes de télévision classique 16:9	Zona de película en copia de distribución de 35 mm utilizada para los sistemas de televisión de resolución convencional con formato 16:9	BR	1994
BR	784	Exchange of television programmes on 16-mm film with two synchronous sound tracks on a separate support	Echange de programmes de télévision sur film 16 mm avec deux pistes audio synchrones sur supports séparés	Intercambio de programas de televisión en película de 16 mm con dos pistas de sonido síncronas en soporte separado	BR	1994
BR	785	The release of programmes in a multimedia environment	Distribution de programmes dans un environnement multimedia	Difusión de programas en un entorno multimedios	BR	1994
BR	1214	Studio recording of sound-broadcasting programmes on magnetic tape for release on multi-programme digital channels	Enregistrement en studio de programmes de radiodiffusion sonore pour la diffusion numérique sur des canaux multiprogrammes	Grabación en estudio de programas de radiodifusión sonora en cinta magnética para la distribución en canales digitales multiprograma	10-11/1011	AR95
BR	1215	Handling and storage of television and sound recordings on magnetic tape	Gestion et archivage de bandes magnétiques enregistrées (son et télévision)	Manipulación y almacenamiento de grabaciones sonoras y de televisión en cinta magnética	10-11/1012	AR95
BR	1216	Recording of television programmes on magnetic tape in the case when several programmes are broadcast in the same digital multiplex	Enregistrement sur bande magnétique de programmes de télévision lorsque plusieurs programmes sont diffusés dans le même multiplex numérique	Grabación de los programas de televisión en cinta magnética para su difusión en un mismo canal múltiplex digital	10-11/1013	AR95

BR	1217	Recording of pan-scan data of 16:9 recordings within the user bits of the longitudinal time code	Intégration des données de panoramage des enregistrements en 16:9 dans les bits utilisateur du code temporel longitudinal	Grabación de los datos de barrido panorámico de grabaciones 16:9 en los bits de usuario del código horario longitudinal	10-11/1014	AR95
BR	1218	Recording of teletext on future digital recorder for consumer use	Enregistrement de données de télétexte sur les futurs magnétoscopes numériques grand public	Grabación de teletexto en los futuros magnétoscopios digitales de uso doméstico	10-11/1015	AR95
BR	1219	Handling and storage of cinematographic film recording	Manipulation et stockage des enregistrements sur film cinématographique	Manipulación y almacenamiento de grabaciones de películas cinematográficas	10-11/1016	AR95
BR	1220	Requirements for the generation, recording and presentation of HDTV programmes intended for release in the "electronic cinema"	Conditions de production, d'enregistrement et de présentation des programmes de TVHD destinés au "cinéma électronique"	Requisitos para la generación, grabación y presentación de programas de TVAD destinados a su distribución en "cine electrónico"	10-11/1017	AR95

NOC	SUP	MOD	NEW	Total in force
21	0	1	7	29

ITU-R Recommendations in force as at
Recommandations de l'UIT-R en vigueur au
Recomendaciones del UIT-R vigentes con fecha de
21/10/95

Series/Série/Serie
V

ITU-R/UIT-R		Title of the Recommendation	Titre de la Recommandation	Título de la Recomendación	Publication/Publicación	
Series Série Serie	Number Numéro Número				Vol or/ou/o Doc	Year Année Año
V	430-3	Use of the international system of units (SI)	Emploi du système international d'unités (SI)	Empleo del sistema internacional de unidades (SI)	V	1994
V	431-6	Nomenclature of the frequency and wavelength bands used in telecommunications	Nomenclature des bandes de fréquences et de longueurs d'onde employées en télécommunication	Nomenclatura de las bandas de frecuencias y de las longitudes de onda empleadas en telecomunicaciones	V	1994
V	461-5	Graphical symbols and rules for the preparation of documentation in telecommunications	Symboles graphiques et règles pour l'établissement de la documentation utilisée dans les télécommunications	Símbolos gráficos y reglas para la preparación de la documentación utilizada en telecomunicaciones	V	1994
V	573-3	Radiocommunication vocabulary	Vocabulaire des radiocommunications	Vocabulario de radiocomunicaciones	V	1994
V	574-3	Use of the decibel and the neper in telecommunications	Emploi du décibel et du néper dans les télécommunications	Uso del decibelio y del neperio en telecomunicaciones	V	1994
V	607-2	Terms and symbols for information quantities in telecommunications	Termes et symboles relatifs aux quantités d'information en télécommunication	Términos y símbolos relacionados con cantidades de información en telecomunicaciones	V	1994
V	608-2	Letter symbols for telecommunications	Symboles littéraux pour les télécommunications	Símbolos literales para las telecomunicaciones	V	1994
V	662-2	Terms and definitions	Termes et définitions	Términos y definiciones	V	1994
V	663-1	Use of certain terms linked with physical quantities	Emploi de certains termes liés à des grandeurs physiques	Utilización de ciertos términos vinculados a cantidades físicas	V	1994
V	664	Adoption of the CCITT Specification and Description Language (SDL)	Adoption du langage de spécification et de description fonctionnelles (LDS) du CCITT	Adopción del lenguaje de especificación y descripción (LED) del CCITT	V	1994
V	665-1	Traffic intensity unit	Unité d'intensité du trafic	Unidad de intensidad de tráfico	V	1994
V	666-2	Abbreviations and initials used in telecommunications	Abréviations et sigles utilisés en télécommunication	Abreviaturas y siglas utilizadas en telecomunicaciones	V	1994

NOC	SUP	MOD	NEW	Total in force
12	0	0	0	12

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 146-E
3 November 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 5

SUMMARY RECORD

OF THE

FOURTH MEETING OF COMMITTEE 5

(MSS AND OTHER MATTERS)

Tuesday, 31 October 1995, at 1605 hours

Chairman: Mr. G.F. JENKINSON (Australia)

	Subjects discussed	**Documents**
1	Oral report by the Chairman of Committee 4 on incorporation by reference	-
2	Approval of the summary records of the first, second and third meetings of Committee 5	102, 106, 111
3	Allocation of late documents	9(Add.17), 73, 75, 80, 81, 83, 90, 98, 121
4	Oral reports by the Chairmen of Working Groups 5A, 5B and 5C	-
5	Draft note by the Chairman of Committee 5 to Committee 6	DT/18
6	Oral report by the Chairman of Working Group 5 ad hoc 1	-
7	Review of Resolutions 113 (WARC-92) and 212 (WARC-92)	17, 19, 30; DT/17(Rev.1)
8	Coordination of work relating to Resolution 46 (WARC-92)	120

1 Oral report by the Chairman of Committee 4 on incorporation by reference

1.1 The **Chairman of Committee 4** said that, following extensive debate of the concept of incorporation by reference, Committee 4 had drawn a number of conclusions. First, no restrictions were considered to be necessary on the inclusion of non-mandatory references, which could be to "the latest version" of a Recommendation. Second, mandatory references to a resolution or recommendation of a WRC would be acceptable without restriction, since such texts would have been agreed by the conference in question. Third, where mandatory references were suggested and the relevant texts were brief, the material should be incorporated in the Radio Regulations. Fourth, if on a case-by-case basis it was decided to incorporate material in the form of mandatory references, certain provisions should apply: the text in question must have the same treaty status as the Radio Regulations, the reference must be explicit, and the text must be adopted by the WRC concerned; all texts incorporated by reference must be readily available, for example by being published in a separate volume; and if a referenced text was updated between WRCs, the reference in the Radio Regulations must continue to apply to the original version until such time as a subsequent WRC should decide to incorporate the new version. With regard to the last-mentioned point, Committee 4 felt that further clarification was required, including consideration of a precise mechanism. In conclusion, he said that a note reflecting his understanding of Committee 4's conclusions as just reported to the present meeting would be published shortly for consideration by Committee 4 at its next meeting.

1.2 The **delegate of Argentina** expressed the view that Committee 4's deliberations on the subject were not fully reflected in the oral report just given, and that the note to be prepared should also mention certain other matters raised, such as cases of cross-referencing.

1.3 The **Chairman of Committee 4** said that his intention had been to reflect the broad measure of agreement which he understood Committee 4 to have reached on the issue of incorporation by reference. The document to be published would take the form of a note from himself to Committee 4 for the latter's consideration and approval; it did not constitute a formal statement of the Committee's conclusions.

1.4 The **Chairman of ad hoc Group 5B1** said that his Group had come up against some difficulties, from a regulatory standpoint, with regard to the incorporation by reference of certain types of Recommendation, such as those which themselves made reference to or depended on other texts. He suggested, therefore, that Committee 4's findings should include, as a requirement, that references to any such material should specify all the particulars relevant to its application.

1.5 The **delegate of Viet Nam** said it was clear from Committee 4's deliberations, that there was still concern about the legal aspects of incorporation by reference, a matter which should also be reflected in the note by the Chairman of Committee 4.

1.6 The **Chairman** said that such matters should be pursued in Committee 4 itself. He thanked the Chairman of Committee 4 for his oral report.

2 Approval of the summary records of the first, second and third meetings of Committee 5 (Documents 102, 106, 111)

2.1 The summary record of the first meeting (Document 102) was **approved**, subject to a written amendment announced by the **delegate of the United States** to paragraph 5.4.

2.2 The summary record of the second meeting (Document 106) was **approved**, subject to an editorial correction to paragraph 2.27 to be submitted in writing by the **delegate of Ecuador**.

2.3 The summary record of the third meeting (Document 111) was **approved**.

3 Allocation of late documents (Documents 9(Add.17), 73, 75, 80, 81, 83, 90, 98, 121)

3.1 The **Chairman**, noting that in most cases the documents concerned had already been considered at the working group level, suggested that the Committee should simply formally agree to their allocation as follows:

- Working Group 5A: Documents 80, 83 and 98;
- Working Group 5B: Documents 9(Add.17), 73, 75, 80, 90, 98 and 121;
- Working Group 5C: Documents 73, 75, 80, 81, 90 and 98.

3.2 It was so **agreed**.

4 Oral reports by the Chairmen of Working Groups 5A, 5B and 5C

4.1 The **Chairman of Working Group 5A**, recalling that the Group was dealing with existing and new allocations, said that currently the most contentious issue with regard to existing allocations was perhaps in the bands 137 - 138 MHz and related to footnote RR 599A. The Group was attempting to work through the proposal to change the existing power flux-density trigger and he was confident that the issue could be resolved. In addition, the Group hoped soon to conclude its work on footnotes RR 608A and RR 608B. A consensus had already been reached on radio astronomy and a document on that question would no doubt be available soon. Work on new allocations had started that day, proposals had been introduced and discussions were to begin soon.

4.2 The **Chairman of Working Group 5B** said that the Group had met once and had decided to set up two ad hoc Groups, 5B1 and 5B2, as detailed in Document DT/15(Rev.1). Group 5B1, which was dealing with technical constraints, had held two meetings and had made good progress. Group 5B2, which was considering proposals for the 2 GHz band, had held two meetings and had covered all the points concerning allocations and date of entry into force. Working Group 5B would be considering the proposals which had not been referred to the ad hoc Groups, as set out in Document DT/17(Rev.1), and hoped to provide further information at the next meeting of Committee 5.

4.3 The **Chairman of Working Group 5C** said that progress was being made slowly but surely. The Group had held one meeting the previous week and had set up three ad hoc Groups. The first, dealing with feeder links in the 4 - 15 GHz range, was currently concentrating on the 5 GHz band, in particular the upper 100 MHz and the lower 60 MHz portions, bidirectional use and the amount of spectrum required. The second ad hoc Group, dealing with feeder links above 15 GHz, had reached a consensus to the effect that a first portion of feeder-link spectrum could be found in the ranges 19.2 - 19.7 GHz and 29 - 29.5 GHz. Although good progress had been made, further discussion might be necessary in order to estimate the amount of spectrum required. The third ad hoc Group, discussing the power flux-density limits, had met once, agreed to propose a single value for each band and was making good progress.

4.4 The **Chairman** thanked the Working Group Chairmen and the ad hoc Groups. He welcomed the spirit of cooperation shown by the delegates, which was enabling progress to be made.

5 Draft note by the Chairman of Committee 5 to Committee 6 (Document DT/18)

5.1 The **Chairman**, recalling that at its third meeting Committee 5 had reached unanimous agreement in respect of its work on WRC-95 agenda item 2.2, said that the Annex to Document DT/18 reflected the outcome of its discussions in a form appropriate to the VGE Report layout. As the document was an accurate representation of Committee 5's views, he proposed that it be formally approved for submission to Committee 6.

5.2 Document DT/18 was **approved**.

6 Oral report by the Chairman of Working Group 5 ad hoc 1

6.1 The **Chairman of Working Group 5 ad hoc 1** said that the Group had addressed the issue of incorporation by reference of ITU-R Recommendations S.1068, S.1069 and SA.1071, as agreed at the Committee's third meeting. The basic issue was to determine which elements in the Recommendations had regulatory significance, and therefore should be given treaty force. There was one such element in Recommendation S.1068, but it had been agreed that there was no need to include it in the Radio Regulations; the issue of incorporation by reference or otherwise did not, therefore, arise. Concerning Recommendations S.1069 and SA.1071, there were four elements which were the same in both Recommendations. It had been considered that two of those elements should be given treaty status. The ad hoc Group was drafting material on the issue of whether they should be incorporated by reference or in full in the Radio Regulations. That work would be completed later in the week, and information provided by Committee 4 on the subject would be taken into account.

7 Review of Resolutions 113 (WARC-92) and 212 (WARC-92) (Documents 17, 19, 30; DT/17(Rev.1))

Resolution 212

7.1 The **Chairman**, noting that proposals had been put forward by Brazil (B/17/196), Australia (AUS/19/22) and Mali (MLI/30/14), said that the three delegations concerned were working together to produce a consolidated proposal, pending which he proposed to defer discussion thereof.

7.2 It was so **agreed**.

7.3 The **delegate of Syria** asked whether the wording of *noting* a) of Resolution 212, which stated that initial implementation of the terrestrial components of FPLMTS was expected to begin "by" the year 2000, would be changed to "around" the year 2000, as agreed in principle during earlier discussions. The **Chairman** said that he had received no proposals on the matter. He invited the delegate of Syria to discuss the matter informally with the delegations concerned.

Resolution 113

7.4 The **Chairman**, noting Mali's proposal MLI/30/14 to retain Resolution 113 as the Working Party concerned had not yet finished its work, proposed that Resolution 113 should, subject to editorial modifications, be retained in its present form.

7.5 It was so **agreed**.

8 Coordination of work relating to Resolution 46 (WARC-92) (Document 120)

8.1 The **Chairman** drew attention to Document 120, a note by the Chairman of Committee 4 to the Chairman of Committee 5 which highlighted the need for coordination of work on Resolution 46. In particular, he drew attention to the final paragraph which stated that liaison statements would be sent to Committee 5 as work progressed with a view to facilitating that coordination. No action was required by Committee 5 at the present stage, but he noted that statements would be received. Likewise, Committee 4 would be informed as appropriate of the work of Committee 5.

8.2 The **Chairman of ad hoc Group 5B1** asked if it would be in order for him to send a liaison statement directly to the Chairman of Working Group 4B in order to expedite the work.

8.3 The **Chairman** said he welcomed direct contact between working groups as a means of advancing their work. As committees were not bound by the work of working groups, he proposed that the Committee should endorse that approach.

8.4 It was so **agreed**.

The meeting rose at 1705 hours.

The Secretary:
G. KOVACS

The Chairman:
G.F. JENKINSON

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 147-E
1 November 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4

Japan

PROPOSALS FOR THE WORK OF THE CONFERENCE

J/147/1
MOD S22.2

§ 2. Non-geostationary space stations shall cease or reduce to a negligible level their emissions, and their associated earth stations shall not transmit to them~~, whenever there is insufficient angular separation between non-geostationary satellites and geostationary satellites, and~~ whenever there is unacceptable interference to geostationary-satellite space systems in the fixed-satellite service operating in accordance with these Regulations.

Reasons:

i) There are some frequency bands in which FSS reverse band working is possible and Resolution 46 is not mentioned in the footnote of the Table of Frequency Allocations.

ii) Current No. 2613 is intended for the situation of forward band working only.

iii) If reverse band working by non-GSO is planned in the frequency band mentioned in i), there is no regulatory provision applicable to the coordination between non-GSO earth stations and GSO earth stations at this moment.

iv) Japan considers that No. 2613 should also apply to case iii).

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 148-E
2 November 1995
Original: English

DRAFTING GROUP
OF WORKING GROUP 5B

United States of America

PROPOSALS FOR THE WORK OF CONFERENCE

TRANSITIONAL ARRANGEMENTS FOR PHASED ENTRY OF MSS IN THE 2 GHz BANDS

The CPM has concluded that co-channel operation of the transmitting stations of the fixed service and the MSS space stations in the 2 GHz MSS Earth-to-space bands would not in general be possible. The CPM has also indicated that sharing between MSS space stations and fixed service stations in the 2 GHz MSS Earth-to-space bands could be feasible in the early years of MSS operation as MSS traffic levels would be relatively low. However in the long term it will become increasingly difficult for fixed service to share spectrum with MSS in the 2 GHz Earth-to-space band as MSS traffic levels increase over time.

There are some proposals to adjust the WARC-92 2 GHz MSS allocations. The sharing difficulty between the two services would remain unchanged as a result of the proposed adjustments to the 2 GHz bands. Therefore, a phased transition arrangement for the fixed service could be used to facilitate the introduction of multiple MSS systems in the 2 GHz bands.

The United States is proposing the following text for a new Radio Regulation footnote 746D to Article 8 addressing the United States positions on transition arrangements for phased entry of MSS in the 2 GHz bands.

Proposed New Radio Regulation footnote 746D to the International Table of Frequency Allocations (Article 8)

USA/148/1

ADD 746D Administrations responsible for coordination of MSS networks under Resolution 46 (WRC-95) pursuant to No. 746B and No. 746C shall make all practical efforts in coordination with affected administrations to ensure that unacceptable interference is not caused to assignments to receiving fixed service stations <u>brought into use or have been approved by the national administration for construction prior to the last day of WRC-95</u> in the 2 GHz space-to-Earth bands. Administrations primarily concerned with continued operation of fixed service systems in the 2 GHz bands should, as far as

practicable, re-channelize their existing fixed service systems to avoid overlapping with the mobile-satellite service both in the Earth-to-space and space-to-Earth bands in accordance with Recommendation ITU-R F.1098 or with other fixed service channelling plans or schemes at the earliest practicable date. Administrations shall ensure that new fixed service systems (that have been approved by the national administration after the last day of WRC-95) should be designed so as to avoid overlap of the spectrum used by the fixed service with the mobile-satellite service in either the Earth-to-space or space-to-Earth portions of these global mobile-satellite service bands as in Recommendation ITU-R F.1098 or in other fixed service channel plans. Administrations shall cease operation of troposcatter systems in the 2 GHz Earth-to-space bands from 1 January 2000.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 149-E
2 November 1995
Original: English

COMMITTEE 4

REPORT BY THE CHAIRMAN OF WORKING GROUP 4B TO THE CHAIRMAN OF COMMITTEE 4

At its meeting on Thursday, 2 November 1995, Working Group 4B examined Article S12 of the VGE Report and concluded that:

a) consideration of S12 be deferred to WRC-97;

b) Article 17 of the existing Radio Regulations be maintained noting the following consequential editorial amendments to reflect changes to other Articles of the Radio Regulations as proposed by the VGE:

Reference to 1240 becomes S11.31

Reference to 1454 becomes S13.19

Reference to Article 22 becomes Section VI of Article S15; and

c) Article S12 of the VGE Report becomes an annex to the attached Resolution.

This Resolution is presented for approval by Committee 4.

P. ABOUDARHAM
Chairman of Working Group 4B

Attachment: 1

ATTACHMENT 1

DRAFT RESOLUTION COM4-YY

SIMPLIFICATION OF ARTICLE 17 OF THE RADIO REGULATIONS

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that the World Administrative Radio Conference, Geneva 1979 (WARC-79) allocated new HF bands to the broadcasting service and that the use of this additional spectrum was subject to provisions to be established by a future WARC for the planning of HF bands allocated to the broadcasting service;

b) that the World Administrative Radio Conference (Malaga-Torremolinos, 1992) (WARC-92), allocated further additional HF bands to the broadcasting service and that the use of this additional spectrum was subject to the planning to be drawn up by a competent WARC;

c) that the efforts to develop a HFBC planning system have not been successful;

d) that the Voluntary Group of Experts (VGE) have made proposals to WRC-95 to simplify the existing Article **17** procedure;

e) that the agenda for WRC-95 invites administrations when preparing and submitting their proposals for WRC-95 to base them as far as practicable on the recommended texts in the final report of the VGE;

recognizing

a) , that the preliminary agenda for WRC-97 includes examination of, and taking necessary decisions on, the question of the HF bands allocated to the broadcasting service in the light of developments to date and the results of the studies carried out by the Radiocommunication Sector;

b) that in response to Resolution **523 (WARC-92)** and ITU-R Question 212/10, ITU-R established Task Group 10/5 to study alternative planning procedures and the associated technical parameters for HF broadcasting;

c) that ITU-R TG 10/5 submitted an interim report to CPM-95 and will submit a final report to CPM-97 for consideration at WRC-97;

resolves

that consideration of the simplification of Article **17** as proposed in Article **S12** of the VGE Report and annexed to this Resolution, be deferred to WRC-97;

further resolves

to maintain the existing consultation procedure of Article **17** as currently applied by the Radiocommunication Bureau pending discussion at WRC-97;

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements for the Conference Preparatory Meeting to include in its report to WRC-97 the conclusions of the work of ITU-R TG 10/5 and any consequential amendments to the proposed Article **S12** of the VGE Report.

ANNEX

PROPOSED ARTICLE S12 OF VGE

Planning and Procedure for the Bands Allocated Exclusively to the Broadcasting Service Between 5 950 kHz and 26 100 kHz

Section I. Introduction

S12.1 When applying the procedure of this Article administrations are urged to comply to the maximum possible extent with the principles contained in Section II of this Article.[VGE Note 12]

Section II. Planning Principles

S12.2 (1) The planning of the high frequency bands allocated to the broadcasting service shall be based on the principle of equal rights of all

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VGE Note 12 The VGE has noted Resolution 9 of the APP-92 requesting the Radiocommunication Assembly (WRC-93), inter alia, "to establish the work programme and the Study Groups of the Radiocommunication Sector, including any future work on HF Broadcasting, taking account of any IFRB report on the application of Resolution 523 of the WARC-92." Upon the assumption that this will lead to longer term action by the Union, the scope for action by the VGE to simplify the present Article 17 of the Radio Regulations relating to HFBC is necessarily limited.

The VGE has therefore limited its action to the "Consultation Procedure" in Sections IV to VIII of Article 17, leaving it to the WRC-95 to decide upon Sections I to III, which contain principles and other material relating to the planning of HFBC. Within these limitations the VGE proposes only that the number of seasons each year be reduced from four to two; that the prior coordination of schedules be encouraged but without disadvantage to uncoordinated schedules; that as a result of the reduced number of incompatibilities the technical work of the Bureau can be reduced; and that as an economy measure the publication of the "Final Schedule" can be abandoned, using the Weekly Circular to update the "Tentative Schedule". The results of this work are condensed in the draft of Article S12.

countries, large or small, to equitable access to these bands. In planning, an attempt shall also be made to achieve efficient use of these frequency bands, account being taken of the technical and economic constraints that may exist in certain cases. On the basis of the foregoing, the following planning principles shall be applied.

S12.3 (2) All the broadcasting requirements, current or future, formulated by the administrations, shall be taken into account and be treated on an equitable basis, so as to guarantee the equality of rights referred to in No. **S12.2**, and to enable each administration to provide a satisfactory service.

S12.4 (3) All broadcasting requirements, national[1] and international, shall be treated on an equal basis, with due consideration of the differences between these two kinds of broadcasting requirements.

S12.4.1 [1] An HF broadcasting use is considered as being for the purposes of national coverage when the transmitting station and its associated required service area are both located within the territory of the same country.

S12.5 (4) In the planning procedure, an attempt shall be made to ensure, as far as practicable, continuity of use of a frequency or of a frequency band. However, such continuity should not prevent equal and technically optimum treatment of all broadcasting requirements.

S12.6 (5) The periodical planning procedure shall be based solely on the broadcasting requirements expected to become operational during the planning period. It shall furthermore be flexible in order to take into account new broadcasting requirements and modifications to the existing broadcasting requirements.

S12.7 (6) The planning procedure shall be based on double-sideband emissions. Single-sideband emissions which administrations might wish to make may, however, be permitted in place of planned double-sideband emissions, provided that the level of interference caused to double-sideband emissions is not increased.

S12.8 (7) For efficient spectrum use, only one frequency should be used, whenever possible, to meet a given broadcasting requirement in a given required service area; in any case the number of frequencies used will be the minimum necessary to provide a specified quality of reception.

S12.9 (8) Those broadcasting requirements for which the agreed minimum usable field strength is not ensured at any point of the required service area, through lack of the requisite technical facilities, can obtain proportionally reduced protection against interference.

S12.10 (9) In the first stage of the equitable application of a new planning procedure, an attempt will be made to include the maximum number of submitted requirements achieving the desired quality level. The remaining requirements will be processed on the understanding that lower quality levels would be acceptable.

S12.11 (10) The planning method shall satisfy, on an equal basis, a minimum of the broadcasting requirements submitted by administrations with the desired performance. Special consideration shall be given to the requirements of administrations which, in the first instance, are unable to achieve this performance.

Section III. Planning System

S12.12 The Planning System developed in accordance with the principles set out in Section **II** of this Article and the decisions of the World Administrative Radio Conference for the Planning of the HF Bands Allocated to the Broadcasting Service (Geneva, 1987), shall be improved and tested in accordance with the instructions contained in Resolution **511 (HFBC-87)** for adoption, if acceptable to a competent world administrative radio conference.

Section IV. Consultation Procedure

S12.13 Twice yearly administrations shall submit their projected seasonal broadcasting schedules in the relevant frequency bands to the Bureau. Those schedules shall cover the following seasons and shall be implemented at 0100 UTC on the first Sunday of each period concerned:

S12.14 a) March schedule - March to August inclusive;

S12.15 b) September schedule - September to February inclusive.

S12.16 Administrations may, if they wish, maintain four periods for their annual patterns of broadcasting, but are urged to do so within the periods indicated below, provided that this is made clear in their projected schedules at the time of their submission to the Bureau. These schedules shall be implemented at 0001 UTC on the first Sunday of each period concerned:

S12.17 a) March Schedule - March and April

S12.18 b) May Schedule - May, June, July and August

S12.19 c) September Schedule - September and October

S12.20 d) November Schedule - November, December, January and February.

S12.21 Administrations may include in their schedules assignments up to one year in advance of their use provided that the characteristics are not expected to change during that period.

S12.22 The frequencies in the schedules should be those that will be used during the season concerned, and they should be the minimum number required to provide satisfactory reception of the programmes in each of the areas and for each of the periods intended. To the maximum possible extent in each schedule the frequencies to be used in each reception area should be repeated from season to season.

S12.23 Administrations are encouraged to coordinate their schedules with other administrations as far as possible prior to submission. An administration may submit on behalf of a group of administrations their coordinated schedules the frequencies of which shall however have no priority for use over those submitted by other administrations.

S12.24 The closing dates for receipt by the Bureau of the schedules relating to the two seasons mentioned in No. **S12.13** and the four seasons mentioned in No. **S12.16** shall be established and published by the Bureau.

S12.25 The schedules shall be submitted with the relevant data contained in Appendix **S4** in accordance with the practices recommended in the Rules of Procedure.

S12.26 Upon receipt of the schedules the Bureau shall, in accordance with the Rules of Procedure, consolidate them, validate the data where necessary, identify such incompatibilities as it may be able, and prepare the High Frequency Broadcasting Schedule (the Schedule). This Schedule shall include all assignments where administrations gave no alternatives, the selections made by the Bureau from any alternatives given, and the frequencies selected by the Bureau in cases where the need for its assistance was indicated by their intentional omission from the individual schedules.

S12.27 The Schedule shall be published at least two months before the start of each of the two seasons in No. **S12.13**.

S12.28 Administrations should consider the Schedule and, before or during the season, they should, as quickly as possible, inform the Bureau of any changes they intend to make from their original submissions and the reasons for those changes. The Bureau shall publish this information regularly and update the Schedule as appropriate.

S12.29 After each season the Bureau shall consult the administrations concerned, the actual frequencies used and shall periodically publish its results to administrations.

S12.30 In a case of harmful interference, involving the application of the provisions of Article **S15**, administrations are urged to exercise the utmost goodwill and mutual cooperating taking into account all the relevant technical and operational factors of the case.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 150-E
3 November 1995

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

LIST OF DOCUMENTS

(Documents 101 - 150)

Doc.	Source	Title	Destination
101	C4	Organization of the work of Committee 4	C4
102 + Corr.1	C5	Summary record of the first meeting of Committee 5	C5
103	C4	Summary record of the first meeting of Committee 4	C4
104 + Corr. 1	[1]	Proposals for the work of the Conference	WG PL
105 (Rev.1)[2]	C4	Summary record of the second meeting of Committee 4	C4
106 + Corr.1	C5	Summary record of the second meeting of Committee 5	C5
107	SG	Transfer of powers Micronesia - United States	PL
108	WG PL	Organization of the work of the Working Group of the Plenary	WG PL
109	C2	Summary record of the first meeting of Committee 2	C2
110	C3	Note by the Chairman of Committee 3 to the Chairmen of Committee 4, 5 and Working Group of the Plenary	C4, C5, WG PL
111	C5	Summary record of the third meeting of Committee 5	C5
112	CLN	Proposals for the work of the Conference	C4
113	C3	Summary record of the first meeting of Committee 3	C3

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[1] BFA, CME, CTI, GAB, GUI, MLI, MTN, UGA, SEN, TCD, TGO

[2] The revised version concerns only the English text.

Doc.	Source	Title	Destination
114	C6	Summary record of the first meeting of Committee 6	C6
115	J	Proposals for the work of the Conference	Ad Hoc of the PL
116	PL	Minutes of the second Plenary meeting	PL
117	ALB	Proposals for the work of the Conference	C4
118	WG 4A	First report of Working Group 4A	C4
119	USA	Information paper	C5
120	C4	Coordination of work relating to Resolution 46	C5
121	J	Proposals for the work of the Conference	C4, C5, WG PL
122	S	Proposals for the work of the Conference	WG 4C
123 + Corr.1	[3]	Information document	C5
124 (Rev.1)	C4	Incorporation by reference	C4
125	AFS	Proposals for the work of the Conference	C4, C5
126	LUX	Proposals for the work of the Conference	PL
127	WG 4A	Second report of Working Group 4A	C4
128	ISR	Proposals for the work of the Conference	C5, WG PL
129	ICSU	Information paper	C5
130 + Corr.1	[4]	Statement regarding the non-geostationary fixed-satellite service (NGSO FSS)	PL
131	C5	First series of texts submitted by Committee 5 to the Editorial Committee	C6
132	ISR	Proposals for the work of the Conference	C4, C5

[3] ARG, B, CAN, CHL, CLM, EQA, USA, HND, JMC, MEX, PRG, PRU, SUR, TRD, URG, VEN

[4] ARG, B, CAN, CHL, CLM, EQA, USA, HND, JMC, MEX, PRG, PRU, SUR, TRD, URG, VEN

Doc.	Source	Title	Destination
133	C4	Summary record of the third meeting of Committee 4	C4
134	HOL	Proposals for the work of the Conference	WG PL
135	[5]	Proposals for the work of the Conference	WG PL
136	AUT	Proposals for the work of the Conference	C4
137	E, POR	Proposals for the work of the Conference	C4
138	C5	ITU-R Recommendations for determination of coordination distances in bands that may be subject to the procedures of MOD Resolution 46	C4, C5
139	DNK, FIN, NOR, S	Proposals for the work of the Conference	C4
140	WG PL	Draft revision of Resolution 712 (Rev. WRC-95)	WG PL
141	INS	Proposals for the work of the Conference	WG 5A
142	WG 4A	Third report of Working Group 4A	C4
143	I	Proposals for the work of the Conference	C4
144	CAN	Document information	PL
145	BR	Report from the Radiocommunication Assembly to the World Radiocommunication Conference (Geneva, 1995)	PL
146	C5	Summary record of the fourth meeting of Committee 5	C5
147	J	Proposals for the work of the Conference	C4
148	USA	Proposals for the work of the Conference	GT 5B
149	GT 4B	Report by the Chairman of Working Group 4B to the Chairman of Committee 4	C4
150	SG	List of documents (101 - 150)	-

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[5] AUS, CHN, KOR, IND, INS, IRN, J, MLA, NZL

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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2 November 1995
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COMMITTEE 4
COMMITTEE 5

Kingdom of Morocco

PROPOSALS FOR THE WORK OF THE CONFERENCE

REVISION OF RESOLUTION 46

Introduction

In view of the fact that certain administrations might encounter difficulties in identifying terrestrial service stations liable to be affected by an MSS project and will require the assistance of the Radiocommunication Bureau, it is recommended that the following paragraph should be inserted in Resolution 46.

MRC/151/1
ADD

A.1bis An administration with existing or planned terrestrial service stations liable to be affected by an MSS project in the bands published in a Special Section may ask the Radiocommunication Bureau to apply the appropriate software in order to identify those of its stations which must be taken into consideration for coordination. To that end, it shall provide the Radiocommunication Bureau with the information required to carry out such a study.

The Bureau shall inform the administration of the results of its calculations within the time limits laid down in the procedures of this Resolution.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 152-E
2 November 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

WORKING GROUP 4B

Source: Document DT/37(Rev.1)

NOTE BY THE CHAIRMAN OF WORKING GROUP 5B,
TO THE CHAIRMAN OF WORKING GROUP 4B

POWER FLUX-DENSITY AND FDP THRESHOLD VALUES FOR SPACE STATIONS IN THE MOBILE-SATELLITE SERVICE IN THE BAND 1 - 3 GHz

Working Group 5B appreciates the initiative taken by the Chairman of Committee 4 in the Note to the Chairman of Committee 5 in Document 120 concerning coordination of work relating to Resolution 46.

Based on the work carried out so far within Working Group 5B concerning technical constraints on the mobile-satellite service in the 1 - 3 GHz band, the following comments are presented.

The following footnotes in Article 8 of the current Radio Regulations make reference to No. 2566 of Article 28 as power flux-density threshold values to initiate coordination:

723C, 726D, 746B, 753F, 754 and 760A.

Working Group 5B is now endeavouring to undertake revisions of these footnotes along the following lines:

- all the necessary power flux-density and FDP threshold values will be proposed to be assembled in Article 28 (one of the purposes of the work of Working Group 5B will be to assess the feasibility of such introduction into Article 28, and then to develop an adequate format);
- the reference to No. 2566 in the above footnotes will be proposed to be deleted;
- Nos. 723C, 726D, 746B, 753F and 760A will be simplified by proposed deletion of the sentence: "In respect of assignments operating in this band, the provisions of Section II, paragraph 2.2 of Resolution 46 (WARC-92) shall also be applied to geostationary transmitting space stations with respect to terrestrial stations", with the understanding that the revised Resolution 46 will cover this requirement;
- the reference to Resolution 46 (WRC-95) will be retained.

N. KISRAWI
Chairman of Working Group 5B

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

WORKING GROUP 5B

Kingdom of Morocco

PROPOSALS FOR THE WORK OF THE CONFERENCE

AGENDA ITEM 2.1b): REVIEW THE DATE OF ENTRY INTO FORCE OF ALLOCATIONS IN THE BANDS 1 980 - 2 010 MHz AND 2 170 - 2 200 MHz IN REGIONS 1 AND 3 AND THE BANDS 1 970 - 2 010 MHz AND 2 160 - 2 200 MHz IN REGION 2

Introduction

Lengthy debate has taken place in Working Group 5B on the date of entry into force of allocations in the 2 GHz band for the MSS.

Some administrations consider that bringing the date of entry into force forward from 2005 to 2000 would permit smooth development of the MSS in all regions of the world. Others are concerned about the impact of such a measure, both in terms of quality of service and in economic terms, on their existing systems whose useful lifetimes might extend beyond 2005.

In this connection, protection of terrestrial systems can be achieved only if WRC-95 adopts the following measures, by means of a resolution:

MRC/153/1

Guaranteeing protection for all terrestrial systems notified to the Radiocommunication Bureau before a date [XXX]. Such protection should enable terrestrial services to operate in line with the performance objectives specified in ITU-R 1094 and ITU-T G.826, without any obligation to cease operating after the year 2000.

MRC/153/2

Administrations having terrestrial services to be taken into account for coordination of an MSS network shall not be required to modify their stations, except through an agreement accommodating the technical and economic aspects.

MRC/153/3

Administrations planning to set up new terrestrial systems in the 2 GHz band must be urged to use equipment complying with Recommendation ITU-R 1098, as soon as such equipment becomes available on the market.

MRC/153/4

Trans-horizon systems in service at a date [YYY] shall be authorized to continue operating.

MRC/153/5

Administrations proposing to bring an MSS system into service must take account of the fact that, when coordinating their system with administrations having terrestrial services, such administrations may have existing or planned installations covered by Article 48 of the Constitution.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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2 November 1995
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COMMITTEE 4

REPORT BY THE CHAIRMAN OF WORKING GROUP 4B TO THE CHAIRMAN OF COMMITTEE 4

At its meeting on Wednesday, 1 November 1995, Working Group 4B examined Article S10 of the VGE Report and concluded that:

1) this Article should not be included in the Simplified Radio Regulations;

2) an updated version of this Article (as contained in the Report of the CPM) should be annexed to the Recommendation as attached;

3) Article 16 of the current Radio Regulations and Appendix S25 should be included in the Simplified Radio Regulations with consequential numbering as appropriate.

This Resolution is presented for approval to Committee 4.

P. ABOUDARHAM
Chairman of Working Group 4B

Attachment: 1

ATTACHMENT

EUR/5/24
ADD

DRAFT RECOMMENDATION COM4-XX

PROCEDURES FOR MODIFICATION OF A FREQUENCY ALLOTMENT OR ASSIGNMENT PLAN

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that preceding conferences have developed plans;

b) that these plans may relate to assignments or to allotments;

c) that assignment and allotment plans fundamentally differ as to the complexity of their maintenance;

d) that, in addition to worldwide plans, regional plans exist catering for specialized needs in particular parts of the world;

e) that plans, by their nature, are dated;

considering in particular

a) that the Voluntary Group of Experts (VGE) is to be commended for undertaking the development of a procedure (Article **S10**) with a view to applying it in the case of a modification to any type of plan;

b) the difficulties presently faced by the administrations which have to be involved in a large number of different procedures, and the need to reduce the number and complexity of such procedures;

c) that the question of universal applicability of one procedure requires greater consideration than most;

noting

a) that VGE Recommendation 2/5 foresaw the possible treatment of that Recommendation at WRC-97 with respect to its possible applicability to the world plans of Appendices **30** and **30A**;

b) that the VGE foresaw the need to decide upon Recommendation 2/5 before treating the applicability of Article **S10**;

c) that in the case of Appendices **30/30A**, Article **S10** contained provisions that do not currently exist in these Appendices;

d) that, associated with Article **S10** in the VGE Report is Appendix **S6**, which would have to be developed further if Article **S10** was to apply to Appendices **25**, **30** and **30A**;

e) that the current modification procedures for Appendices **30** and **30A** have been applied, generally without problems, and that Article **S10**, if kept unchanged, would create unnecessary delays and complexities;

f) that this Conference has developed a modified version of Article **S10**, aimed at resolving the difficulties mentioned above, as included in Annex 1;

g) that the modification procedure for Appendix **25**, as contained in Article **16** of the Radio Regulations, has been satisfactorily applied for several years;

h) that this Conference, in reviewing VGE Recommendation 2/4, has decided to incorporate the existing modification procedure for Appendix **25** within that Appendix, thereby rendering it self-contained for simplification of use;

i) that this Conference, in reviewing Recommendation 2/5, has decided to defer to a future world radiocommunication conference the question of whether Article **S10** should be applied to the world plans of Appendices **30** and **30A**;

j) that, consequential to the above and with regard to VGE Recommendation 2/6, no further action is required on Appendix **S6**, and the provisions of Appendices **30** and **30A** shall continue in force;

k) that this Conference, in reviewing VGE Recommendation 2/7, has decided not to modify Appendices **26**, **27** and **30B**;

l) that the matter of one universal modification procedure for all plans, or all subsequent plans, has not matured for a decision at this Conference;

further noting

that WRC-97 is to review Appendices **30** and **30A**;

recommends

that the plan modification procedure as contained in the Annex to this Recommendation, possibly modified as a result of the *further requests*, be considered by future regional radio conferences or world radio conferences for possible application for the modification of the plans;

further requests

the ITU-R to continue studying the application of this Annex to Appendices **30/30A** and Appendix **S6**.

ANNEX

(to draft Recommendation COM4-XX: Article T10)

MODIFIED ARTICLE S10

ARTICLE T10~~VGE Note 1~~

Procedure for Modification of a Frequency Allotment or Assignment Plan

T10.1

For ~~all world~~the frequency allotment or assignment Plans contained in Appendices to these Regulations, the Bureau shall maintain the master copies of the Plans, incorporating any agreed modifications~~VGE Note 7~~ [30, 30A], and shall provide such copies in an appropriate form for publication by the Secretary-General when justified by circumstances.

~~VGE Note 1~~ ~~The scope of application of Article T10 to be decided by the WRC-95.~~

~~VGE Note 7~~ ~~Regional Plans have legally different sources and status from the Plans so far made by WARCs and attached as Appendices to the Radio Regulations. As such the regional Plans are not open to any modification by a future world radio conference. It would NOT therefore be possible for the WRC-95 to modify the procedures of these regional Plans. It would, however, be possible for the WRC to consider the potential value of the Simplified Procedures to these Plans and to adopt Recommendations to the appropriate future regional conferences urging substitution, to the maximum feasible extent, of elements of the Simplified Procedures.~~

T10.2

Before notifying any assignment which is subject to a plan the administration shall ensure that it is in conformity with the Plan.[1] If the assignment is not in conformity the administration shall apply the procedure[2]~~, VGE Note 8,~~ to effect an appropriate modification to the Plan by seeking the agreement of the administrations, which are identified in accordance with Appendix S6, as having planned allotments or assignments which may be affected by the proposed modification.

~~VGE Note 8~~ ~~The WRC-95 will need to decide whether this Article is to be applied to the Plans of Appendices S25, S30 and S30A. The VGE recommends that it should NOT be applied to the Plans of Appendices S26, S27 and S30B.~~

T10.2.1

1 An assignment is subject to a plan when it is for a station in a radiocommunication service and in a frequency band and in a geographical area covered by a plan. An assignment is in conformity with the Plan, if it appears in the Plan, or corresponds to an allotment in the Plan, or if the procedure for modification of the Plan has been successfully applied.

T10.2.2

2 Where an existing Plan contains a supplementary or alternative procedure that procedure shall continue to be applied.

T10.3

A proposed modification to a plan may consist of:

T10.4

a) a change in the characteristics of an entry in the Plan; or

T10.5

b) the inclusion of a new entry in the Plan; or

T10.6

c) the cancellation of an entry in the Plan.

T10.7 Before an administration proposes to include in the Plan under the provisions of T10.5, a new frequency assignment to a space station or to include in the Plan new frequency assignments to a space station whose orbital position is not designated in the Plan for this administration, all the assignments to the service area involved should normally have been brought into service or have been notified to the Bureau in accordance with the relevant provisions of the Plan. Should this not be the case, the administration concerned shall inform the Bureau of the reasons therefor.

T 10.8 For the purpose of effecting a modification to a plan, the administration concerned shall, having regard to the relevant provisions associated with the Plan, send to the Bureau the relevant information listed in Appendix S4. This action shall be taken within the time limits specified in the relevant appendix.

T 10.9 The Bureau, upon receiving the information under No. **T10.8:**

T 10.10

a) determine in accordance with Appendix **S6** the administrations whose allotments or assignments are considered to be affected;

T 10.11

b) include their names in the information received under No. **T10.8;**

T 10.12

c) publish the complete information in its Weekly Circular;

T10.13

d) promptly inform all administrations affected of its actions and the results of its calculations, drawing their attention to the relevant Weekly Circular.

T 10.14 Following receipt of the Weekly Circular, an administration believing that it should have been included in the list of administrations whose services are considered to be affected may, giving the technical reasons for so doing, request the Bureau to include its name. The Bureau shall study this request on the basis of Appendix **S6** and the relevant rules of Procedure. In the event that the request to be included in the list of affected administrations is accepted by the Bureau, an addendum to the publication mentioned in **T10.12** shall be published by the Bureau. Should the Bureau reach a negative conclusion, it shall inform the administrations concerned.

T 10.15 The administration seeking agreement and those with which it is sought, or the Bureau, may request any additional information they consider necessary. The Bureau shall be sent copies of any such requests and the replies.

T 10.16 Comments from administrations on the information published pursuant to **T10.12** should be sent either directly to the administration proposing the modification or through the Bureau. In any event the Bureau shall be informed that comments have been made. The Bureau shall inform the administration proposing the modification of the comments that have been made.

T 10.17 An administration which has not notified its comments either to the administration seeking agreement or to the Bureau within a period of four months following the date of the weekly circular referred to in **T 10.12** shall be understood to have agreed to the proposed modification. This time-limit may be extended by up to three months for an administration that has requested additional information under **T10.15** or for an administration that has requested the assistance of the Bureau under **T10.18.** In the latter case the Bureau shall inform the administrations concerned of this request.

T10.18 Any administration involved in this procedure may request the assistance of the Bureau in seeking agreement:

T10.19

~~a)~~ ~~when there has been no reply or decision within four months;~~

~~b~~a) in applying any step of this procedure;

T10.20

~~c~~b) in carrying out any technical study necessary for the application of this procedure.

T10.2~~2~~1 If, following action by the Bureau in response to a request for assistance under No. **T10.18** the Bureau receives no reply or decision within three months of its request for a decision in the matter from an administration whose agreement has been sought, the administration which requested the agreement shall be deemed to have fulfilled its obligations under this procedure. It shall also be deemed that the administration which did not give its decision has undertaken:

T10.2~~3~~2

~~a)~~ That no complaint will be made in respect of harmful interference affecting the services rendered by its stations which may be caused by the use of the assignment in conformity with the proposed modification to the Plan, and

T 10.243 If no comments have been received on the expiry of the periods specified in **T 10.17**, or if agreement has been reached with the administrations which have made comments and with which agreement is necessary, or if the provisions of ~~**T 10.22**~~**T 10.21** have been applied, the administration proposing the modification shall inform the Bureau, indicating the final characteristics of the frequency assignment, together with the names of the administrations with which agreement has been reached.
T10.254 The Bureau shall publish in a special section of its weekly circular the information received under ~~**T 10.24**~~**T 10.23** together with the names of any administrations with which the provisions of this Article have been successfully applied. The Bureau shall then up-date the master copy of the Plan as well as the Master Register. The new or modified entry in the Plan shall then have the same status as others appearing in the Plan and shall be considered as being in conformity with the Plan.
T10.265 The relevant provisions of the Plan shall be applied when frequency assignments are notified to the Bureau.
T10.276 If no agreement is reached between the administrations concerned the Bureau shall carry out any study that may be requested by those administrations. The Bureau shall inform them of the results and of any recommendations it may be able to offer for a solution of the problem.
T10.287 When a proposed modification to a plan involves developing countries, administrations shall seek all practicable solutions conducive to the economic development of the radiocommunications systems of those countries.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 155-E
3 November 1995
Original: French

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 6

FIRST SERIES OF TEXTS SUBMITTED BY COMMITTEE 4 TO THE EDITORIAL COMMITTEE

Committee 4 has adopted the attached texts, which it submits to the Editorial Committee for consideration and subsequent transmission to the Plenary Meeting.

The Final Acts are prepared on the basis of the existing Radio Regulations. To facilitate the referencing of old and new texts, a table is presented, for each Article, showing the correspondence between the existing Radio Regulations provisions and the VGE Report Part C provisions. Where the VGE Report makes no change of substance to a Radio Regulations provision and the VGE provision has been adopted unchanged by Committee 4, the text of the relevant Radio Regulations provision is not reproduced. (Editorial changes and numbering changes are not shown in full but are indicated in the table as "(MOD)".) If any change of substance to a Radio Regulations provision has been made by the VGE, or the VGE provision has been changed by Committee 4, the text is provided. Radio Regulations provisions suppressed in the VGE Report are shown in the table. The marginal notation (NOC, MOD, etc.) represents the action taken by WRC-95 and is reproduced in the last column of the table*. The table will be presented to the Plenary together with each Article.

M. GODDARD
Chairman of Committee 4

* NOTE – A blank box in the table corresponds to a "NOC".

ARTICLE S0 PREAMBLE

RR	Action by VGE	VGE	Action by WRC-95
	ADD	S0.1	
	ADD	S0.2	
	ADD	S0.3	
	ADD	S0.4	
	ADD	S0.5	
	ADD	S0.6	
	ADD	S0.7	
	ADD	S0.8	
	ADD	S0.9	
	ADD	S0.10	
1	MOD	S0.11	

RADIO REGULATIONS

PREAMBLE

NOC **S0.1** These Regulations are founded on the following principles:

NOC **S0.2** Administrations shall endeavour to limit the number of frequencies and the spectrum used to the minimum essential to provide in a satisfactory manner the necessary services. To that end, they shall endeavour to apply the latest technical advances as soon as possible. **(CS195)**

NOC **S0.3** In using frequency bands for radio services, administrations shall bear in mind that radio frequencies and the geostationary-satellite orbit are limited natural resources and that they must be used rationally, efficiently and economically, in conformity with the provisions of the Radio Regulations, so that countries or groups of countries may have equitable access to both, taking into account the special needs of the developing countries and the geographical situation of particular countries. **(CS196)**

NOC **S0.4** All stations, whatever their purpose, must be established and operated in such a manner as not to cause harmful interference to the radio services or communications of other administrations or of recognized operating agencies, or of other duly authorized operating agencies which carry on a radio service, and which operate in accordance with the provisions of these Regulations. **(CS197)**

NOC **S0.5** With a view to fulfilling the purposes of the Union appearing in Article 1 of the Constitution, these Regulations have the following objectives:

NOC **S0.6** to facilitate equitable access to and the orderly use of the natural resources of the radio-frequency spectrum and the geostationary-satellite orbit;

NOC **S0.7** to ensure the availability and protection from harmful interference of the frequencies provided for distress and safety purposes;

NOC **S0.8** to assist in the prevention and resolution of harmful interference between the radio services of different administrations;

NOC **S0.9** to facilitate the efficient and effective operation of all radiocommunication services;

NOC **S0.10** to provide for and where necessary regulate new applications of radiocommunication technology.

NOC **S0.11** The application of the provisions of these Regulations by the International Telecommunication Union does not imply the expression of any opinion whatsoever on the part of the Union concerning the sovereignty or the legal status of any country, territory or geographical area.

ARTICLE S1 - Terms and Definitions

RR	Action by VGE	VGE	Action by WRC-95
2	MOD	S1.1	
3	MOD	S1.2	
4	(MOD)	S1.3	
5	(MOD)	S1.4	
6		S1.5	
7	(MOD)	S1.6	
8		S1.7	
9		S1.8	
10		S1.9	
11		S1.10	
12		S1.11	
13		S1.12	
14		S1.13	
15	MOD	S1.14	
16		S1.15	
17		S1.16	
18		S1.17	
19		S1.18	
20		S1.19	
21		S1.20	
22		S1.21	
23	SUP	--	
24		S1.22	
25		S1.23	
26	(MOD)	S1.24	
27		S1.25	
28		S1.26	
29		S1.27	
30		S1.28	
31		S1.29	
32		S1.30	
33		S1.31	
34		S1.32	
34A		S1.33	
34B		S1.34	
35		S1.35	
35A		S1.36	
35B		S1.37	
36	(MOD)	S1.38	
37		S1.39	
38		S1.40	

RR	Action by VGE	VGE	Action by WRC-95
39		S1.41	
40		S1.42	
41		S1.43	
42		S1.44	
43		S1.45	
44		S1.46	
45		S1.47	
46		S1.48	
46A		S1.49	
47		S1.50	
48		S1.51	
49		S1.52	
50		S1.53	
51		S1.54	
52		S1.55	
53		S1.56	
54		S1.57	
55		S1.58	
56	(MOD)	S1.59	
57		S1.60	
58		S1.61	
59		S1.62	
60		S1.63	
61		S1.64	
62		S1.65	
63		S1.66	
64	SUP	--	
65		S1.67	
66		S1.68	
67		S1.69	
67A		S1.70	
68		S1.71	
68A		S1.72	
69		S1.73	
69A		S1.74	
70		S1.75	
71		S1.76	
72		S1.77	
73		S1.78	
74		S1.79	
75		S1.80	
76		S1.81	
77		S1.82	

RR	Action by VGE	VGE	Action by WRC-95
78		S1.83	
79		S1.84	
80		S1.85	
81		S1.86	
82		S1.87	
83		S1.88	
84		S1.89	
85		S1.90	
86		S1.91	
87		S1.92	
88		S1.93	
88A		S1.94	
89		S1.95	
90		S1.96	
91		S1.97	
92		S1.98	
93		S1.99	
94		S1.100	
95		S1.101	
96		S1.102	
97		S1.103	
98		S1.104	
99		S1.105	
100		S1.106	
101		S1.107	
102		S1.108	
103		S1.109	
104		S1.110	
105		S1.111	
106		S1.112	
107		S1.113	
108		S1.114	
109		S1.115	
110	(MOD)	S1.116	
111	(MOD)	S1.117	MOD
112	(MOD)	S1.118	
113		S1.119	
114		S1.120	
115		S1.121	
116	MOD	S1.122	
117	MOD	S1.123	
118		S1.124	
119		S1.125	

RR	Action by VGE	VGE	Action by WRC-95
120		S1.126	
121		S1.127	
122		S1.128	
123		S1.129	
124		S1.130	
125		S1.131	
126		S1.132	
127		S1.133	
128		S1.134	
129		S1.135	
130		S1.136	
131		S1.137	
132		S1.138	
133		S1.139	
134		S1.140	
135		S1.141	
136		S1.142	
137		S1.143	
138		S1.144	
139		S1.145	
140		S1.146	
141		S1.147	
142		S1.148	
143		S1.149	
144		S1.150	
145		S1.151	
146		S1.152	
147	(MOD)	S1.153	
148		S1.154	
149		S1.155	
150	(MOD)	S1.156	
151		S1.157	
152		S1.158	
153		S1.159	
154		S1.160	
155		S1.161	
156		S1.162	
157		S1.163	
158		S1.164	
159		S1.165	
160		S1.166	
161	(MOD)	S1.167	
162		S1.168	

RR	Action by VGE	VGE	Action by WRC-95
163	(MOD)	S1.169	
164		S1.170	
165		S1.171	
166		S1.172	
167		S1.173	
168		S1.174	
168A		S1.175	
168B		S1.176	
169		S1.177	
170		S1.178	
171		S1.179	
172		S1.180	
173		S1.181	
174		S1.182	
175		S1.183	
176		S1.184	
177		S1.185	
178		S1.186	
179		S1.187	
180		S1.188	
181		S1.189	
182		S1.190	
183		S1.191	
184 - 207 not allocated			
FOOTNOTES			
15.1	SUP		
		S1.117.1	MOD
119.1		S1.125.1	
120.1		S1.126.1	
121.1		S1.127.1	
161.1		S1.167.1	
162.1		S1.168.1	

CHAPTER SI

Terminology and Technical Characteristics

ARTICLE S1

Terms and Definitions

Introduction

NOC S1.1 For the purposes of these Regulations, the following terms shall have the meanings defined below. These terms and definitions do not, however, necessarily apply for other purposes. Definitions identical to those contained in the Annex to the Constitution or the Annex to the Convention of the International Telecommunication Union (Geneva, 1992) are marked "(CS)" or "(CV)" respectively.

Note: If, in the text of a definition below, a term is printed in italics, this means that the term itself is defined in this Article.

Section I. General Terms

NOC S1.2 *Administration:* Any governmental department or service responsible for discharging the obligations undertaken in the Convention of the International Telecommunication Union and in the Administrative Regulations (CS).

NOC S1.3 to S1.13

NOC S1.14 *Coordinated Universal Time (UTC):* Time scale, based on the second (SI), as defined in the most recent version of ITU-R Recommendation 460.

For most practical purposes associated with the Radio Regulations, UTC is equivalent to mean solar time at the prime meridian (0° longitude), formerly expressed in GMT.

NOC S1.15 to S1.116

MOD S1.117 *Telegraphy*[1]*:* A form of telecommunication in which the transmitted information is intended to be recorded on arrival as a graphic document; the transmitted information may sometimes be presented in an alternative form or may be stored for subsequent use. **(CS1016)**

MOD **S1.117.1** *Note*: In this definition, a graphic document records information in a permanent form and is capable of being filed and consulted; it may take the form of written or printed matter or of a fixed image.

NOC **S1.118 to S1.121**

NOC **S1.122** *Facsimile:* A form of *telegraphy* for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form.

NOC **S1.123** *Telephony:* A form of *telecommunication* primarily intended for the exchange of information in the form of speech.

NOC **S1.124 to S1.191**

ARTICLE S2 - Nomenclature

RR	Action by VGE	VGE	Action by WRC-95
208	MOD	S2.1	
209		S2.2	
210 - 234 not allocated			
235		S2.3	
236		S2.4	
237		S2.5	
238		S2.6	
239 - 263 not allocated			
264	MOD	S2.7	
265 - 273	SUP*	Ap. S1	
274 - 298 not allocated			
FOOTNOTES			
267.1	SUP*	Ap. S1	
271.1	SUP*	Ap. S1	
272.1	SUP*	Ap. S1	
273.1	SUP*	Ap. S1	

ARTICLE S2

Nomenclature

Section I. Frequency and Wavelength Bands

S2.1 The radio spectrum shall be subdivided into nine frequency bands, which shall be designated by progressive whole numbers in accordance with the following table. As the unit of frequency is the hertz (Hz), frequencies shall be expressed:

— in kilohertz (kHz), up to and including 3 000 kHz;

— in megahertz (MHz), above 3 MHz, up to and including 3 000 MHz;

— in gigahertz (GHz), above 3 GHz, up to and including 3 000 GHz.

However, where adherence to these provisions would introduce serious difficulties, for example in connection with the notification and registration of frequencies, the lists of frequencies and related matters, reasonable departures may be made.

Band Number	Symbols	Frequency Range (lower limit exclusive, upper limit inclusive)	Corresponding Metric Subdivision	Metric Abbreviations for the Bands
4	VLF	3 to 30 kHz	Myriametric waves	B.Mam
5	LF	30 to 300 kHz	Kilometric waves	B.km
6	MF	300 to 3 000 kHz	Hectometric waves	B.hm
7	HF	3 to 30 MHz	Decametric waves	B.dam
8	VHF	30 to 300 MHz	Metric waves	B.m
9	UHF	300 to 3 000 MHz	Decimetric waves	B.dm
10	SHF	3 to 30 GHz	Centimetric waves	B.cm
11	EHF	30 to 300 GHz	Millimetric waves	B.mm
12		300 to 3 000 GHz	Decimillimetric waves	

Note 1: "Band Number N" (N = band number) extends from 0.3×10^N Hz to 3×10^N Hz.

Note 2: Prefix: k = kilo (10^3), M = mega (10^6), G = giga (10^9).

NOC S2.2 to S2.6

Section III. Designation of Emissions

NOC S2.7 Emissions shall be designated according to their necessary bandwidth and their classification in accordance with the method described in Appendix **S1**.

ARTICLE S3 - Technical Characteristics of Stations

RR	Action by VGE	VGE	Action by WRC-95
299		S3.1	
300	(MOD)	S3.2	
301		S3.3	
302	(MOD)	S3.4	
303	MOD	S3.5	
304	MOD	S3.6	
305	MOD	S3.7	MOD
306		S3.8	
307	MOD	S3.9	
308		S3.10	
309		S3.11	
310		S3.12	
311		S3.13	
312	(MOD)	S3.14	
313		S3.15	
314 - 338 not allocated			

ARTICLE S3

Technical Characteristics of Stations

NOC **S3.1 to S3.4**

NOC **S3.5** [Transmitting stations shall conform to the frequency tolerances specified in ITU-R Recommendation ... (see [Annex **AP 7**]).]

NOC **S3.6** [Transmitting stations shall conform to the maximum permitted spurious emission power levels specified in ITU-R Recommendation ... (see [Annex **AP 8**]).]

MOD **S3.7** Transmitting stations shall conform to the maximum permitted power levels for out-of-band emissions specified for certain services and classes of emission in the present Regulations. In the absence of such specified maximum permitted power levels transmitting stations shall, to the maximum extent possible, satisfy the requirements relating to the limitation of the out-of-band emissions specified in the most recent ITU-R Recommendations.

NOC **S3.8**

NOC **S3.9** The bandwidths of emissions also shall be such as to ensure the most efficient utilization of the spectrum; in general this requires that bandwidths be kept at the lowest values which the state of the technique and the nature of the service permit. Appendix **S1** is provided as a guide for the determination of the necessary bandwidth.

NOC **S3.10 to S3.15**

ARTICLE S6 - Special Agreements

RR	Action by VGE	VGE	Action by WRC-95
374	(MOD)	S6.1	
375	(MOD)	S6.2	
376	(MOD)	S6.3	
377		S6.4	
378		S6.5	
379	MOD	S6.6	
380	(MOD)	S6.7	
381 - 390 not allocated			

N.B.: In view of the proposed deletion of the present Article 10		
990 - 1016	SUP	--
1017 - 1040 not allocated		

ARTICLE S6

Special Agreements

NOC **S6.1 to S6.5**

NOC **S6.6** § 6. The Director of the Radiocommunication Bureau and the Chairman of the Radio Regulations Board may be invited to send representatives to participate in an advisory capacity in the preparation of these agreements and in the proceedings of the conferences, it being recognized that in the majority of cases such participation is desirable.

NOC **S6.7**

ARTICLE S15 - Interference

RR	Action by VGE	VGE	Action by WRC-95
1798	SUP*	S15.25	
1799	MOD	S15.1	
1800	SUP	--	
1801	SUP	--	
1802	SUP	--	
1803	SUP	--	
1804	MOD	S15.2	
1805	MOD	S15.3	
1806		S15.4	
1807	(MOD)	S15.5	
1808		S15.6	
1809		S15.7	
1810		S15.8	
1811		S15.9	
1812	(MOD)	S15.10	
1813		S15.11	
1814		S15.12	
1815		S15.13	
1816	SUP	--	
1817 - 1841 not allocated			
1842		S15.14	
1843		S15.15	
1844		S15.16	
1845		S15.17	
1846		S15.18	MOD
1847 - 1871 not allocated			
1915	(MOD)	S15.19	
1916		S15.20	
1917		S15.21	
1918 - 1942 not allocated			
1943	(MOD)	S15.22	
1944	(MOD)	S15.23	
1947	(MOD)	S15.24	
1798	(MOD)	S15.25	
1946	(MOD)	S15.26	

RR	Action by VGE	VGE	Action by WRC-95
1958	(MOD)	S15.27	
1957	(MOD)	S15.28	
1956	(MOD)	S15.29	
1945	(MOD)	S15.30	
1948	(MOD)	S15.31	
1949	(MOD)	S15.32	
1955	(MOD)	S15.33	
1950	(MOD)	S15.34	
1954	(MOD)	S15.35	
1951	(MOD)	S15.36	
1952	(MOD)	S15.37	
1953	(MOD)	S15.38	
1959	(MOD)	S15.39	
1960	(MOD)	S15.40	
1961	(MOD)	S15.41	
1962	(MOD)	S15.42	
1963	(MOD)	S15.43	
1964	(MOD)	S15.44	
1965	(MOD)	S15.45	
1966	(MOD)	S15.46	
1967 - 1991 not allocated			
FOOTNOTES			
1814.1	(MOD)	S15.12.1	
1815.1	(MOD)	S15.13.1	

CHAPTER SIV

Interference

ARTICLE S15

Interference

Section I. Interference from Radio Stations

NOC **S15.1** § 1. All stations are forbidden to carry out unnecessary transmissions, or the transmission of superfluous signals, or the transmission of false or misleading signals, or the transmission of signals without identification (except as provided for in Article **S19**).

NOC **S15.2** § 2. Transmitting stations shall radiate only as much power as is necessary to ensure a satisfactory service.

NOC **S15.3** § 3. In order to avoid interference (see also Article **S3** and No. **S22.1**):

NOC **S15.4 to S15.17**

MOD **S15.18** (5) For testing stations in the [maritime] mobile service see No. **S57.9**.

NOC **S15.19 to S15.46**

ARTICLE S16 - International Monitoring

RR	Action by VGE	VGE	Action by WRC-95
1872	MOD	S16.1	
1873		S16.2	MOD
1875		S16.3	
1876	SUP*	[An. 20]	
1877		S16.4	
1874	MOD	S16.5	
1874bis	ADD	S16.6	
1878	SUP*	[An. 20]	
1879	SUP*	[An. 20]	
1880	SUP*	[An. 20]	
1881	SUP*	[An. 20]	
1882	SUP	--	
1883	SUP*	[An. 20]	
1884	SUP	--	
1885	(MOD)	S16.7	
1886	(MOD)	S16.8	
FOOTNOTE			
1872.1	ADD	S16.1.1	
1887 - 1914 not allocated			

ARTICLE S16

International Monitoring

NOC **S16.1** To assist to the extent practicable in the implementation of these Regulations, in particular to help ensure efficient and economical use of the radio-frequency spectrum and to help in the prompt elimination of harmful interference, administrations agree to continue the development of monitoring facilities and, to the extent practicable, to cooperate in the continued development of the international monitoring system, taking into account the relevant ITU-R Recommendations.[1]

NOC **S16.1.1** [1] Information on this subject is also provided in the ITU-R Handbook on Monitoring Stations.

MOD **S16.2** The international monitoring system comprises only those monitoring stations which have been so nominated by administrations in the information sent to the Secretary-General in accordance with [Annex **20**]. These stations may be operated by an administration or, in accordance with an authorization granted by the appropriate administration, by a public or private enterprise, by a common monitoring service established by two or more countries, or by an international organization.

NOC **S16.3 and S16.4**

NOC **S16.5** Administrations will, as far as they consider practicable, conduct such monitoring as may be requested of them by other administrations or by the Bureau.

NOC **S16.6** Administrative and procedural requirements for use and operation of the international monitoring system shall be in accordance with the provisions of ITU-R Recommendation (see [Annex **20**]).

NOC **S16.7 and S16.8**

ARTICLE S17 - Secrecy

RR	Action by VGE	VGE	Action by WRC-95
1992		S17.1	MOD
1993		S17.2	
1994		S17.3	
1995 - 2019 not allocated			

ARTICLE S18 - Licences

RR	Action by VGE	VGE	Action by WRC-95
2020		S18.1	MOD
2021		S18.2	
2022		S18.3	
2023		S18.4	MOD
2024		S18.5	
2025		S18.6	
2026		S18.7	
2027		S18.8	
2028		S18.9	
2029		S18.10	
2030		S18.11	
2031 - 2054 not allocated			

ARTICLE S17

Secrecy

MOD **S17.1** In the application of the appropriate provisions of the Constitution and the Convention, administrations bind themselves to take the necessary measures to prohibit and prevent:

NOC **S17.2 and S17.3**

ARTICLE S18

Licences

MOD **[S18.1** § 1. (1) No transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations by the government of the country[, or by any entity approved by the government of the country] to which the station in question is subject. (However, see Nos. **S18.2**, **S18.8** and **S18.11**.)]

NOC **S18.2 and S18.3**

MOD **S18.4** § 2. The holder of a licence is required to preserve the secrecy of telecommunications, as provided in the relevant provisions of the Constitution and the Convention. Moreover, the licence shall mention, specifically or by reference, that if the station includes a receiver, the interception of radiocommunication correspondence, other than that which the station is authorized to receive, is forbidden, and that in the case where such correspondence is involuntarily received, it shall not be reproduced, nor communicated to third parties, nor used for any purpose, and even its existence shall not be disclosed.

NOC **S18.5 to S18.11**

RESOLUTION COM4-1

FOOTNOTES TO THE TABLE OF FREQUENCY ALLOCATIONS

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that footnotes to the Table of Frequency Allocations should be clear, concise and easy to understand;

b) that footnotes should relate directly to matters of frequency allocation;

c) that there is a need to review footnotes regularly to ensure that any which are no longer required are deleted;

d) that, in order to ensure that footnotes allow modification to the Table of Frequency Allocations without introducing unnecessary complications, principles related to the use of footnotes are needed;

resolves

1 that, wherever possible, footnotes to the Table of Frequency Allocations should be confined to altering, limiting, or otherwise changing the relevant allocations rather than dealing with the operation of stations, assignment of frequencies or other matters;

2 that the Table of Frequency Allocations should include only those footnotes which have international implications for the use of the radio-frequency spectrum;

3 that new footnotes to the Table of Frequency Allocations should only be adopted to:

a) achieve flexibility in the Table of Frequency Allocations; or

b) protect existing usage when the relevant allocations are changed; or

c) introduce either transitional or permanent restrictions on a new service to achieve compatibility; or

d) meet the specific requirements of a country or area when it is impracticable to satisfy such needs otherwise within the Table of Frequency Allocations;

4 that footnotes should be in a common format where they serve a common purpose, and, where possible, grouped into a single footnote with appropriate references to the relevant frequency bands;

5 that recommended agendas for future world radiocommunication conferences should include an agenda item which would permit country footnotes, or country names to footnotes, to be deleted, if no longer required;

urges administrations

that, in making proposals to world radiocommunication conferences, account should be taken of *resolves* 1 through 5;

instructs the Director of the Radiocommunication Bureau

to review footnotes periodically, in consultation with concerned administrations, and communicate the results to future world radiocommunication conferences, to enable administrations to propose the deletion of their country footnotes, or their own country names from footnotes as appropriate.

RECOMMENDATION COM4-A

PRINCIPLES FOR THE ALLOCATION OF FREQUENCY BANDS

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that the ITU should maintain an International Table of Frequency Allocations covering the usable radio-frequency spectrum;

b) that it may be desirable, in certain cases, to allocate frequency bands to the most broadly defined services to improve flexibility of use but without detriment to other services;

c) that the development of common worldwide allocations is desirable to improve and harmonize utilization of the radio-frequency spectrum;

d) that adherence to these principles for allocation of spectrum will allow the Table of Frequency Allocations to focus on matters of regulatory significance while enabling greater flexibility in national spectrum use;

recommends that future world radiocommunication conferences

1 should, wherever possible, allocate frequency bands to the most broadly defined services with a view to providing the maximum flexibility to administrations in spectrum use, taking into account safety, technical, operational, economic and other relevant factors;

2 should, wherever possible, allocate frequency bands on a worldwide basis (aligned services, categories of services and frequency band limits) taking into account safety, technical, operational, economic and other relevant factors;

3 should take into account relevant studies from the Radiocommunication Sector and the reports from the relevant Conference Preparatory Meetings;

recommends to administrations

that, in making proposals to world radiocommunication conferences, account should be taken of *recommends* 1 through 3;

requests the Director of the Radiocommunication Bureau and the ITU-R Study Groups, as appropriate,

1 when executing technical studies in a frequency band, to examine the compatibility of a broad definition of services with the existing utilizations and the possibility of alignment of allocations on a worldwide basis noting *considerings* a), b), c) and d), and *recommends* 1, 2 and 3 above;

2 where appropriate to conduct these studies in cooperation with the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO);

3 to submit a report to future world radiocommunication conferences containing the results of these studies;

invites

the relevant conference preparatory meetings and the relevant ITU-R study groups to identify areas for study and to undertake the studies necessary to determine the impact on existing services of those agenda items of future world radiocommunication conferences which involve broadening the scope of existing service allocations;

instructs the Secretary-General

to communicate this Recommendation to the ICAO and the IMO.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 156-E
3 November 1995
Original: English

WORKING GROUP 5A

United States of America

INFORMATION PAPER

NGSO MSS FEEDER LINK OPERATION IN REGIONS 1 AND 3 IN THE 216.0 - 216.5 AND 217.5 - 218 MHz BANDS

A Introduction

The United States has proposed an allocation to NGSO < 1 GHz for space-to-Earth operation in the bands 216.0 - 216.5 and 217.5 - 218.0 MHz.

Non-Geostationary Satellite Orbit Mobile-Satellite Services, NGSO MSS < 1 GHz, provide worldwide data and messaging services. Feeder gateway ground stations provide connections to terrestrial networks and constellation control.

Only non-voice non-GEO (NVNG) MSS feeder downlinks are proposed for this band in Regions 1 and 3 where broadcasting is primary in the proposed bands. Transmissions from satellite to gateway ground stations result in a very low power flux-density on ground into TV receivers.

No feeder station emissions are proposed in this band. Feeder gateway ground stations are located out of broadcast service areas to allow reception of weak downlink signal without broadcast interference.

B Design considerations

Power flux-density recommendations are based on conservative application of well established ITU broadcast interference standards, CCIR reports, recommendations and applicable FCC studies. U/D derived from non-perceptible interference level. TV viewers will not see interference. DSB listeners will not hear interference.

A summary of interference cases is included in the attached tables. Interference to analogue TV reception is tolerable if a power flux-density of -152.6 dB(W/m^2/4 kHz) power flux-density is not exceeded. Digital TV and sound broadcasting can tolerate higher interference power flux-density levels.

C Regulatory considerations

Equitable power flux-density limits exist that assures interference free broadcast reception yet provides adequate signal power to ground stations for feeder-link reception. An allocation with reference to preliminary power flux-density value is required. Later review of power flux-density levels by a competent study group is acceptable.

D References

Analogue TV

[1] ITU Recommendation ITU-R IS.851-1 – 1993 – Sharing Between the Broadcasting Service and the Fixed and/or Mobile Services in the VHF and UHF Bands.

[2] CCIR Report 306-4 – 1982 – Ratio of Wanted-to-Unwanted Signal for AM Vestigial Sideband Colour Television Systems.

[3] CCIR Recommendation 418-3 – 1978 – Ratio of the Wanted-to-Unwanted Signal in Monochrome Television.

Digital TV

[4] ITU Recommendation 798-1 – 1994 – Digital Terrestrial Television Broadcasting in the VHF/UHF Bands.

[5] FCC Advanced Television System Recommendation – 24 February 1993.

Digital Sound Broadcasting.

[6] ITU-R Special Publication – Geneva, 1995 – Terrestrial and Satellite Digital Sound Broadcasting to Vehicular, Portable and Fixed Receivers in the VHF/UHF Bands.

Analogue TV Interference Summary

Parameter	Level	Comments
Thermal Noise	-96 dBm	10 dB Noise Figure in 6 MHz
Required SNR	23.2 dB	Derived from required signal power to be protected from reference 1 and assumed noise power
Required rural signal power to be protected	-72.8 dBm (49 dBμV/m)	From reference 1
No Perceptible interference U/D	-58 dB	Most stringent requirement from references 1, 2 for CW interference for TV formats H, I, K1, L, B, D, G, K
Tolerable interference power	-130.8 dBm (-9 dBμV/m) -152.6 dB(W/m^2/4 kHz)	Power flux-density calculated at 217 MHz

Digital TV Interference Summary

Parameter	Level	Comments
Thermal Noise	-96 dBm	10 dB Noise Figure in 6 MHz
Minimum Required SNR	15.4 dB	32 QAM/16 QAM Assumed
Required rural signal power	-80.6 dBm	
No Perceptible interference U/D	-20 dB	Reference 4 does not recommend U/D level. Most stringent requirement from reference 5
Tolerable interference power	-100.6 dBm (21.2 dBμ) -122.4 dB(W/m^2/4 kHz)	Power flux-density calculated at 217 MHz

Digital Sound Broadcasting (DSB) Interference Summary

Parameter	Level	Comments
Thermal Noise	-109.2 dBm	3 dB Noise Figure in 1.5 MHz, representative man-made noise
Minimum Required SNR	17 dB	OFDM SNR from Reference 6
Required rural signal power	-92.2 dBm	
No Perceptible interference U/D	-12 dB	Most stringent requirement from reference 6 is -12 dB for WB-FM. NB-PMR U/D is greater than 0 dB.
Tolerable interference power	-104.2 dBm (17.6 dBμ) -126.0 dB(W/m^2/4 kHz)	Power flux-density calculated at 217 MHz

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

SUMMARY RECORD

OF THE

FOURTH MEETING OF COMMITTEE 4

(VGE REPORT ON THE SIMPLIFICATION OF THE RADIO REGULATIONS)

Wednesday, 1 November 1995, at 1430 hours

Chairman: Mr. M. GODDARD (United Kingdom)

Subjects discussed		**Documents**
1	Approval of the summary records of the first and second meetings of Committee 4	103, 105(Rev.1)
2	Incorporation by reference (continued)	124
3	Approval of the first and second reports of Working Group 4A	118, 127

1 Approval of the summary records of the first and second meetings of Committee 4 (Documents 103 and 105(Rev.1))

1.1 The summary records of the first and second meetings of Committee 4 (Documents 103 and 105(Rev.1)) were **approved**.

2 Incorporation by reference (continued) (Document 124)

2.1 The **Chairman** introduced Document 124, which constituted an attempt to recapitulate the conclusions reached by Committee 4 at its third meeting. Various delegations, ITU officials and the Chairman of Committee 5 had already signified to him their agreement. He invited the delegations to approve those conclusions in their turn.

2.2 The **delegate of Argentina** made the statement reproduced in Annex.

2.3 The **Chairman** said that the discussions which had so far taken place clearly showed that, if the principle of incorporation by reference were adopted, it would have to be accompanied by very precise guidelines.

2.4 The **delegate of France** asked for an additional study to be made on references to ITU-R Recommendations in the Radio Regulations, since Recommendations had never possessed any mandatory character. He was completely in agreement with Document 124.

2.5 The **Chairman** invited the participants to consider Document 124 paragraph by paragraph.

Paragraphs 1, 2a) and 2b)

2.6 Paragraphs 1, 2a) and 2b) were **approved**.

Paragraphs 2c) and 2d)

2.7 The **delegate of Saudi Arabia**, referring to paragraph 2c), enquired whether the brevity of the text was the only criterion governing the incorporation of mandatory provisions in the body of the Radio Regulations. Moreover, some clarification would be welcome on paragraph 2d) which proposed the case-by-case incorporation of material by reference on a mandatory basis, for example, in cases where the material concerned was likely to be of specific interest to a limited number of users of the Radio Regulations. In his view, that was a vague and hardly satisfactory criterion.

2.8 The **Chairman** acknowledged that the criteria of volume or limited number of users of the referenced texts were purely subjective and had been employed merely for purposes of guidance in the absence of more precise criteria.

2.9 The **delegate of Morocco** proposed that subparagraph 2d)iii) should be amended to read: "The referenced text must be adopted by the Plenary of a competent conference, but should not be part of the Final Acts".

2.10 It was so **agreed**.

2.11 The **delegate of Germany**, reverting to the comment by the delegate of Saudi Arabia, proposed the deletion of the phrase between brackets in paragraph 2d), since the examples quoted were merely illustrative. The **delegation of Saudi Arabia** supported that proposal.

2.12 It was so **agreed**.

2.13 The **Chairman** said that he had received from the Vice-Chairman a proposal to replace the second and third sentences of subparagraph 2d)v) by the following wording: "The mechanism for considering such a step shall be on the basis of proposals from administrations to the extent that the provision concerned is within the scope of a WRC agenda".

2.14 In reply to a request for clarification from the **delegate of Japan**, the **Chairman** put forward the following hypothesis: if a Recommendation was incorporated by reference in Article X of the Radio Regulations and subsequently updated by the Radiocommunication Assembly, an administration might, at a later WRC and provided that the article in question formed part of its agenda, propose the updating of the reference concerned in the Regulations. That would be the mechanism applied if the proposal was adopted.

2.15 The **Chairman of the VGE** thought that such a mechanism would undermine one of the advantages offered by incorporation by reference, namely the maintenance of a closer link between the Radio Regulations and technological progress. For that purpose, when a referenced text was updated, it was important that the reference contained in the Radio Regulations should refer to the new version of the text. Needless to say, it would then be up to the WRC to agree or refuse to modify the reference.

2.16 The **delegate of Germany** said that he was opposed to the deletion of the last sentence of subparagraph 2d)v) since proposal EUR/5/27 had not yet been discussed.

2.17 The **delegate of Finland** supported that view, drawing attention to No. 164, Article 12 of the ITU Convention (Geneva, 1992), which stipulated that, in relation to radiocommunication conferences, the Director of the Radiocommunication Bureau shall coordinate the preparatory work of the study groups and the Bureau, communicate to Members the results of that preparatory work, collect their comments and submit a consolidated report to the conference which might include proposals of a regulatory nature. In that connection, he wondered whether the proposal under consideration did not conflict with the spirit of the Convention.

2.18 The **delegate of Saudi Arabia** supported the Vice-Chairman's proposal, in order to avoid making the WRC's task more difficult.

2.19 The **delegate of Spain** endorsed the comments by the Chairman of the VGE and the delegate of Germany.

2.20 The **Chairman** proposed that the second sentence of subparagraph 2d)v) should be reworded to indicate that the mechanism for the incorporation of new versions of references contained in the Radio Regulations could not be clearly defined at that juncture; the subject would be further discussed at a later meeting of Committee 4. With that reservation, he proposed that the principle of incorporation by reference be adopted, and that Document 124 as amended be agreed.

2.21 It was so **agreed**.

3 Approval of the first and second reports of Working Group 4A (Documents 118 and 127)

First report of Working Group 4A (Document 118)

3.1 The **Chairman of Working Group 4A** said that the two draft texts contained in Attachments 1 and 2 to the document under consideration had been produced in the light of the VGE's recommendations and administrations' proposals, and that wide agreement had been reached within the Working Group.

New Resolution COM4/1 (Attachment 1)

Footnotes to the Table of Frequency Allocations

3.2 The **delegate of Russia** proposed that the last part of the section *instructs the Director of the Radiocommunication Bureau* should be amended to read: "... to future world radiocommunication conferences, to enable administrations to delete their country footnotes ...".

3.3 The **delegate of the United Kingdom,** supported by the **delegate of France**, pointed out that the deletion of the footnotes in question had to be put forward as a proposal for approval at a future world radiocommunication conference; the amendment proposed should thus read: "... to enable administrations to propose the deletion ...". The **delegate of Russia** having said that, in his view, the deletion of footnotes was the sovereign right of the country concerned, the **Chairman** explained that, since the deletion of a footnote was tantamount to modifying the Radio Regulations, a corresponding proposal would have to be submitted to a world conference. The **Chairman of Working Group 4A** added that the section under discussion did in fact establish a mechanism which should enable the Radiocommunication Bureau to coordinate proposals for the deletion of footnotes with a view to their submission to a world conference for approval.

3.4 In the light of those explanations, the amendment proposed by the delegate of Russia, as modified by the delegate of the United Kingdom, was **approved**.

3.5 In reply to a request for clarification by the **delegate of Croatia** concerning the possibility of adding footnotes to the Radio Regulations, the **Chairman** emphasized that the footnotes to the Table of Frequency Allocations were an integral part of the Radio Regulations, which meant that any modification, or *a fortiori*, any addition, would have to be approved by a world conference. He added, however, that in the spirit of the VGE Report, draft new Resolution COM4/1 was designed to simplify the Radio Regulations and that the last section related only to the deletion of footnotes. In that respect, the **Chairman of Working Group 4A** drew attention to *resolves* 2, emphasizing the term "international implications"; that provision placed all countries on an equal footing.

3.6 In reply to a question from the **delegate of the Ukraine** concerning the nature of the mechanism which would be applied to States which either no longer existed, such as the ex-USSR, or which had been recently constituted, the **Chairman of Working Group 4A** said that the matter was still being studied by the Working Group, but that one possible solution, when frontiers had been redrawn following political upheavals, would be to agree with the administrations concerned on the modifications to be made to the Regulations.

3.7 With the amendment proposed and the explanations provided, draft new Resolution COM4/1 (Attachment 1) was **approved**.

New Recommendation COM4/A (Attachment 2)

Principles for the allocation of frequency spectrum

3.8 In the interests of consistency, the **Chairman of Working Group 4A** proposed that the title should be altered to read: "Principles for the allocation of frequency bands".

3.9 The **observer of IMO**, supported by the **delegate of Japan**, thought that the factors indicated in *recommends that future world radiocommunication conferences* 1 and 2 should be rearranged to give precedence to safety. The **delegate of Australia** said that, although he had no objection to the change, the original order did in fact not imply any priority.

3.10 The **delegate of Russia** having said that the title of the draft new Recommendation risked appearing over-ambitious, the **Chairman** said that the absence of the definite article, at least in English, deliberately avoided being too specific and that, at all events, the draft new Recommendation sought neither to be exhaustive nor to enunciate all the principles applicable to the allocation of the frequency spectrum.

3.11 Subject to the proposed editorial changes, draft new Recommendation COM4/A (Attachment 2) was **approved**.

Second report of Working Group 4A (Document 127)

3.12 The **Chairman of Working Group 4A** said that his Working Group had only one amendment of substance to propose in Article S1 as proposed by the VGE, concerning the definition of *Telegraphy.*

NOC S1.1 to S1.116

3.13 The **delegate of Brazil** said that his delegation had submitted a proposed amendment concerning the mobile-satellite service, calling for deletion of the radiodetermination-satellite service in certain frequency bands. Given that Committee 5 was reviewing that service, the matter referred to in No. S1.25 should be reconsidered later.

3.14 The **Chairman of Working Group 4A** said that the proposed amendment submitted by the delegation of Brazil in respect of No. S1.25 had indeed been examined by the Working Group which, while not wishing to adopt it, had taken note of the examination of certain specific frequency allocations currently being conducted by Committee 5, an examination which, in his view, might perhaps lead to the Conference adopting a final position that was different from that of the Working Group.

3.15 As a compromise, the **Chairman** suggested that No. S1.25 should not be amended for the time being, but that it should be noted that in the light of the discussions taking place in Committee 5 the delegation of Brazil might re-submit its proposed modification later.

3.16 It was so **agreed**.

3.17 The **delegate of Argentina** said that his delegation had put forward a proposed amendment to Nos. S1.21A and S1.66A, since no agreement had yet been reached on a definition for the aeronautical fixed service and aeronautical fixed stations.

3.18 The **Chairman of Working Group 4A** said that the proposal to reinstate the definitions of the aeronautical fixed service and aeronautical fixed stations in Article S1 had also been discussed by the Working Group, which had decided that it would stick to the position recommended by the VGE and that those definitions would no longer form part of the Radio Regulations.

3.19 The **delegate of Argentina**, supported by the **delegate of Spain**, said that at its last meeting the Working Group had not excluded those definitions from the Radio Regulations, but had decided to defer any decision on the matter.

3.20 The **delegate of France** said that approval of the section from NOC S1.1 to S1.116 would not settle the matter of the aeronautical fixed service on which, indeed, no decision had yet been taken. The fundamental question thus arose at what point during the examination of Part C of the VGE Report the Committee would be called upon to solve the problem.

3.21 The **Chairman** proposed that the section from NOC S1.1 to S1.116 should be approved subject to the express proviso that the definitions of the aeronautical fixed service and aeronautical fixed stations might be reinstated later on, after more thorough discussion by Working Group 4A, and, clearly, on the understanding that the modification proposed by the delegation of Brazil for No. S1.25 might be re-submitted later.

3.22 It was so **agreed**.

MOD S1.117

3.23 The **delegate of Viet Nam** said that the definition proposed seemed broader than that contained in the Constitution, and wondered about the legal consequences of that lack of consistency. The **Chairman of Working Group 4A** said that in any case, the text set out in annex to the Constitution took precedence. The **delegate of Spain,** noting that statement, asked that in the Spanish version, at least, the text of the Constitution should be reproduced word for word. The **Chairman** proposed that the definition given in the Constitution should be adopted for MOD S1.117. The **delegate of Germany** suggested that in that case, No. 1016 of the Constitution should be expressly mentioned.

3.24 It was so **agreed**.

SUP S1.117

3.25 Following a remark by the **delegate of France** concerning the form of the proposal, the **Chairman** suggested that matters of presentation should be left to the Editorial Committee.

3.26 It was so **agreed**.

NOC S1.118 to S1.191

3.27 The **delegate of Argentina** referred to his delegation's proposal (ARG/8/14) for No. S1.170A concerning the definition of service area. The **Chairman of Working Group 4A** replied that the proposal had been examined by the Working Group and rejected.

3.28 With the various clarifications provided and reservations expressed, the text of Article S1 as set out in Document 127 was **approved**.

The meeting rose at 1600 hours.

The Secretary:
M. GIROUX

The Chairman:
M. GODDARD

Annex: 1

Original: Spanish

ANNEX

Statement by the delegate of Argentina

Task 3, Operational and administrative matters, is concerned, as its central topic, with incorporation of texts by reference in the simplified Regulations.

In tackling this question, careful thought should be given to the meaning and scope of the term "simplify".

The chief characteristic of a simplified text is that it is concise, concrete and self-sufficient in form. To change the information it contains while losing sight of those qualities will merely result in a text which is brief but of doubtful usefulness.

As a general principle, everything that is necessary in order to deal with the most frequently occurring problems and those which, though occurring less often, are of extreme importance, ought to appear in the simplified Regulations.

To distinguish the fundamental from the secondary entails a knowledge of regulatory matters, but at the same time thorough familiarity with the operational aspects and the time they take.

Only in those cases in which the frequency and/or importance of the matter dealt with indicates the desirability of moving it to supporting documentation is such a transfer and the consequent incorporation by reference justified.

The above considerations should be the basis for identifying the material to be removed from the existing Regulations and included in other texts for consultation.

As an example, we may mention the case of the appendices dealing with frequency tolerances and spurious emissions. Both have been subjected to a process of mutilation and transfer to what is collectively known as "supporting documentation". The importance of keeping them as they are derives from the absolute need to have a single basis for evaluating infringements in the areas to which they relate. If, on the other hand, they are made available as ITU-R Recommendations, there will be uncertainty as to whether the applicable version will be to hand at the time when a dispute arises.

The foregoing summarizes the two positions reflected in the VGE Report and the well-known disagreement in the Report of the CPM-95.

Administrations should make a critical examination of the documents arguing for one method of proceeding or the other and also of the material it is proposed to transfer and its effects as regards the usefulness of Regulations divested of such material.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-95 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 23 OCTOBRE – 17 NOVEMBRE 1995

Corrigendum 1 au Document 158-F/E/S
10 novembre 1995
Original: anglais

COMMISSION 5

Canada, Chili, Colombie (République de), Equateur, Etats-Unis d'Amérique, Mexique, Paraguay (République du), Pérou, Suriname (République du), Uruguay (République orientale de l'), Venezuela (République du)

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Ajouter **"République Argentine, République fédérative du Brésil, Canada, Chili, République de Colombie, Equateur, Etats-Unis d'Amérique, République du Honduras, Jamaïque, Mexique, République du Paraguay, Pérou, République du Suriname, Trinité-et-Tobago, République orientale de l'Uruguay, République du Venezuela"** dans la liste des pays signataires de ce document.

*Add **"Argentine Republic, Federative Republic of Brazil, Canada, Chile, Republic of Colombia, Ecuador, United States of America, Republic of Honduras, Jamaica, Mexico, Republic of Paraguay, Peru, Republic of Suriname, Trinidad and Tobago, Eastern Republic of Uruguay, Republic of Venezuela"** in the list of countries cosponsoring this document.*

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INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 158-E
3 November 1995
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GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 5

Canada, Chile, Colombia (Republic of), Ecuador, United States of America, Mexico, Paraguay (Republic of), Peru, Suriname (Republic of), Uruguay (Eastern Republic of), Venezuela (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

The CPM Report to WRC-95 states that: "The application of the procedures given in Resolution 46 and the pfd trigger level of -125 dB(W/m^2/4 kHz) for coordination with terrestrial services are appropriate at this time. However, for those systems of the aeronautical mobile (OR) service which operate in accordance with RR 596 and RR 598, further study is required to assess sharing between such systems and systems of those space services allocated in the band 137 - 138 MHz."

ITU-R Study Group 8 Question 8/84 addresses this issue and the matter should be studied by ITU-R as a matter of urgency.

Proposal

The above-mentioned Members of the Inter-American Telecommunications Commission (CITEL) ratify that value -125 dB(W/m^2/4 kHz) is adequate to protect existing terrestrial services. However, the aeronautical mobile service (OR) requires further study by the ITU-R.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 159(Rev.2)-E
7 November 1995
Original: English

COMMITTEE 4

THIRD REPORT OF WORKING GROUP 4C

I. Annex 1 to this report contains the texts adopted by the Group.

II. The following texts considered by the Group are presented for your consideration with the following comments:

1 **Article S18** (see Document DT/22) – Having considered No. S18.1, the Group could not come to a consensus. It was decided that the two alternatives, which met nearly equal support from the participants, should be presented to Committee 4 for its consideration.

MOD 2020 **S18.1** § 1. (1) No transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations [under the authority of] [by the Administration of] the government of the country to which the station in question is subject. (However, see Nos. **[2021] S18.2**, **[2027] S18.8** and **[2030] S18.11**.)

2 **Article S25** (see Document DT/36) – The Group, having adopted the VGE proposed text without modification, proposed, however, that the matter of the Morse code requirements for operators in the amateur service should be included for consideration in the provisional agenda of WRC-99. An appropriate note was sent to WGPL.

3 Texts of Articles S30, S31 and S32 were adopted with amendments as shown in Annex to this report. No. S32.63 (Article S32) has been put in square brackets until Drafting Group 4C1 prepares an alternative text (see Annex 1).

4 **Article S34** – The VGE proposed text was adopted by majority without modifications. Several administrations (D, F, S, NZL) having referred to the concept of "incorporation by reference" in accordance with Document 124(Rev.1) reserved their position with regard to the mandatory status of the "relevant ITU-R Recommendations" referred to in Nos. S34.1 and S34.2.

5 Conditions for the issue of an Operator's Certificate have been revised by ad hoc Group 4C1 chaired by Mr. Sonesson (Sweden) and the appropriate table is included in Article S47.

6 **Article S50** – It was adopted with a note by NZL concerning the mandatory status of the referenced material in Nos. S50.9.

7 Amendments to Resolution 13 (WARC-79) have been adopted further to the BR Report (Document 15(Rev.1) (see Annex 2).

8 Draft new Resolution [COM4-#] "Consideration of Certain Operational Matters concerning the Radio Regulations in the Aeronautical Mobile and Maritime Mobile Services" was adopted (see Annex 3). A note to the WGPL was forwarded with a view to its inclusion in the agenda of WRC-97 consideration of the progress report on that matter. The delegation of Japan expressed its view that WRC-97 shall, in particular, conclude whether any further action in that direction would be necessary.

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III. Committee 4 having adopted the mechanism of incorporation by reference (see Document 124(Rev.1)), the articles in which that concept arose had to be reviewed, by making reference to annexes or ITU-R Recommendations. Drafting Group 4C2 was set up for that purpose, under the chairmanship of Ms. Allison (United States).

V. RUBIO CARRETÓN
Chairman of Working Group 4C

Annexes: 4

ANNEX 1

CHAPTER SVII

Distress and Safety Communications[1]

NOC C.SVII [1] For the purposes of this Chapter, distress and safety communications include distress, urgency and safety calls and messages.

ARTICLE S30

NOC

General Provisions

NOC

Section I. Introduction

NOC S30.1 to S30.3

NOC

Section II. Maritime Provisions

MOD S30.4 § 4. The provisions specified in this Chapter are obligatory (see Resolution **331 (Mob-87)**) in the maritime mobile service and the maritime mobile-satellite service for all stations using the frequencies and techniques prescribed for the functions set out herein (see also No. **S30.5**). However, stations of the maritime mobile service, when fitted with equipment used by stations operating in conformity with Appendix **S13**, shall comply with the appropriate provisions of that ~~Chapter~~Appendix.

NOC S30.5 to S30.13 § 5. The International Convention for the Safety of Life at Sea, SOLAS, 1974, prescribes which ships and which of their survival craft shall be provided with radio equipment, and which ships shall carry portable radio equipment for use in survival craft. It also prescribes the requirements which shall be met by such equipment.

NOC

ARTICLE S31

NOC

Frequencies for the Global Maritime Distress and Safety System (GMDSS)

NOC **Section I. General**

NOC **S31.1 to S31.2**

MOD **S31.3** § 3. ~~Test~~The number and duration of test transmissions shall be kept to a minimum on the frequencies identified in Appendix **S15**; they should be coordinated with a competent authority, as necessary, and, wherever practicable, be carried out on artificial antennas or with reduced power. However, testing on the distress and safety calling frequencies should be avoided, but where this is unavoidable, it should be indicated that these are test transmissions.

S31.4 to S31.11 § 4. Before transmitting for other than distress purposes on any of the frequencies identified in Appendix **S15** for distress and safety, a station shall, where practicable, listen on the frequency concerned to make sure that no distress transmission is being sent.

MOD **Section III. ~~Watch on Frequencies~~Watchkeeping**

S31.12 to S31.20 *A. Coast Stations*

NOC ARTICLE S32

NOC **Operational Procedures for Distress and Safety Communications (GMDSS)**

NOC **Section I. General**

S32.1 to S32.6

MOD **S32.7** § 6. The Phonetic Alphabet and Figure Code in Appendix S14 and ~~T~~the abbreviations and signals in accordance with Recommendation ITU-R [RR Appendix 14] ~~[Annex AP 14] and the Phonetic Alphabet and Figure Code in Appendix S14~~ should be used where applicable[1].

MOD **S32.7.1** [1] The use of the Standard Marine ~~Navigational Vocabulary~~Communications Phrases and, where language difficulties exist, the

International Code of Signals, both published by the International Maritime Organization (IMO), is also recommended.

Section II. Distress Alerting

S32.8 to S32.62

MOD **S32.63** (3) Locating signals may be transmitted in the following frequency bands:

117.975 - 136 MHz;

156 - 174 MHz;

406 - 406.1 MHz; ~~and~~

1 645.5 – 1 646.5 MHz; and

9 200 - 9 500 MHz.

NOC **S32.64** (4) Locating signals shall be in accordance with the relevant ITU-R Recommendations.

NOC ARTICLE S33

NOC **Operational Procedures for Urgency and Safety Communications (GMDSS)**

NOC ARTICLE S34

NOC **Alerting Signals (GMDSS)**

NOC **CHAPTER SVIII**

Aeronautical Services

NOC ARTICLE S35

NOC **Introduction**

MOD **S35.1** § 1. With the exception of Articles **S36, S37, S39, S42, S43** and **S44.2**, the other provisions of this Chapter may be governed by special arrangements concluded pursuant to ~~Article 31 of the International Telecommunication Convention, Nairobi, 1982~~Article 42 of the Constitution of the International Telecommunication Union, Geneva, 1992, or by intergovernmental

agreements[1] provided their implementation does not cause harmful interference to the radio services of other countries.

NOC S35.1.1 [1] For example, the International Civil Aviation Organization (ICAO) has agreed upon standards and recommended practices adapted to the needs of aircraft operation which have been proven in practice and are well established in current use.

NOC ARTICLE S36

NOC **Authority of the Person Responsible for the Station**

NOC ARTICLE S37

NOC **Operators' Certificates**

NOC ARTICLE S38

NOC **Personnel**

NOC ARTICLE S39

NOC **Inspection of Stations**

NOC **S39.1 to S39.7**

ADD S39.8 § 4. The frequencies of emission of mobile stations shall be checked as often as possible by the inspection service to which these stations are subject.

NOC ARTICLE S40

NOC **Working Hours of Stations**

NOC ARTICLE S41

NOC **Communications with Stations in the Maritime Services**

NOC ARTICLE S42

NOC **Conditions to be Observed by Stations**

S42.1 to S42.3

ADD S42.4 § 4. The operation of a broadcasting service (see No. S1.38) by an aircraft station at sea and over the sea is prohibited (see also No. S23.2).

NOC ARTICLE S43

NOC **Special Rules Relating to the Use of Frequencies**

NOC ARTICLE S44

NOC **Order of Priority of Communications**

NOC ARTICLE S45

NOC **General Communication Procedure**

NOC **CHAPTER SIX**

NOC **Maritime Services**

NOC ARTICLE S46

NOC **Authority of the Master**

NOC

ARTICLE S47

NOC

Operators' Certificates

Section I. General Provisions

S47.1 to S47.17

MOD **S47.18** § 5. Each administration may determine the conditions under which personnel holding certificates specified in Appendix **S13** ~~[see Nos. 1.1(1) a) and 1.1(2)]~~ may be granted certificates under Nos. **S47.20** to **S47.23**.

NOC

Section II. Categories of Operators' Certificates

NOC **S47.19 to S47.24**

Section III. Conditions for the Issue of Certificates

MOD **S47.25** § 7. The requirements of the certificates of this section, for which candidates must show proof of the technical and professional knowledge and qualification, are shown in Table [AR55B].

MOD

TABLE [AR55B]

Conditions for the Issue of Operator's Certificate

Knowledge Requirements for Radio Electronic Operator's and General Operator's Certificates				
The relevant certificate is issued to a candidate who has given proof of the technical and professional knowledge and qualifications enumerated below, as applicable, and indicated by an asterisk (*) in the appropriate box	**1st-Class Radio Electronic Certificate**	**2nd-Class Radio Electronic Certificate**	**General Operator's Certificate**	**Restricted Operator's Certificate**
Knowledge of the principles of electricity and the theory of radio and of electronics sufficient to meet the requirements specified below:	*	*		
Theoretical knowledge of GMDSS radiocommunication equipment, including narrow-band direct-printing telegraph and radiotelephone transmitters and receivers, digital selective calling equipment, ship earth stations, emergency position-indicating radiobeacons, marine antenna systems, radio equipment for survival craft together with all auxiliary items, including power supplies, as well as general knowledge of the principles of other equipment generally used for radionavigation, with particular reference to maintaining equipment in service.	*			
General theoretical knowledge of GMDSS radiocommunication equipment, including narrow-band direct-printing telegraph and radiotelephone transmitters and receivers, digital selective calling equipment, ship earth stations, emergency position-indicating radiobeacons, marine antenna systems, radio equipment for survival craft together with all auxiliary items, including power supplies, as well as general knowledge of the principles of other equipment generally used for radionavigation, with particular reference to maintaining equipment in service.		*		
Practical knowledge of the operation and knowledge of the preventive maintenance of the equipment indicated above.	*	*		
Practical knowledge necessary for the location and repair (using appropriate testing equipment and tools) of faults in the equipment mentioned above which may occur during a voyage.	*			
Practical knowledge necessary for effecting repairs in the case of faults in the equipment indicated above, using the means available on board and, if necessary, replacing modular units.		*		
Detailed practical knowledge of the operation of all the GMDSS sub-systems and equipment.	*	*	*	
Practical knowledge of the operation of all the GMDSS sub-systems and equipment which is required while the ship is within the range of VHF coast stations. (see Note 1)				*

(CONT.)				
Ability to send and to receive correctly by radiotelephone and direct-printing telegraphy.	*	*	*	
Ability to send and to receive correctly by radiotelephone.				*
Detailed knowledge of the regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommunications and knowledge of those provisions of the International Convention for the Safety of Life at Sea which relate to radio.	*	*	*	
Knowledge of the Regulations applying to radiotelephone communications and specifically of that part of those Regulations relating to the safety of life.				*
Sufficient knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing.	*	*	*	
An elementary knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing. Administrations may waive the above language requirements for holders of a restricted operator's certificate when the ship station is confined to a limited area specified by the administration concerned. In such cases the certificate shall be suitably endorsed.				*

NOTE 1 – A Restricted Operator's Certificate (ROC) covers only the operation of GMDSS equipment required for GMDSS sea areas A1, and does not cover the operation of GMDSS A2/A3/A4 equipment fitted on a ship over and above the basic A1 requirements, even if the vessel is in a sea area A1. GMDSS sea areas A1, A2, A3 and A4 are identified in the International Convention for the Safety of Life at Sea, 1974, as amended.

NOC

Section IV. Qualifying Service

(MOD) S47.26 § 8. (1) The holder of a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate is authorized to embark as chief operator of a ship station of the fourth category (see Recommendation ITU-R ~~Annex 58, No. 4056~~[Annex 58 and Appendix 12]).

(MOD) S47.27 (2) However, before becoming chief or sole operator of a ship station of the fourth category (see Recommendation ITU-R ~~Annex 58, No. 4056~~[Annex 58 and Appendix 12]) which is required by international agreements to carry a radiotelegraph operator, the holder of a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate shall have had adequate experience as operator on board ship at sea.

(MOD) S47.28 (3) Before becoming chief operator of a ship station of the second or third category (see Recommendation ITU-R ~~Annex 58, Nos. 4054 and 4055~~[Annex 58 and Appendix 12]), the holder of a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate shall have had, as operator on board ship or in a coast station, at least six months' experience of which at least three months shall have been on board ship.

(MOD) S47.29 (4) Before becoming chief operator of a ship station of the first category (see Recommendation ITU-R ~~Annex 58, No. 4053~~[Annex 58 and Appendix 12]), the holder of a radiocommunication operator's general certificate or a first-class radiotelegraph operator's certificate shall have had, as operator on board ship or in a coast station, at least one year's experience of which at least six months shall have been on board ship.

NOC

ARTICLE S48

NOC

Personnel

NOC

ARTICLE S49

NOC

Inspection of Stations

NOC S49.1 to S49.7

ADD S49.8 § 4. The frequencies of emission of ship stations shall be checked as often as possible by the inspection service to which these stations are subject.

NOC ARTICLE S50

NOC **Working Hours of Stations**

S50.1

(MOD) S50.9 § 5. The services of ship stations for the international public correspondence shall be provided in accordance with the provisions of ~~ITU-R~~ Recommendation ITU-R ~~(see [Annex 58]~~[Annex 58 and Appendix 12~~)~~].

ANNEX 2

RESOLUTION No. 13

RELATING TO THE FORMATION OF CALL SIGNS AND THE ALLOCATION OF NEW INTERNATIONAL SERIES[1]

The World Administrative Radio Conference, Geneva, 1979,

considering

a) the recommendation of the International Radio Conference, Atlantic City, 1947, relating to the formation of call signs;

b) the increasing demand for call signs justified by the increased number of Members of the Union and by the increased requirements of countries which are already Members;

c) the information supplied by the Secretary-General regarding allocations of call signs since 1947 and the possibilities of the current system of forming call signs;

believing

that call signs already in use should, as far as possible, not be changed;

noting

a) that the former call sign series formed of three letters, or a figure and two letters, having been exhausted, a new series has been introduced formed of a letter, a figure and a letter; but in no case may the figure be 0 or 1;

MOD

b) that the method mentioned in *noting a)* is not applicable to series beginning with one of the following letters: B, F, G, I, K, M, N, R, ~~U~~, W;

c) that a proposal has been submitted to this Conference for the formation of new call sign series by replacing the third character, which is a letter, by a digit;

d) however, that this would require consequential changes in Section III of Article **25**;

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[1] Replaces Resolution No. 8 of the Administrative Radio Conference, Geneva, 1959.

resolves

1. that the Secretary-General shall continue to urge administrations:

   1.1 to make the maximum use of the possibilities of the series at present allocated, to avoid, as far as possible, further requests;

   1.2 to review the call-sign assignments they have already made from their present allocations, with a view to releasing any series and place them at the disposal of the Union;

2. that the Secretary-General shall, upon request, furnish advice to administrations on the means of effecting the greatest economy, which should be the rule, in the use of a series of call signs;

3. that if, nevertheless, before the next competent world administrative radio conference, it appears that all the possibilities of the present system of forming call signs will be exhausted, the Secretary-General shall:

   3.1 explore the possibility of forming new series on the basis of the proposal mentioned in *noting c)*;

   3.2 issue a circular-letter:

      3.2.1 explaining the position;

      3.2.2 urging the administrations to send in their proposals for possible solutions;

4. that, from the information thus submitted, the Secretary-General shall prepare a report, together with his comments and suggestions, for submission to the next competent world administrative radio conference.

ANNEX 3

DRAFT RESOLUTION [COM4-XXX]

CONSIDERATION OF CERTAIN OPERATIONAL MATTERS CONCERNING THE RADIO REGULATIONS IN THE AERONAUTICAL MOBILE AND MARITIME MOBILE SERVICES*

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that its decision regarding the recommendations proposed by the Voluntary Group of Experts have resulted in a considerable simplification for the Radio Regulations;

b) that the Radio Regulations contain various provisions, in particular for the aeronautical mobile and maritime mobile services which mainly relate to the operational aspects of these services;

c) that ICAO and IMO have already in place internationally recognized operational provisions pertaining to the aeronautical mobile and the maritime mobile services;

recognizing

that the relevant provisions in the Radio Regulations may be better defined in close collaboration with those organizations;

recognizing also

that the regulatory instruments of the ICAO, IMO and the ITU have different legal foundations and status such as membership, legal status of regulatory instruments, scope of aeronautical mobile and maritime mobile services, and influence on administrations;

resolves to instruct the Secretary-General

1 to arrange for the appropriate study within the ITU, in consultation with ICAO and the IMO and to identify in the Radio Regulations possible provisions, particularly with respect to Chapter S.VIII and S.IX, which have the character of specifying operational procedures of interest only to the aeronautical mobile and maritime mobile services;

2 to investigate legal issues raised by the difference between ICAO, IMO and the ITU as mentioned in *recognizing also*, above;

3 to report on the progress of this work to the World Radiocommunication Conference 1997;

4 to bring this Resolution to the attention of the ICAO and IMO.

---

* This Resolution refers to the aeronautical mobile and the maritime mobile services as well as to the aeronautical mobile-satellite and the maritime mobile-satellite services.

ANNEX 4

RESOLUTION [COM4-#]

FURTHER STUDIES CONCERNING APPLICATION OF ARTICLE S19 (IDENTIFICATION OF STATIONS)

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that application of Article **S19** has given rise to *inter alia* legal and political questions arising from uncertainty as to who can be allocated call sign series and blocks of identities and the ambiguity in the use of the terms country, member and administration relative to the provisions of the Article;

b) that this matter is of considerable importance to many administrations and to some international organizations;

c) that a proposal was made to consider the possibility of extension of present allocations of the international call sign series by lifting the limitation to use the letter Q and digits "Ø" and "1";

d) that the VGE concluded that much more expert study is required before any further changes to Article **S19** are considered;

[e) that this Conference has recommended to the Council the inclusion in the agenda of WRC-97 the review of Article **S19**[1];]

instructs the Secretary-General and the Director of the Radiocommunication Bureau

to arrange for the appropriate studies within the Radiocommunication Sector in consultation with the ICAO and IMO and present a report to WRC-97.

It was decided that a Note to the Working Group of the Plenary should be forwarded with a view to including in the agenda of WRC-97 an appropriate item.

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[1] See Resolution [[EUR-10] (EUR/5/87)].

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 159(Rev.1)-E
3 November 1995
Original: English

COMMITTEE 4

THIRD REPORT OF WORKING GROUP 4C

I. Annex 1 to this report contains the texts adopted by the Group.

II. The following texts considered by the Group are presented for your consideration with the following comments:

1 **Article S18** (see Document DT/22) – Having considered No. S18.1, the Group could not come to a consensus. It was decided that the two alternatives, which met nearly equal support from the participants, should be presented to Committee 4 for its consideration.

MOD 2020 **S18.1** § 1. (1) No transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations [under the authority of] [by the Administration of] the government of the country to which the station in question is subject. (However, see Nos. **[2021] S18.2, [2027] S18.8** and **[2030] S18.11**.)

2 **Article S25** (see Document DT/36) – The Group, having adopted the VGE proposed text without modification, proposed, however, that the matter of the Morse code requirements for operators in the amateur service should be included for consideration in the provisional agenda of WRC-99. An appropriate note was sent to WGPL.

3 Texts of Articles S30, S31 and S32 were adopted with amendments as shown in Annex to this report. No. S32.63 (Article S32) has been put in square brackets until Drafting Group 4C1 prepares an alternative text (see Annex 1).

4 **Article S34** – The VGE proposed text was adopted by majority without modifications. Several administrations (D, F, S, NZL) having referred to the concept of "incorporation by reference" in accordance with Document 124(Rev.1) reserved their position with regard to the mandatory status of the "relevant ITU-R Recommendations" referred to in Nos. S34.1 and S34.2.

5 Conditions for the issue of an Operator's Certificate have been revised by ad hoc Group 4C1 chaired by Mr. Sonesson (Sweden) and the appropriate table is included in Article S47.

6 **Article S50** – It was adopted with a note by NZL concerning the mandatory status of the referenced material in Nos. S50.9.

7 Amendments to Resolution 13 (WARC-79) have been adopted further to the BR Report (Document 15(Rev.1) (see Annex 2).

8 Draft new Resolution [COM4-#] "Consideration of Certain Operational Matters concerning the Radio Regulations in the Aeronautical Mobile and Maritime Mobile Services" was adopted (see Annex 3). A note to the WGPL was forwarded with a view to its inclusion in the agenda of WRC-97 consideration of the progress report on that matter. The delegation of Japan expressed its view that WRC-97 shall, in particular, conclude whether any further action in that direction would be necessary.

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III. Committee 4 having adopted the mechanism of incorporation by reference (see Document 124(Rev.1)), the articles in which that concept arose had to be reviewed, by making reference to annexes or ITU-R Recommendations. Drafting Group 4C2 was set up for that purpose, under the chairmanship of Ms. Allison (United States).

V. RUBIO CARRETÓN
Chairman of Working Group 4C

Annexes: 4

ANNEX 1

CHAPTER SVII

Distress and Safety Communications[1]

NOC C.SVII [1] For the purposes of this Chapter, distress and safety communications include distress, urgency and safety calls and messages.

ARTICLE S30

NOC **General Provisions**

NOC **Section I. Introduction**

NOC **S30.1 to S30.3**

NOC **Section II. Maritime Provisions**

MOD **S30.4** § 4. The provisions specified in this Chapter are obligatory (see Resolution **331 (Mob-87)**) in the maritime mobile service and the maritime mobile-satellite service for all stations using the frequencies and techniques prescribed for the functions set out herein (see also No. **S30.5**). However, stations of the maritime mobile service, when fitted with equipment used by stations operating in conformity with Appendix **S13**, shall comply with the appropriate provisions of that ~~Chapter~~Appendix.

NOC **S30.5 to S30.13** § 5. The International Convention for the Safety of Life at Sea, SOLAS, 1974, prescribes which ships and which of their survival craft shall be provided with radio equipment, and which ships shall carry portable radio equipment for use in survival craft. It also prescribes the requirements which shall be met by such equipment.

NOC ARTICLE S31

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MOD **S31.3** § 3. ~~Test~~The number and duration of test transmissions shall be kept to a minimum on the frequencies identified in Appendix **S15**; they should be coordinated with a competent authority, as necessary, and, wherever practicable, be carried out on artificial antennas or with reduced power. However, testing on the distress and safety calling frequencies should be avoided, but where this is unavoidable, it should be indicated that these are test transmissions.

S31.4 to S31.11 § 4. Before transmitting for other than distress purposes on any of the frequencies identified in Appendix **S15** for distress and safety, a station shall, where practicable, listen on the frequency concerned to make sure that no distress transmission is being sent.

MOD

Section III. ~~Watch on Frequencies~~Watchkeeping

S31.12 to S31.20

A. Coast Stations

NOC

ARTICLE S32

NOC

Operational Procedures for Distress and Safety Communications (GMDSS)

NOC

Section I. General

S32.1 to S32.6

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agreements[1] provided their implementation does not cause harmful interference to the radio services of other countries.

NOC S35.1.1 [1] For example, the International Civil Aviation Organization (ICAO) has agreed upon standards and recommended practices adapted to the needs of aircraft operation which have been proven in practice and are well established in current use.

NOC ARTICLE S36

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ADD S39.8 § 4. The frequencies of emission of mobile stations shall be checked as often as possible by the inspection service to which these stations are subject.

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NOC **CHAPTER SIX**

NOC **Maritime Services**

NOC ARTICLE S46

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NOC

ARTICLE S47

NOC

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MOD **S47.18** § 5. Each administration may determine the conditions under which personnel holding certificates specified in Appendix **S13** ~~[see Nos. 1.1(1) a) and 1.1(2)]~~ may be granted certificates under Nos. **S47.20** to **S47.23**.

NOC

Section II. Categories of Operators' Certificates

NOC **S47.19 to S47.24**

Section III. Conditions for the Issue of Certificates

MOD **S47.25** § 7. The requirements of the certificates of this section, for which candidates must show proof of the technical and professional knowledge and qualification, are shown in Table [AR55B].

MOD

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Knowledge of the principles of electricity and the theory of radio and of electronics sufficient to meet the requirements specified below:	*	*		
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General theoretical knowledge of GMDSS radiocommunication equipment, including narrow-band direct-printing telegraph and radiotelephone transmitters and receivers, digital selective calling equipment, ship earth stations, emergency position-indicating radiobeacons, marine antenna systems, radio equipment for survival craft together with all auxiliary items, including power supplies, as well as general knowledge of the principles of other equipment generally used for radionavigation, with particular reference to maintaining equipment in service.		*		
Practical knowledge of the operation and knowledge of the preventive maintenance of the equipment indicated above.	*	*		
Practical knowledge necessary for the location and repair (using appropriate testing equipment and tools) of faults in the equipment mentioned above which may occur during a voyage.	*			
Practical knowledge necessary for effecting repairs in the case of faults in the equipment indicated above, using the means available on board and, if necessary, replacing modular units.		*		
Detailed practical knowledge of the operation of all the GMDSS sub-systems and equipment.	*	*	*	
Practical knowledge of the operation of all the GMDSS sub-systems and equipment which is required while the ship is within the range of VHF coast stations. (see Note 1)				*

(CONT.)				
Ability to send and to receive correctly by radiotelephone and direct-printing telegraphy.	*	*	*	
Ability to send and to receive correctly by radiotelephone.				*
Detailed knowledge of the regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommunications and knowledge of those provisions of the International Convention for the Safety of Life at Sea which relate to radio.	*	*	*	
Knowledge of the Regulations applying to radiotelephone communications and specifically of that part of those Regulations relating to the safety of life.				*
Sufficient knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing.	*	*	*	
An elementary knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing. Administrations may waive the above language requirements for holders of a restricted operator's certificate when the ship station is confined to a limited area specified by the administration concerned. In such cases the certificate shall be suitably endorsed.				*

NOTE 1 – A Restricted Operator's Certificate (ROC) covers only the operation of GMDSS equipment required for GMDSS sea areas A1, and does not cover the operation of GMDSS A2/A3/A4 equipment fitted on a ship over and above the basic A1 requirements, even if the vessel is in a sea area A1. GMDSS sea areas A1, A2, A3 and A4 are identified in the International Convention for the Safety of Life at Sea, 1974, as amended.

NOC **Section IV. Qualifying Service**

(MOD) S47.26 § 8. (1) The holder of a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate is authorized to embark as chief operator of a ship station of the fourth category (see [~~Annex 58, No. 4056~~Annex 58 and Appendix 12]).

(MOD) S47.27 (2) However, before becoming chief or sole operator of a ship station of the fourth category (see [~~Annex 58, No. 4056~~Annex 58 and Appendix 12]) which is required by international agreements to carry a radiotelegraph operator, the holder of a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate shall have had adequate experience as operator on board ship at sea.

(MOD) S47.28 (3) Before becoming chief operator of a ship station of the second or third category (see [~~Annex 58, Nos. 4054 and 4055~~Annex 58 and Appendix 12]), the holder of a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate shall have had, as operator on board ship or in a coast station, at least six months' experience of which at least three months shall have been on board ship.

(MOD) S47.29 (4) Before becoming chief operator of a ship station of the first category (see [~~Annex 58, No. 4053~~Annex 58 and Appendix 12]), the holder of a radiocommunication operator's general certificate or a first-class radiotelegraph operator's certificate shall have had, as operator on board ship or in a coast station, at least one year's experience of which at least six months shall have been on board ship.

NOC ARTICLE S48

NOC **Personnel**

NOC ARTICLE S49

NOC **Inspection of Stations**

NOC **S49.1 to S49.7**

ADD S49.8 § 4. The frequencies of emission of ship stations shall be checked as often as possible by the inspection service to which these stations are subject.

NOC ARTICLE S50

NOC **Working Hours of Stations**

S50.1

(MOD) S50.9 § 5. The services of ship stations for the international public correspondence shall be provided in accordance with the provisions of ITU-R Recommendation (~~see [Annex 58]~~Annex 58 and Appendix 12).

ANNEX 2

RESOLUTION No. 13

RELATING TO THE FORMATION OF CALL SIGNS AND THE ALLOCATION OF NEW INTERNATIONAL SERIES[1]

The World Administrative Radio Conference, Geneva, 1979,

considering

a) the recommendation of the International Radio Conference, Atlantic City, 1947, relating to the formation of call signs;

b) the increasing demand for call signs justified by the increased number of Members of the Union and by the increased requirements of countries which are already Members;

c) the information supplied by the Secretary-General regarding allocations of call signs since 1947 and the possibilities of the current system of forming call signs;

believing

that call signs already in use should, as far as possible, not be changed;

noting

a) that the former call sign series formed of three letters, or a figure and two letters, having been exhausted, a new series has been introduced formed of a letter, a figure and a letter; but in no case may the figure be 0 or 1;

MOD

b) that the method mentioned in *noting a)* is not applicable to series beginning with one of the following letters: B, F, G, I, K, M, N, R, ~~U~~V, W;

c) that a proposal has been submitted to this Conference for the formation of new call sign series by replacing the third character, which is a letter, by a digit;

d) however, that this would require consequential changes in Section III of Article **25**;

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[1] Replaces Resolution No. 8 of the Administrative Radio Conference, Geneva, 1959.

resolves

1. that the Secretary-General shall continue to urge administrations:

   1.1 to make the maximum use of the possibilities of the series at present allocated, to avoid, as far as possible, further requests;

   1.2 to review the call-sign assignments they have already made from their present allocations, with a view to releasing any series and place them at the disposal of the Union;

2. that the Secretary-General shall, upon request, furnish advice to administrations on the means of effecting the greatest economy, which should be the rule, in the use of a series of call signs;

3. that if, nevertheless, before the next competent world administrative radio conference, it appears that all the possibilities of the present system of forming call signs will be exhausted, the Secretary-General shall:

   3.1 explore the possibility of forming new series on the basis of the proposal mentioned in *noting c)*;

   3.2 issue a circular-letter:

      3.2.1 explaining the position;

      3.2.2 urging the administrations to send in their proposals for possible solutions;

4. that, from the information thus submitted, the Secretary-General shall prepare a report, together with his comments and suggestions, for submission to the next competent world administrative radio conference.

ANNEX 3

DRAFT RESOLUTION [COM4-XXX]

CONSIDERATION OF CERTAIN OPERATIONAL MATTERS CONCERNING THE RADIO REGULATIONS IN THE AERONAUTICAL MOBILE AND MARITIME MOBILE SERVICES*

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that its decision regarding the recommendations proposed by the Voluntary Group of Experts have resulted in a considerable simplification for the Radio Regulations;

b) that the Radio Regulations contain various provisions, in particular for the aeronautical mobile and maritime mobile services which mainly relate to the operational aspects of these services;

c) that ICAO and IMO have already in place internationally recognized operational provisions pertaining to the aeronautical mobile and the maritime mobile services;

recognizing

that the relevant provisions in the Radio Regulations may be better defined in close collaboration with those organizations;

recognizing also

that the regulatory instruments of the ICAO, IMO and the ITU have different legal foundations and status such as membership, legal status of regulatory instruments, scope of aeronautical mobile and maritime mobile services, and influence on administrations;

resolves to instruct the Secretary-General

1 to arrange for the appropriate study within the ITU, in consultation with ICAO and the IMO and to identify in the Radio Regulations possible provisions, particularly with respect to Chapter S.VIII and S.IX, which have the character of specifying operational procedures of interest only to the aeronautical mobile and maritime mobile services;

2 to investigate legal issues raised by the difference between ICAO, IMO and the ITU as mentioned in *recognizing also*, above;

3 to report on the progress of this work to the World Radiocommunication Conference 1997;

4 to bring this Resolution to the attention of the ICAO and IMO.

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* This Resolution refers to the aeronautical mobile and the maritime mobile services as well as to the aeronautical mobile-satellite and the maritime mobile-satellite services.

ANNEX 4

RESOLUTION [COM4-#]

FURTHER STUDIES CONCERNING APPLICATION OF ARTICLE S19 (IDENTIFICATION OF STATIONS)

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that application of Article **S19** has given rise to *inter alia* legal and political questions arising from uncertainty as to who can be allocated call sign series and blocks of identities and the ambiguity in the use of the terms country, member and administration relative to the provisions of the Article;

b) that this matter is of considerable importance to many administrations and to some international organizations;

c) that a proposal was made to consider the possibility of extension of present allocations of the international call sign series by lifting the limitation to use the letter Q and digits "Ø" and "1";

d) that the VGE concluded that much more expert study is required before any further changes to Article **S19** are considered;

[e) that this Conference has recommended to the Council the inclusion in the agenda of WRC-97 the review of Article **S19**[1];]

instructs the Secretary-General and the Director of the Radiocommunication Bureau

to arrange for the appropriate studies within the Radiocommunication Sector in consultation with the ICAO and IMO and present a report to WRC-97.

It was decided that a Note to the Working Group of the Plenary should be forwarded with a view to including in the agenda of WRC-97 an appropriate item.

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[1] See Resolution [[EUR-10] (EUR/5/87)].

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 159-E
3 November 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4

THIRD REPORT OF WORKING GROUP 4C

I. Annex 1 to this report contains the texts adopted by the Group.

II. The following texts considered by the Group are presented for your consideration with the following comments:

1 Article S18 (see Document DT/22) – Having considered No. S18.1, the Group could not come to a consensus. It was decided that the two alternatives, which met nearly equal support from the participants, should be presented to Committee 4 for its consideration.

MOD 2020 **S18.1** § 1. (1) No transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations [under the authority of] [by the Administration of] the government of the country to which the station in question is subject. (However, see Nos. **[2021] S18.2**, **[2027] S18.8** and **[2030] S18.11**.)

2 Article S25 (see Document DT/36) – The Group, having adopted the VGE proposed text without modification, proposed, however, that the matter of the Morse code requirements for operators in the amateur service should be included for consideration in the provisional agenda of WRC-99. An appropriate note was sent to WGPL.

3 Texts of Articles S30, S31 and S32 were adopted with amendments as shown in Annex to this report. No. S32.63 (Article S32) has been put in square brackets until Drafting Group 4C1 prepares an alternative text (see Annex 1).

4 Appendices S13 and S15 were considered. It was agreed that the VGE proposed texts could be adopted without Table [AR55A] in Appendix S13 and the table in Appendix S15. Although the contents of those tables was agreed, it was decided that their layout should be modified. That task was entrusted to ad hoc Group 4C1, chaired by Mr. Sonesson (Sweden).

5 Article S34 – The VGE proposed text was adopted by majority without modifications. Several administrations (D, F, S, NZL) having referred to the concept of "incorporation by reference" in accordance with Document 124(Rev.1) reserved their position with regard to the mandatory status of the "relevant ITU-R Recommendations" referred to in Nos. S34.1 and S34.2.

6 **Article S50** – It was adopted with a note by NZL concerning the mandatory status of the referenced material in Nos. S50.9.

7 Amendments to Resolution 13 (WARC-79) have been adopted further to the BR Report (Document 15(Rev.1) (see Annex 2).

8 Draft new Resolution [COM4-#] "Consideration of Certain Operational Matters concerning the Radio Regulations in the Aeronautical Mobile and Maritime Mobile Services" was adopted (see Annex 3). A note to the WGPL was forwarded with a view to its inclusion in the agenda of WRC-97 consideration of the progress report on that matter. The delegation of Japan expressed its view that WRC-97 shall, in particular, conclude whether any further action in that direction would be necessary.

9 Draft new Resolution [COM4-#] "Further studies concerning the application of Article S19 (Identification of Stations in DT/22)" has been amended (see Annex 4). A liaison note was forwarded to WGPL with a view to its inclusion in the agenda of WRC-97 of an appropriate item (see Document DT/44).

III. Committee 4 having adopted the mechanism of incorporation by reference (see Document 124(Rev.1)), the articles in which that concept arose had to be reviewed, by making reference to annexes or ITU-R Recommendations. Drafting Group 4C2 was set up for that purpose, under the chairmanship of Ms. Allison (United States).

V. RUBIO CARRETÓN
Chairman of Working Group 4C

Annexes: 4

ANNEX 1

CHAPTER SVII

Distress and Safety Communications[1]

C.SVII

[1] For the purposes of this Chapter, distress and safety communications include distress, urgency and safety calls and messages.

ARTICLE S30

General Provisions

Section I. Introduction

S30.1 § 1. This Chapter contains the provisions for the Operational use of the Global Maritime Distress and Safety System (GMDSS). Distress, urgency and safety transmissions may also be made, using Morse telegraphy and radiotelephony techniques, in accordance with the provisions of Appendix **S13** and relevant ITU-R Recommendations. Stations of the maritime mobile service, when using frequencies and techniques in conformity with Appendix **S13**, shall comply with the appropriate provisions of that Appendix.

S30.2 § 2. No provision of these Regulations prevents the use by a mobile station or a mobile earth station in distress of any means at its disposal to attract attention, make known its position, and obtain help (see also No. **S4.9**).

S30.3 § 3. No provision of these Regulations prevents the use by stations on board aircraft, ships engaged in search and rescue operations, land stations, or coast earth stations, in exceptional circumstances, of any means at their disposal to assist a mobile station or a mobile earth station in distress (see also Nos. **S4.9** and **S4.16**).

Section II. Maritime Provisions

MOD S30.4 § 4. The provisions specified in this Chapter are obligatory (see Resolution **331 (Mob-87)**) in the maritime mobile service and the maritime mobile-satellite service for all stations using the frequencies and techniques prescribed for the functions set out herein (see also No. **S30.5**). However, stations of the maritime mobile service, when fitted with equipment used by stations operating in conformity with Appendix **S13**, shall comply with the appropriate provisions of that ~~Chapter~~Appendix.

S30.5 § 5. The International Convention for the Safety of Life at Sea, SOLAS, 1974, prescribes which ships and which of their survival craft shall be provided with radio equipment, and which ships shall carry portable radio equipment for use in survival craft. It also prescribes the requirements which shall be met by such equipment.

S30.6 § 6. Ship earth stations located at Rescue Coordination Centres[1] may be authorized by an administration to communicate for distress and safety purposes with any other station using bands allocated to the maritime mobile-satellite service, when special circumstances make it essential, notwithstanding the methods of working provided for in these Regulations.

S30.6.1 [1] The term "Rescue Coordination Centre" as defined in the International Convention on Maritime Search and Rescue, 1979, refers to a unit responsible for promoting the efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

S30.7 § 7. Mobile stations[2] of the maritime mobile service may communicate, for safety purposes, with stations of the aeronautical mobile service. Such communications shall normally be made on the frequencies authorized, and under the conditions specified in Section I of Article **S31** (see also No. **S4.9**).

S30.7.1 [2] Mobile stations communicating with the stations of the aeronautical mobile (R) service in bands allocated to the aeronautical mobile (R) service shall conform to the provisions of the Regulations which relate to that service and, as appropriate, to any special arrangements between the governments concerned by which the aeronautical mobile (R) service is regulated.

Section III. Aeronautical Provisions

S30.8 § 8. The procedure specified in this Chapter is obligatory for communications between stations on board aircraft and stations of the maritime mobile-satellite service, wherever this service or stations of this service are specifically mentioned.

S30.9 § 9. Certain provisions of this Chapter are applicable to the aeronautical mobile service, except in the case of special arrangements between the governments concerned.

S30.10 § 10. Mobile stations of the aeronautical mobile service may communicate, for distress and safety purposes, with stations of the maritime mobile service in conformity with the provisions of this Chapter.

S30.11 § 11. Any station on board an aircraft required by national or international regulations to communicate for distress, urgency or safety purposes with stations of the maritime mobile service that comply with the provisions of this Chapter, shall be capable of transmitting and receiving class J3E emissions when using the carrier frequency 2 182 kHz, or class J3E emissions when using the carrier frequency 4 125 kHz, or class G3E emissions when using the frequency 156.8 MHz and, optionally, the frequency 156.3 MHz.

Section IV. Land Mobile Provisions

S30.12 § 12. Stations of the land mobile service in uninhabited, sparsely populated or remote areas may, for distress and safety purposes, use the frequencies provided for in this Chapter.

S30.13 § 13. The procedure specified in this Chapter is obligatory for stations of the land mobile service when using frequencies provided in these Regulations for distress and safety communications.

ARTICLE S31

Frequencies for the Global Maritime Distress and Safety System (GMDSS)

Section I. General

S31.1 § 1. The frequencies to be used for the transmission of distress and safety information under the GMDSS are contained in Appendix **S15**.

S31.2 § 2. Any emission causing harmful interference to distress and safety communications on any of the discrete frequencies identified in Appendices **S13** and **S15** is prohibited.

MOD S31.3 § 3. ~~Test~~The number and duration of test transmissions shall be kept to a minimum on the frequencies identified in Appendix **S15**; they should be coordinated with a competent authority, as necessary, and, wherever practicable, be carried out on artificial antennas or with reduced power. However, testing on the distress and safety calling frequencies should be avoided, but where this is unavoidable, it should be indicated that these are test transmissions.

S31.4 § 4. Before transmitting for other than distress purposes on any of the frequencies identified in Appendix **S15** for distress and safety, a station shall, where practicable, listen on the frequency concerned to make sure that no distress transmission is being sent.

S31.5 **Section II. Survival Craft Stations**

S31.6 § 5. (1) Equipment for radiotelephony use in survival craft stations shall, if capable of operating on any frequency in the bands between 156 MHz and 174 MHz, be able to transmit and receive on 156.8 MHz and at least one other frequency in these bands.

S31.7 (2) Equipment for transmitting locating signals from survival craft stations shall be capable of operating in the 9 200 - 9 500 MHz band.

S31.8 (3) Equipment with digital selective calling facilities for use in survival craft shall, if capable of operating:

S31.9 a) in the bands between 1 605 kHz and 2 850 kHz, be able to transmit on 2 187.5 kHz;

S31.10 b) in the bands between 4 000 kHz and 27 500 kHz, be able to transmit on 8 414.5 kHz;

S31.11 c) in the bands between 156 MHz and 174 MHz, be able to transmit on 156.525 MHz.

MOD **Section III. ~~Watch on Frequencies~~Watchkeeping**

S31.12 *A. Coast Stations*

S31.13 § 6. Those coast stations assuming a watch-keeping responsibility in the GMDSS shall maintain an automatic digital selective calling watch on frequencies and for periods of time as indicated in the information published in the List of Coast Stations (see Resolution No. **322 (Rev.Mob-87)**).

S31.14 *B. Coast Earth Stations*

S31.15 § 7. Those coast earth stations assuming a watch-keeping responsibility in the GMDSS shall maintain a continuous automatic watch for appropriate distress alerts relayed by space stations (see Resolution No. **322 (Rev.Mob-87)**).

S31.16 *C. Ship Stations*

S31.17 § 8. (1) Ship stations complying with the provisions of this Chapter shall, while at sea, maintain an automatic digital selective calling watch on the appropriate distress and safety calling frequencies in the frequency bands in which they are operating. Ship stations, where so equipped, should also maintain watch on the appropriate frequencies for the automatic reception of transmissions of meteorological and navigational warnings and other urgent information to ships. However, ship stations shall also continue to apply the appropriate watch-keeping provisions of Appendix **S13** (see Resolution **331 (Mob-87)**).

S31.18 (2) Ship stations complying with the provisions of this Chapter should, where practicable, maintain a watch on the frequency 156.650 MHz for communications related to the safety of navigation.

S31.19 *D. Ship Earth Stations*

S31.20 § 9. Ship earth stations in use for the reception of shore-to-ship distress alert relays should maintain watch except when communicating on a working channel.

ARTICLE S32

Operational Procedures for Distress and Safety Communications (GMDSS)

Section I. General

S32.1 § 1. Distress and safety communications rely on the use of terrestrial MF, HF and VHF radiocommunications and communications using satellite techniques.

S32.2 § 2. (1) The distress alert (see No. **S32.9**) shall be sent through a satellite either with absolute priority in general communication channels or on exclusive distress and safety frequencies or, alternatively, on the distress and safety frequencies in the MF, HF and VHF bands using digital selective calling.

S32.3 (2) The distress alert (see No. **S32.9**) shall be sent only on the authority of the person responsible for the ship, aircraft or other vehicle carrying the mobile station or the mobile earth station.

S32.4 § 3. All stations which receive a distress alert transmitted by digital selective calling shall immediately cease any transmission capable of interfering with distress traffic and shall continue watch until the call has been acknowledged.

S32.5 § 4. Digital selective calling shall be in accordance with the relevant ITU-R Recommendations.

S32.6 § 5. Transmissions by radiotelephony shall be made slowly and distinctly, each word being clearly pronounced to facilitate transcription.

MOD S32.7 § 6. The Phonetic Alphabet and Figure Code in Appendix **S14** and ~~T~~the abbreviations and signals in accordance with ITU-R Recommendation ... (See [Annex **AP 14**]) ~~and the Phonetic Alphabet and Figure Code in Appendix **S14**~~ should be used where applicable[1].

S32.7.1 [1] The use of the Standard Marine ~~Navigational Vocabulary~~Communications Phrases and, where language difficulties exist, the International Code of Signals, both published by the International Maritime Organization (IMO), is also recommended.

Section II. Distress Alerting

S32.8 *A. General*

S32.9 § 7. (1) The transmission of a distress alert indicates that a mobile unit[1] or person[2] is in distress and requires immediate assistance. The distress alert is a digital selective call using a distress call format[3] in bands used for terrestrial radiocommunication or a distress message format, in which case it is relayed through space stations.

S32.9.1 [1] Mobile unit: A ship, aircraft or other vehicle.

S32.9.2 [2] In this Article, where the case is of a person in distress, the application of the procedures may require adaptation to meet the needs of the particular circumstances.

S32.9.3 [3] The format of distress calls and distress messages shall be in accordance with the relevant ITU-R Recommendations.

S32.10 (2) The distress alert shall provide[4] the identification of the station in distress and its position.

S32.10.1 [4] The distress alert may also contain information regarding the nature of the distress, the type of assistance required, the course and speed of the mobile unit, the time that this information was recorded and any other information which might facilitate rescue.

S32.11 *B. Transmission of a Distress Alert*

B1. Transmission of a Distress Alert by a Ship Station or a Ship Earth Station

S32.12 § 8. Ship-to-shore distress alerts are used to alert Rescue Coordination Centres via coast stations or coast earth stations that a ship is in distress. These alerts are based on the use of transmissions via satellites (from a ship earth station or a satellite EPIRB) and terrestrial services (from ship stations and EPIRBs).

S32.13 § 9. Ship-to-ship distress alerts are used to alert other ships in the vicinity of the ship in distress and are based on the use of digital selective calling in the VHF and MF bands. Additionally, the HF band may be used.

B2. Transmission of a Shore-to-Ship Distress Alert Relay

S32.14 § 10. (1) A station or a Rescue Coordination Centre which receives a distress alert shall initiate the transmission of a shore-to-ship distress alert relay addressed, as appropriate, to all ships, to a selected group of ships or to a specific ship by satellite and/or terrestrial means.

S32.15 (2) The distress alert relay shall contain the identification of the mobile unit in distress, its position and all other information which might facilitate rescue.

B3. Transmission of a Distress Alert by a Station Not Itself in Distress

S32.16 § 11. A station in the mobile or mobile-satellite service which learns that a mobile unit is in distress shall initiate and transmit a distress alert in any of the following cases:

S32.17 a) when the mobile unit in distress is not itself in a position to transmit the distress alert;

S32.18 b) when the master or person responsible for the mobile unit not in distress or the person responsible for the land station considers that further help is necessary.

S32.19 § 12. A station transmitting a distress alert relay in accordance with Nos. **S32.16**, **S32.17**, **S32.18** and **S32.31** shall indicate that it is not itself in distress.

S32.20 *C. Receipt and Acknowledgement of Distress Alerts*

C1. Procedure for Acknowledgement of Receipt of Distress Alerts

S32.21 § 13. Acknowledgement by digital selective calling of receipt of a distress alert in the terrestrial services shall be in accordance with relevant ITU-R Recommendations.

S32.22 § 14. Acknowledgement through a satellite of receipt of a distress alert from a ship earth station shall be sent immediately (see No. **S32.26**).

S32.23 § 15. (1) Acknowledgement by radiotelephony of receipt of a distress alert from a ship station or a ship earth station shall be given in the following form:

- the distress signal MAYDAY;
- the call sign or other identification of the station sending the distress message, spoken three times;
- the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
- the call sign or other identification of the station acknowledging receipt, spoken three times;
- the word RECEIVED (or RRR spoken as ROMEO ROMEO ROMEO in case of language difficulties);
- the distress signal MAYDAY.

S32.24 (2) The acknowledgement by direct-printing telegraphy of receipt of a distress alert from a ship station shall be given in the following form:

- the distress signal MAYDAY;
- the call sign or other identification of the station sending the distress alert;
- the word DE;

– the call sign or other identification of the station acknowledging receipt of the distress alert;

– the signal RRR;

– the distress signal MAYDAY.

S32.25 § 16. The acknowledgement by direct-printing telegraphy of receipt of a distress alert from a ship earth station shall be given by the coast earth station receiving the distress alert, by retransmitting the ship station identity of the ship transmitting the distress alert.

C2. Receipt and Acknowledgement of Receipt by a Coast Station, a Coast Earth Station or a Rescue Coordination Centre

S32.26 § 17. Coast stations and appropriate coast earth stations in receipt of distress alerts shall ensure that they are routed as soon as possible to a Rescue Coordination Centre. Receipt of a distress alert is to be acknowledged as soon as possible by a coast station, or by a Rescue Coordination Centre via a coast station or an appropriate coast earth station.

S32.27 § 18. A coast station using digital selective calling to acknowledge a distress call shall transmit the acknowledgement on the distress calling frequency on which the call was received and should address it to all ships. The acknowledgement shall include the identification of the ship whose distress call is being acknowledged.

C3. Receipt and Acknowledgement of Receipt by a Ship Station or Ship Earth Station

S32.28 § 19. (1) Ship or ship earth stations in receipt of a distress alert shall, as soon as possible, inform the master or person responsible for the ship of the contents of the distress alert.

S32.29 (2) In areas where reliable communications with one or more coast stations are practicable, ship stations in receipt of a distress alert should defer acknowledgement for a short interval so that receipt may be acknowledged by a coast station.

S32.30 § 20. (1) Ship stations operating in areas where reliable communications with a coast station are not practicable which receive a distress alert from a ship station which is, beyond doubt, in their vicinity, shall, as soon as possible and if appropriately equipped, acknowledge receipt and inform a Rescue Coordination Centre through a coast station or coast earth station (see No. **S32.18**).

S32.31 (2) However, a ship station receiving an HF distress alert shall not acknowledge it but shall observe the provisions of Nos. **S32.36** to **S32.38**, and shall, if the alert is not acknowledged by a coast station within 3 minutes, relay the distress alert.

S32.32 § 21. A ship station acknowledging receipt of a distress alert in accordance with No. **S32.29** or No. **S32.30** should:

S32.33 a) in the first instance, acknowledge receipt of the alert by using radiotelephony on the distress and safety traffic frequency in the band used for the alert;

S32.34 b) if acknowledgement by radiotelephony of the distress alert received on the MF or VHF distress alerting frequency is unsuccessful, acknowledge receipt of the distress alert by responding with a digital selective call on the appropriate frequency.

S32.35 § 22. A ship station in receipt of a shore-to-ship distress alert (see No. **S32.14**) should establish communication as directed and render such assistance as required and appropriate.

S32.36 *D. Preparations for Handling of Distress Traffic*

S32.37 § 23. On receipt of a distress alert transmitted by use of digital selective calling techniques, ship stations and coast stations shall set watch on the radiotelephone distress and safety traffic frequency associated with the distress and safety calling frequency on which the distress alert was received.

S32.38 § 24. Coast stations and ship stations with narrow-band direct-printing equipment shall set watch on the narrow-band direct-printing frequency associated with the distress alert signal if it indicates that narrow-band direct-printing is to be used for subsequent distress communications. If practicable, they should additionally set watch on the radiotelephone frequency associated with the distress alert frequency.

Section III. Distress Traffic

S32.39 *A. General and Search and Rescue Coordinating Communications*

S32.40 § 25. Distress traffic consists of all messages relating to the immediate assistance required by the ship in distress, including search and rescue communications and on-scene communications. The distress traffic shall as far as possible be on the frequencies contained in Article **S31**.

S32.41 § 26. (1) The distress signal consists of the word MAYDAY, pronounced in radiotelephony as the French expression "m'aider".

S32.42 (2) For distress traffic by radiotelephony, when establishing communications, calls shall be prefixed by the distress signal MAYDAY.

S32.43 § 27. (1) Error correction techniques in accordance with relevant ITU-R Recommendations shall be used for distress traffic by direct-printing telegraphy. All messages shall be preceded by at least one carriage return, a line feed signal, a letter shift signal and the distress signal MAYDAY.

S32.44 (2) Distress communications by direct-printing telegraphy should normally be established by the ship in distress and should be in the broadcast (forward error correction) mode. The ARQ mode may subsequently be used when it is advantageous to do so.

S32.45 § 28. (1) The Rescue Coordination Centre responsible for controlling a search and rescue operation shall also coordinate the distress traffic relating to the incident or may appoint another station to do so.

S32.46 (2) The Rescue Coordination Centre coordinating distress traffic, the unit coordinating search and rescue operations[1] or the coast station involved may impose silence on stations which interfere with that traffic. This instruction shall be addressed to all stations or to one station only, according to circumstances. In either case, the following shall be used:

S32.46.1 [1] In accordance with the International Convention on Maritime Search and Rescue, 1979, this is the on-scene commander (OSC) or the coordinator surface search (CSS).

S32.47 a) in radiotelephony, the signal SEELONCE MAYDAY, pronounced as the French expression "silence, m'aider";

S32.48 b) in narrow-band direct-printing telegraphy normally using forward-error correcting mode, the signal SILENCE MAYDAY. However, the ARQ mode may be used when it is advantageous to do so.

S32.49 § 29. Until they receive the message indicating that normal working may be resumed (see No. **S32.51**), all stations which are aware of the distress traffic, and which are not taking part in it, and which are not in distress, are forbidden to transmit on the frequencies in which the distress traffic is taking place.

S32.50 § 30. A station of the mobile service which, while following distress traffic, is able to continue its normal service, may do so when the distress traffic is well established and on condition that it observes the provisions of No. **S32.49** and that it does not interfere with distress traffic.

S32.51 § 31. When distress traffic has ceased on frequencies which have been used for distress traffic, the Rescue Coordination Centre controlling a search and rescue operation shall initiate a message for transmission on these frequencies indicating that distress traffic has finished.

S32.52 § 32. (1) In radiotelephony, the message referred to in No. **S32.51** consists of:

- the distress signal MAYDAY;
- the call "Hello all stations" or CQ (spoken as CHARLIE QUEBEC) spoken three times;
- the words THIS IS (or DE spoken as DELTA ECHO in the case of language difficulties);
- the call sign or other identification of the station sending the message;
- the time of handing in of the message;
- the name and call sign of the mobile station which was in distress;
- the words SEELONCE FEENEE pronounced as the French words "silence fini".

S32.53 (2) In direct-printing telegraphy, the message referred to in No. **S32.51** consists of:

- the distress signal MAYDAY;
- the call CQ;
- the word DE;
- the call sign or other identification of the station sending the message;
- the time of handing in of the message;
- the name and call sign of the mobile station which was in distress; and
- the words SILENCE FINI.

S32.54 *B. On-scene communications*

S32.55 § 33. (1) On-scene communications are those between the mobile unit in distress and assisting mobile units, and between the mobile units and the unit coordinating search and rescue operations[1].

S32.55.1 [1] In accordance with the International Convention on Maritime Search and Rescue, 1979, this is the on-scene commander (OSC) or the coordinator surface search (CSS).

S32.56 (2) Control of on-scene communications is the responsibility of the unit coordinating search and rescue operations[1]. Simplex communications shall be used so that all on-scene mobile stations may share relevant information concerning the distress incident. If direct-printing telegraphy is used, it shall be in the forward error-correcting mode.

S32.56.1 [1] In accordance with the International Convention on Maritime Search and Rescue, 1979, this is the on-scene commander (OSC) or the coordinator surface search (CSS).

S32.57 § 34. (1) The preferred frequencies in radiotelephony for on-scene communications are 156.8 MHz and 2 182 kHz. The frequency 2 174.5 kHz may also be used for ship-to-ship on-scene communications using narrow-band direct-printing telegraphy in the forward error correcting mode.

S32.58 (2) In addition to 156.8 MHz and 2 182 kHz, the frequencies 3 023 kHz, 4 125 kHz, 5 680 kHz, 123.1 MHz and 156.3 MHz may be used for ship-to-aircraft on-scene communications.

S32.59 § 35. The selection or designation of on-scene frequencies is the responsibility of the unit coordinating search and rescue operations[2]. Normally, once an on-scene frequency is established, a continuous aural or teleprinter watch is maintained by all participating on-scene mobile units on the selected frequency.

S32.59.1 [2] In accordance with the International Convention on Maritime Search and Rescue, 1979, this is the on-scene commander (OSC) or the coordinator surface search (CSS).

S32.60 *C. Locating and Homing Signals*

S32.61 § 36. (1) Locating signals are radio transmissions intended to facilitate the finding of a mobile unit in distress or the location of survivors. These signals include those transmitted by searching units, and those transmitted by the mobile unit in distress, by survival craft, by float-free EPIRBs, by satellite EPIRBs and by search and rescue radar transponders to assist the searching units.

S32.62 (2) Homing signals are those locating signals which are transmitted by mobile units in distress, or by survival craft, for the purpose of providing searching units with a signal that can be used to determine the bearing to the transmitting stations.

[MOD S32.63 (3) Locating signals may be transmitted in the following frequency bands:

117.975 - 136 MHz;

156 - 174 MHz;

406 - 406.1 MHz; ~~and~~

1 645.5 – 1 646.5 MHz; and

9 200 - 9 500 MHz].

S32.64 (4) Locating signals shall be in accordance with the relevant ITU-R Recommendations.

ARTICLE S33

Operational Procedures for Urgency and Safety Communications (GMDSS)

Section I. General

S33.1 § 1. Urgency and safety communications include:

S33.2 a) navigational and meteorological warnings and urgent information;

S33.3 b) ship-to-ship safety of navigation communications;

S33.4 c) ship reporting communications;

S33.5 d) support communications for search and rescue operations;

S33.6 e) other urgency and safety messages; and

S33.7 f) communications relating to the navigation, movements and needs of ships and weather observation messages destined for an official meteorological service.

Section II. Urgency Communications

S33.8 § 2. In a terrestrial system the announcement of the urgency message shall be made on one or more of the distress and safety calling frequencies specified in Section I of Article **S31** using digital selective calling and the urgency call format. A separate announcement need not be made if the urgency message is to be transmitted through the maritime mobile-satellite service.

S33.9 § 3. The urgency signal and message shall be transmitted on one or more of the distress and safety traffic frequencies specified in Section I of Article **S31**, or via the maritime mobile-satellite service or on other frequencies used for this purpose.

S33.10 § 4. The urgency signal consists of the words PAN PAN. In radiotelephony each word of the group shall be pronounced as the French word "panne".

S33.11 § 5. The urgency call format and the urgency signal indicate that the calling station has a very urgent message to transmit concerning the safety of a mobile unit or a person.

S33.12 § 6. (1) In radiotelephony, the urgency message shall be preceded by the urgency signal (see No. **S33.10**), repeated three times, and the identification of the transmitting station.

S33.13 (2) In narrow-band direct-printing, the urgency message shall be preceded by the urgency signal (see No. **S33.10**) and the identification of the transmitting station.

S33.14 § 7. (1) The urgency call format or urgency signal shall be sent only on the authority of the master or the person responsible for the mobile unit carrying the mobile station or mobile earth station.

S33.15 (2) The urgency call format or the urgency signal may be transmitted by a land station or a coast earth station with the approval of the responsible authority.

S33.16 § 8. When an urgency message which calls for action by the stations receiving the message has been transmitted, the station responsible for its transmission shall cancel it as soon as it knows that action is no longer necessary.

S33.17 § 9. (1) Error correction techniques in accordance with relevant ITU-R Recommendations shall be used for urgency messages by direct-printing telegraphy. All messages shall be preceded by at least one carriage return, a line feed signal, a letter shift signal and the urgency signal PAN PAN.

S33.18 (2) Urgency communications by direct-printing telegraphy should normally be established in the broadcast (forward error correction) mode. The ARQ mode may subsequently be used when it is advantageous to do so.

Section III. Medical Transports

S33.19 § 10. The term "medical transports", as defined in the 1949 Geneva Conventions and Additional Protocols, refers to any means of transportation by land, water or air, whether military or civilian, permanent or temporary, assigned exclusively to medical transportation and under the control of a competent authority of a party to a conflict or of neutral States and of other States not parties to an armed conflict, when these ships, craft and aircraft assist the wounded, the sick and the shipwrecked.

S33.20 § 11. For the purpose of announcing and identifying medical transports which are protected under the above-mentioned Conventions, the procedure of Section II of this Article is used. The urgency signal shall be followed by the addition of the single word MEDICAL in narrow-band direct-printing and by the addition of the single word MAY-DEE-CAL pronounced as in French "médical", in radiotelephony.

S33.21 § 12. The use of the signals described in No. **S33.20** indicates that the message which follows concerns a protected medical transport. The message shall convey the following data:

S33.22 a) call sign or other recognized means of identification of the medical transport;

S33.23 b) position of the medical transport;

S33.24 c) number and type of vehicles in the medical transport;

S33.25 d) intended route;

S33.26 e) estimated time en route and of departure and arrival, as appropriate;

S33.27 f) any other information, such as flight altitude, radio frequencies guarded, languages used and secondary surveillance radar modes and codes.

S33.28 § 13. (1) The identification and location of medical transports at sea may be conveyed by means of appropriate standard maritime radar transponders (see Recommendation **14 (Mob-87)**).

S33.29 (2) The identification and location of aircraft medical transports may be conveyed by the use of the secondary surveillance radar (SSR) system specified in Annex 10 to the Convention on International Civil Aviation.

S33.30 § 14. The use of radiocommunications for announcing and identifying medical transports is optional; however, if they are used, the provisions of these Regulations and particularly of this Section and of Articles **S30** and **S31** shall apply.

Section IV. Safety Communications

S33.31 § 15. In a terrestrial system the announcement of the safety message shall be made on one or more of the distress and safety calling frequencies specified in Section I of Article **S31** using digital selective calling techniques. A separate announcement need not be made if the message is to be transmitted through the maritime mobile-satellite service.

S33.32 § 16. The safety signal and message shall normally be transmitted on one or more of the distress and safety traffic frequencies specified in Section I of Article **S31**, or via the maritime mobile-satellite service or on other frequencies used for this purpose.

S33.33 § 17. The safety signal consists of the word SECURITE. In radiotelephony, it shall be pronounced as in French.

S33.34 § 18. The safety call format or the safety signal indicates that the calling station has an important navigational or meteorological warning to transmit.

S33.35 § 19. (1) In radiotelephony, the safety message shall be preceded by the safety signal (see No. **S33.33**) repeated three times, and the identification of the transmitting station.

S33.36 (2) In narrow-band direct-printing, the safety message shall be preceded by the safety signal (see No. **S33.33**), and the identification of the transmitting station.

S33.37 § 20. (1) Error correction techniques in accordance with relevant ITU-R Recommendations shall be used for safety messages by direct-printing telegraphy. All messages shall be preceded by at least one carriage return, a line feed signal, a letter shift signal and the safety signal SECURITE.

S33.38 (2) Safety communications by direct-printing telegraphy should normally be established in the broadcast (forward error correction) mode. The ARQ mode may subsequently be used when it is advantageous to do so.

Section V. Transmission of Maritime Safety Information

S33.39 *A. General*

S33.40 § 21. The operational details of the stations transmitting maritime safety information in accordance with Nos. **S33.43**, **S33.45**, **S33.46**, **S33.48** and **S33.50** shall be indicated in the List of Radiodetermination and Special Service Stations (see also Appendix **S13**).

S33.41 § 22. The mode and format of the transmissions mentioned in Nos. **S33.43**, **S33.45**, **S33.46** and **S33.48** shall be in accordance with the relevant ITU-R Recommendations.

S33.42 *B. International NAVTEX System*

S33.43 § 23. Maritime safety information shall be transmitted by means of narrow-band direct-printing telegraphy with forward error correction using the frequency 518 kHz in accordance with the international NAVTEX system (see Nos. **S9.20** and **S9.29** and Appendix **S15**).

S33.44 *C. 490 kHz and 4 209.5 kHz*

S33.45 § 24. (1) The frequency 490 kHz may be used, after full implementation of the GMDSS, for the transmission of maritime safety information by means of narrow-band direct-printing telegraphy with forward error correction (see Appendix **S15** and Resolution **210 (Mob-87)**).

S33.46 (2) The frequency 4 209.5 kHz is used exclusively for NAVTEX-type transmission by means of narrow-band direct-printing telegraphy with forward error correction (see Resolution **332 (Mob-87)**).

S33.47 *D. High Seas*
Maritime Safety Information

S33.48 § 25. Maritime safety information is transmitted by means of narrow-band direct-printing telegraphy with forward error correction using the frequencies 4 210 kHz, 6 314 kHz, 8 416.5 kHz, 12 579 kHz, 16 806.5 kHz, 19 680.5 kHz, 22 376 kHz and 26 100.5 kHz (see Resolution **333 (Mob-87)**).

S33.49 *E. Maritime Safety Information via Satellite*

S33.50 § 26. Maritime safety information may be transmitted via satellite in the maritime mobile-satellite service using the band 1 530 - 1 545 MHz (see Appendix **S15**).

Section VI. Intership Navigation Safety Communications

S33.51 § 27. (1) Intership navigation safety communications are those VHF radiotelephone communications conducted between ships for the purpose of contributing to the safe movement of ships.

S33.52 (2) The frequency 156.650 MHz is used for intership navigation safety communications (see also Appendix **S15** and note *p)* in Appendix **S18**).

Section VII. Use of Other Frequencies for Distress and Safety

S33.53 § 28. Radiocommunications for distress and safety purposes may be conducted on any appropriate communications frequency, including those used for public correspondence. In the maritime mobile-satellite service, frequencies in the bands 1 530 - 1 544 MHz and 1 626.5 - 1 645.5 MHz are used for this function as well as for distress alerting purposes (see No. **S32.2**).

ARTICLE S34

Alerting Signals (GMDSS)

Section I. Emergency Position-Indicating Radiobeacon (EPIRB) and Satellite EPIRB Signals

S34.1 § 1. The emergency position-indicating radiobeacon signal transmitted on 156.525 MHz and satellite EPIRB signals in the band 406 - 406.1 MHz or 1 645.5 - 1 646.5 MHz shall be in accordance with relevant ITU-R Recommendations.

Section II. Digital Selective Calling

S34.2 § 2. The characteristics of the "distress call" (see No. **S32.9**) in the digital selective calling system shall be in accordance with relevant ITU-R Recommendations.

CHAPTER SVIII

Aeronautical Services

ARTICLE S35

Introduction

MOD S35.1 § 1. With the exception of Articles **S36, S37, S39, S42, S43** and **S44.2**, the other provisions of this Chapter may be governed by special arrangements concluded pursuant to ~~Article 31 of the International Telecommunication Convention, Nairobi, 1982~~Article 42 of the Constitution of the International Telecommunication Union, Geneva, 1992, or by intergovernmental agreements[1] provided their implementation does not cause harmful interference to the radio services of other countries.

S35.1.1 [1] For example, the International Civil Aviation Organization (ICAO) has agreed upon standards and recommended practices adapted to the needs of aircraft operation which have been proven in practice and are well established in current use.

ARTICLE S36

Authority of the Person Responsible for the Station

S36.1 § 1. The service of a mobile station is placed under the supreme authority of the person responsible for the aircraft or other vehicle carrying the mobile station.

S36.2 § 2. The person holding this authority shall require that each operator comply with these Regulations and that the mobile station for which the operator is responsible is used, at all times, in accordance with these Regulations.

S36.3 § 3. Except as otherwise provided for in these Regulations, the person responsible, as well as all the persons who may have knowledge of any information whatever obtained by means of the radiocommunication service, are placed under the obligation of observing and ensuring the secrecy of correspondence.

S36.4 § 4. The provisions of Nos. **S36.1, S36.2** and **S36.3** shall also apply to personnel of aircraft earth stations.

ARTICLE S37

Operators' Certificates

Section I. General Provisions

S37.1 (1) The service of every aircraft station and every aircraft earth station shall be controlled by an operator holding a certificate issued or recognized by the government to which the station is subject. Provided the station is so controlled, other persons besides the holder of the certificate may use the radiotelephone equipment.

S37.2 (2) In order to meet special needs, special agreements between administrations may fix the conditions to be fulfilled in order to obtain a radiotelephone operator's certificate intended to be used in aircraft radiotelephone stations and aircraft earth stations complying with certain technical conditions and certain operating conditions. These agreements, if made, shall be on the condition that harmful interference to international services shall not result therefrom. These conditions and agreements shall be mentioned in the certificates issued to such operators.

S37.3 (3) The service of automatic communication devices[1] installed in an aircraft station or aircraft earth station shall be controlled by an operator holding a certificate issued or recognized by the government to which the station is subject. Provided the devices are so controlled, they may be used by other persons.

S37.3.1 [1] The term "automatic communication devices" is intended to include such equipment as teleprinters, data transfer systems, etc.

S37.4 (4) Nevertheless, in the service of aircraft stations and aircraft earth stations operating radiotelephony solely on frequencies above 30 MHz, each government shall decide for itself whether a certificate is necessary and, if so, shall define the conditions for obtaining it.

S37.5 (5) The provisions of No. **S37.4** shall not, however, apply to any aircraft station or aircraft earth station working on frequencies assigned for international use.

S37.6 § 2. (1) In the case of complete unavailability of the operator in the course of a flight, and solely as a temporary measure, the person responsible for the station may authorize an operator holding a certificate issued by the government of another Member of the Union to perform the radiocommunication service.

S37.7 (2) When it is necessary to employ a person without a certificate or an operator not holding an adequate certificate as a temporary operator, his performance as such must be limited solely to signals of distress, urgency and safety, messages relating thereto, messages relating directly to the safety of life and essential messages relating to the navigation and safe movement of the aircraft.

S37.8 (3) In all cases, such temporary operators must be replaced as soon as possible by operators holding the certificate prescribed in paragraph 1 of this Article.

S37.9 § 3. (1) Each administration shall take the necessary steps to prevent, to the maximum extent possible, the fraudulent use of certificates. For this purpose, such certificates shall bear the holder's signature and shall be authenticated by the issuing administration. Administrations may employ, if they wish, other means of identification such as photographs, fingerprints, etc.

S37.10 (2) To facilitate verification of certificates, these may carry, if necessary, in addition to the text in the national language, a translation of this text in a working language of the Union.

S37.11 § 4. Each administration shall take the necessary steps to place operators under the obligation to preserve the secrecy of correspondence as provided for in No. **S18.4**.

Section II. Classes and Categories of Certificates

S37.12 § 5. There are two categories of radiotelephone operators' certificates, general and restricted.

S37.13 § 6. (1) The holder of a radio telephone operator's general certificate may carry out the radiotelephone service of any aircraft station or of any aircraft earth station.

S37.14 (2) The holder of a radiotelephone operator's restricted certificate may carry out the radiotelephone service of any aircraft station or aircraft earth station operating on frequencies allocated exclusively to the aeronautical mobile service or the aeronautical mobile-satellite service, provided that the operation of the transmitter requires only the use of simple external switching devices.

Section III. Conditions for the Issue of Operators' Certificates

S37.15 *A. General*

S37.16 § 7. (1) The conditions to be imposed for obtaining the various certificates are contained in the following paragraphs and represent the minimum requirements.

S37.17 (2) Each administration is free to fix the number of examinations necessary to obtain each certificate.

S37.18 § 8. (1) The administration which issues a certificate may, before authorizing an operator to carry out the service on board aircraft, require the fulfilment of other conditions (for example: experience with automatic communication devices; further technical and professional knowledge relating particularly to navigation; physical fitness; the completion as an operator of a certain number of flying hours; etc.).

S37.19 (2) Administrations should take whatever steps they consider necessary to ensure the continued proficiency of operators after prolonged absences from operational duties.

S37.20 *B. Radiotelephone Operators' Certificates*

S37.21 § 9. The radiotelephone operator's general certificate is issued to candidates who have given proof of the knowledge and professional qualifications enumerated below (see also No. **S37.13**):

S37.22 a) a knowledge of the elementary principles of radiotelephony;

S37.23 b) detailed knowledge of the practical operation and adjustment of radiotelephone apparatus;

S37.24 c) ability to send correctly and to receive correctly by radiotelephone in one of the working languages of the Union;

S37.25 d) detailed knowledge of the Regulations applying to radiotelephone communications and specifically of that part of those Regulations relating to the safety of life.

S37.26 § 10. (1) The radiotelephone operator's restricted certificate is issued to candidates who have given proof of the knowledge and professional qualifications enumerated below:

S37.27 a) practical knowledge of radiotelephone operation and procedure;

S37.28 b) ability to send correctly and to receive correctly by radiotelephone in one of the working languages of the Union;

S37.29 c) general knowledge of the Regulations applying to radiotelephone communications and specifically of that part of those Regulations relating to the safety of life.

S37.30 (2) For aircraft radiotelephone stations and aircraft earth stations operating on frequencies allocated exclusively to the aeronautical mobile service or the aeronautical mobile-satellite service, each administration may itself fix the conditions for obtaining a radiotelephone operator's restricted certificate, provided that the operation of the transmitter requires only the use

of simple external switching devices. The administration shall ensure that the operator has an adequate knowledge of radiotelephone operation and procedure particularly as far as distress, urgency and safety are concerned. This in no way contravenes the provisions of No. **S37.2**.

S37.31 § 11. A radiotelephone operator's certificate shall show whether it is a general certificate or a restricted certificate and, in the latter case, if it has been issued in conformity with the provisions of No. **S37.30**.

ARTICLE S38

Personnel

S38.1 Administrations shall ensure that the staff on duty in aeronautical stations and in aeronautical earth stations shall be adequately qualified to operate the stations efficiently.

ARTICLE S39

Inspection of Stations

S39.1 § 1. (1) The inspectors of governments or appropriate administrations of countries who visit an aircraft station or aircraft earth station may require the production of the licence for examination. The operator of the station, or the person responsible for the station, shall facilitate this examination. The licence shall be kept in such a way that it can be produced upon request.

S39.2 (2) The inspectors shall have in their possession an identity card or badge, issued by the competent authority, which they shall show on request of the person responsible for the aircraft.

S39.3 (3) When the licence cannot be produced or when manifest irregularities are observed, governments or administrations may inspect the radio installations in order to satisfy themselves that these conform to the conditions imposed by these Regulations.

S39.4 (4) In addition, inspectors have the right to require the production of the operators' certificates, but proof of professional knowledge may not be demanded.

S39.5 § 2. (1) When a government or administration has found it necessary to adopt the course indicated in No. **S39.3**, or when the operators' certificates cannot be produced, the government or administration to which the aircraft station or aircraft earth station is subject shall be so informed without delay. In addition, the procedure specified in Article **S15** is followed when necessary.

S39.6 (2) Before leaving, the inspector shall report the result of his inspection to the person responsible for the aircraft. If any breach of the conditions imposed by these Regulations is observed, the inspector shall make this report in writing.

S39.7 § 3. Members undertake not to impose upon foreign aircraft stations or aircraft earth stations which are temporarily within their territorial limits or which make a temporary stay in their territory, technical and operating conditions more severe than those contemplated in these Regulations. This undertaking in no way affects arrangements which are made under international agreements relating to air navigation, and which are therefore not covered by these Regulations.

ARTICLE S40

Working Hours of Stations

S40.1 § 1. Every station of the aeronautical mobile service and the aeronautical mobile-satellite service shall have an accurate clock correctly regulated to Coordinated Universal Time (UTC).

S40.2 § 2. The service of an aeronautical station or an aeronautical earth station shall be continuous throughout the period during which it bears responsibility for the radiocommunication service to aircraft in flight.

S40.3 § 2A. Aircraft stations and aircraft earth stations in flight shall maintain service to meet the essential communications needs of the aircraft with respect to safety and regularity of flight and shall maintain watch as required by the competent authority and shall not cease watch, except for reasons of safety, without informing the aeronautical station or aeronautical earth station concerned.

ARTICLE S41

Communications with Stations in the Maritime Services

S41.1 Stations on board aircraft may communicate, for purposes of distress, and for public correspondence[1], with stations of the maritime mobile or maritime mobile-satellite services. For these purposes, they shall conform to the relevant provisions of Chapter **SVII** and Chapter **SIX**, Articles **S51** (Section III), **S53, S54, S55, S57** and **S58** and Appendix **S13** (see also Nos. **S4.19, S4.20** and **S43.4**).

S41.1.1 [1] Stations on board aircraft may communicate for public correspondence purposes as long as watch is maintained on the frequencies provided for safety and regularity of flight.

ARTICLE S42

Conditions to be Observed by Stations

S42.1 § 1. The energy radiated by receiving apparatus shall be reduced to the lowest practical value and shall not cause harmful interference to other stations.

S42.2 § 2. Administrations shall take all practicable steps necessary to ensure that the operation of any electrical or electronic apparatus installed in mobile stations and mobile earth stations does not cause harmful interference to the essential radio services of stations which are operating in accordance with the provisions of these Regulations.

S42.3 § 3. Mobile stations and mobile earth stations other than survival craft stations shall be provided with the documents enumerated in the appropriate section of Appendix **S16** (Section VI, "Aircraft Stations").

ADD S42.4 § 4. The operation of a broadcasting service (see No. S1.38) by an aircraft station at sea and over the sea is prohibited (see also No. S23.2).

ARTICLE S43

Special Rules Relating to the Use of Frequencies

S43.1 § 1. Frequencies in any band allocated to the aeronautical mobile (R) service and the aeronautical mobile-satellite (R) service are reserved for communications relating to safety and regularity of flight between any aircraft and those aeronautical stations and aeronautical earth stations primarily concerned with flight along national or international civil air routes.

S43.2 § 2. Frequencies in any band allocated to the aeronautical mobile (OR) service and the aeronautical mobile-satellite (OR) service are reserved for communications between any aircraft and aeronautical stations and aeronautical earth stations other than those primarily concerned with flight along national or international civil air routes.

S43.3 § 3. Frequencies in the bands allocated to the aeronautical mobile service between 2 850 kHz and 22 000 kHz (see Article **S5**) shall be assigned in conformity with the provisions of Appendices **S26** and **S27** and the other relevant provisions of these Regulations.

S43.4 § 4. Administrations shall not permit public correspondence in the frequency bands allocated exclusively to the aeronautical mobile service or to the aeronautical mobile-satellite service.

S43.5 § 5. In order to reduce interference, aircraft stations shall, within the means at their disposal, endeavour to select for calling the band with the most favourable propagational characteristics for effecting reliable communication. In the absence of more precise data, an aircraft station shall, before making a call, listen for the signals of the station with which it desires to communicate. The strength and intelligibility of such signals are useful as a guide to propagational conditions and indicate which is the preferable band for calling.

S43.6 § 6. Governments may, by agreement, decide the frequencies to be used for call and reply in the aeronautical mobile service and the aeronautical mobile-satellite service.

ARTICLE S44

Order of Priority of Communications

S44.1 § 1. The order of priority for communications[1] in the aeronautical mobile service and the aeronautical mobile-satellite service shall be as follows, except where impracticable in a fully automated system in which, nevertheless, Category 1 shall receive priority:

1. Distress calls, distress messages and distress traffic.
2. Communications preceded by the urgency signal.
3. Communications relating to radio direction-finding.
4. Flight safety messages.
5. Meteorological messages.
6. Flight regularity messages.
7. Messages relating to the application of the United Nations Charter.
8. Government messages for which priority has been expressly requested.
9. Service communications relating to the working of the telecommunication service or to communications previously exchanged.
10. Other aeronautical communications.

S44.1.1 [1] The term *communications* as used in this Article includes radiotelegrams, radiotelephone calls and radiotelex calls.

S44.2 § 2. Categories 1 and 2 shall receive priority over all other communications irrespective of any agreement under the provisions of No. **S35.1**.

ARTICLE S45

General Communication Procedure

S45.1 § 1. As a general rule, it rests with the aircraft station to establish communication with the aeronautical station. For this purpose, the aircraft station may call the aeronautical station only when it comes within the designated operational coverage[1] area of the latter.

S45.1.1 [1] Designated operational coverage is that volume of airspace needed operationally in order to provide a particular service and within which the facility is afforded frequency protection.

S45.2 § 2. An aeronautical station having traffic for an aircraft station may call this station if it has reason to believe that the aircraft station is keeping watch and is within the designated operational coverage area (see No. **S45.1.1**) of the aeronautical station.

S45.3 § 3. When an aeronautical station receives calls in close succession from several aircraft stations, it decides on the order in which these stations may transmit their traffic. Its decision shall be based on the priority in Article **S44**.

S45.4 § 4. If an aeronautical station finds it necessary to intervene in communications between aircraft stations, these stations shall comply with the instructions given by the aeronautical station.

S45.5 § 5. Before transmitting, a station shall take precautions to ensure that it will not interfere with a communication already in progress and that the station called is not in communication with another station.

S45.6 § 6. When a radiotelephone call has been made to an aeronautical station, but no answer has been received, a period of at least ten seconds should elapse before a subsequent call is made to that station.

S45.7 § 7. Aircraft stations shall not radiate carrier waves between calls.

CHAPTER SIX

Maritime Services

ARTICLE S46

Authority of the Master

S46.1 § 1. The service of a ship station is placed under the supreme authority of the master or of the person responsible for the ship or other vessel carrying the station.

S46.2 § 2. The person holding this authority shall require that each operator comply with these Regulations and that the ship station for which the operator is responsible is used, at all times, in accordance with these Regulations.

S46.3 § 3. The master or the person responsible, as well as all persons who may have knowledge of the text or even of the existence of a radiotelegram, or of any information whatever obtained by means of the radiocommunication service, are placed under the obligation of observing and ensuring the secrecy of correspondence.

S46.4 § 4. The provisions of Nos. **S46.1**, **S46.2** and **S46.3** shall also apply to personnel of ship earth stations.

ARTICLE S47

Operators' Certificates

Section I. General Provisions

S47.1 § 1. (1) The service of every ship Morse radiotelegraph station shall be performed by an operator holding a certificate issued or recognized by the government to which the station is subject.

S47.2 (2) The service of every ship radiotelephone station, ship earth station and ship station using the frequencies and techniques prescribed in Chapter **SVII** shall be controlled by an operator holding a certificate issued or recognized by the government to which the station is subject. Provided the station is so controlled, other persons besides the holder of the certificate may use the equipment.

S47.3 (3) The service of automatic communication devices[1] installed in a ship station shall be controlled by an operator holding a certificate issued or recognized by the government to which the station is subject. Provided the devices are so controlled, they may be used by other persons. If such devices require for their basic function the use of Morse code signals specified in the Instructions for the Operation of the International Public Telegram Service, the service shall be performed by an operator holding a radiotelegraph operator's certificate. However, this latter requirement does not apply to automatic devices which may use Morse code signals solely for identification purposes.

S47.3.1 [1] The term "automatic communication devices" is intended to include such equipment as teleprinters, data transfer systems, etc.

S47.4 (4) Nevertheless, in the service of radiotelephone stations operating solely on frequencies above 30 MHz, each government shall decide for itself whether a certificate is necessary and, if so, shall define the conditions for obtaining it.

S47.5 (5) The provisions of No. **S47.4** shall not, however, apply to any ship station working on frequencies assigned for international use.

S47.6 § 2. (1) In the case of complete unavailability of the operator in the course of a sea passage and solely as a temporary measure, the master or the person responsible for the station may authorize an operator holding a certificate issued by the government of another Member to perform the radiocommunication service.

S47.7 (2) When it is necessary to employ a person without a certificate or an operator not holding an adequate certificate as a temporary operator, his performance as such must be limited solely to signals of distress, distress alerting, urgency and safety, messages relating thereto, messages relating directly to the safety of life and urgent messages relating to the movement of the ship.

S47.8 (3) In all cases, such temporary operators must be replaced as soon as possible by operators holding the certificate prescribed in paragraph 1 of this Article.

S47.9 § 3. (1) Each administration shall take the necessary steps to prevent, to the maximum extent possible, the fraudulent use of certificates. For this purpose, such certificates shall bear the holder's signature and shall be authenticated by the issuing administration. Administrations may employ, if they wish, other means of identification such as photographs, fingerprints, etc.

S47.10 (2) In the maritime mobile service the certificates issued after 1 January 1978 shall bear the photograph of the holder and the holder's date of birth.

S47.11 (3) To facilitate verification of certificates, these may carry, if necessary, in addition to the text in the national language, a translation of this text in a working language of the Union.

S47.12 (4) In the maritime mobile service all certificates not in one of the working languages of the Union and issued after 1 January 1978 shall carry at least the following information in one of these working languages:

S47.13 a) the name and date of birth of the holder;

S47.14 b) the title of the certificate and its date of issue;

S47.15 c) if applicable, the number and period of validity of the certificate;

S47.16 d) the issuing administration.

S47.17 § 4. Each administration shall take the necessary steps to place operators under the obligation to preserve the secrecy of correspondence as provided for in No. **S18.4**.

MOD S47.18 § 5. Each administration may determine the conditions under which personnel holding certificates specified in Appendix **S13** ~~[see Nos. 1.1(1) a) and 1.1(2)]~~ may be granted certificates under Nos. **S47.20** to **S47.23**.

Section II. Categories of Operators' Certificates

S47.19 § 6. There are four categories of certificates, shown in descending order of requirement, for personnel of ship stations and ship earth stations using the frequencies and techniques prescribed in Chapter **SVII**. An operator meeting the requirements of any higher order certificate fully meets all of the requirements of the lower order certificates.

S47.20 a) First-Class Radio Electronic Certificate;

S47.21 b) Second-Class Radio Electronic Certificate;

S47.22 c) General Operator's Certificate;

S47.23 d) Restricted Operator's Certificate.

S47.24 (2) The holder of one of the certificates specified in Nos. **S47.20**, **S47.21**, **S47.22** and **S47.23** may carry out the service of ship stations or ship earth stations using the frequencies and techniques prescribed in Chapter **SVII**.

Section III. Conditions for the Issue of Certificates

[**S47.25** § 7. The requirements of the certificates of this section, for which candidates must show proof of the technical and professional knowledge and qualification, are shown in Table [AR55B].]

TABLE [AR55B]

Knowledge Requirements for Radio Electronic Operator's and General Operator's Certificates

	A	B	C	D	E
1.	Knowledge Requirement	1st * Class	2nd * Class	General *	Restricted*
2.	Principles of Electricity and theory of Radio and Electronics	Note 1	Note 1		
3.	Theoretical knowledge of all GMDSS equipment (See Note 2) and; General knowledge of the principles of equipment used for radionavigation, with particular reference to maintaining the equipment in service	Note 9	Note 10		
4.	Knowledge of the operation and preventive maintenance of the equipment indicated in 3	Note 11	Note 11		
5.	Practical knowledge necessary for the location of faults in the equipment indicated in 3	Note 3			
6.	Practical knowledge for effecting repairs in the case of faults in the equipment indicated in 3	Note 3	Note 3, Note 12		
7.	Knowledge of operation of all GMDSS subsystems and equipment	Note 9	Note 11	Note 11	Note 4
8.	Ability to send and receive by radiotelephone and direct printing	Note 7	Note 7	Note 7	Note 7, Note 8, Note 13
9.	Detailed knowledge of the regulations, related to radiocommunications	Note 5	Note 5	Note 5	Note 6

* Classes of Radio Electronic Operator's and General Operator's Certificates

1st Class = First-Class Radio Electronic Operator's Certificate
2nd Class = Second-Class Radio Electronic Operator's Certificate
General = General Operator's Certificate
Restricted = Restricted Operator's Certificate]

[Notes to Table [AR55B]

Note 1 - Knowledge sufficient to meet Requirements of row 3 and row 4 above.

Note 2 - GMDSS equipment includes Narrow-Band Direct Printing telegraph, radiotelephone transmitters and receivers, Digital Selective Calling Equipment, ship earth stations, Emergency Position Indicating Radio Beacons, marine antenna systems, radio equipment for survival craft together with all auxiliary items, including power supplies.

Note 3 - Using appropriate testing equipment and tools on board the vessel.

Note 4 - Limited to the equipment required for ships sailing in [GMDSS Sea Area A1] (VHF).

Note 5 - Detailed knowledge of regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommunications and knowledge of those provisions of the International Convention for the Safety of Life at Sea which relate to radio.

Note 6 - Knowledge of the regulations applying to radiotelephony communications and specifically of that part of those regulations relating to safety of life.

Note 7 - Sufficient knowledge of one of the working languages of the Union. Should be able to express themselves satisfactorily in that language, both orally and in writing.

Note 8 - Administrations may waive this language requirement for holders of a restricted operator's certificate when the ship station is confined to a limited area specified by the administration concerned. In such cases the certificate shall be suitably endorsed.

Note 9 - A detailed knowledge is required.

Note 10 - A general knowledge only is required.

Note 11 - A detailed practical knowledge only is required.

Note 12 - Knowledge required only for replacement of modular units.

Note 13 - Knowledge as applicable to radiotelephone only is required.]

Section IV. Qualifying Service

S47.26 § 8. (1) The holder of a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate is authorized to embark as chief operator of a ship station of the fourth category (see [Annex **58**, No. **4056**]).

S47.27 (2) However, before becoming chief or sole operator of a ship station of the fourth category (see [Annex **58**, No. **4056**]) which is required by international agreements to carry a radiotelegraph operator, the holder of a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate shall have had adequate experience as operator on board ship at sea.

S47.28 (3) Before becoming chief operator of a ship station of the second or third category (see [Annex **58**, Nos. **4054** and **4055**]), the holder of a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate shall have had, as operator on board ship or in a coast station, at least six months' experience of which at least three months shall have been on board ship.

S47.29 (4) Before becoming chief operator of a ship station of the first category (see [Annex **58**, No. **4053**]), the holder of a radiocommunication operator's general certificate or a first-class radiotelegraph operator's certificate shall have had, as operator on board ship or in a coast station, at least one year's experience of which at least six months shall have been on board ship.

ARTICLE S48

Personnel

Section I. Personnel of Coast Stations and Coast Earth Stations

S48.1 § 1. Administrations shall ensure that the staff on duty in coast stations and in coast earth stations are adequately qualified to operate the stations efficiently.

Section II. Class and Minimum Number of Personnel for Ship Stations and Ship Earth Stations

S48.2 § 2. Administrations shall ensure that the personnel of ship stations and ship earth stations are adequately qualified to enable efficient operation of the station, and shall take steps to ensure the operational availability and maintenance of equipment for distress and safety communications in accordance with the relevant international agreements.

S48.3 § 3. An adequately qualified person shall be available to act as a dedicated communications operator in cases of distress.

S48.4 § 4. The personnel of ship stations and ship earth stations for which a radio installation is compulsory under international agreements and which use the frequencies and techniques prescribed in Chapter **SVII** shall, with respect to the provisions of Article **S47**, include:

S48.5 a) for stations on board ships which sail beyond the range of VHF coast stations, taking into account the provisions of the Convention for the Safety of Life at Sea: a holder of a first- or second-class radio electronic certificate or a general operator's certificate;

S48.6 b) for stations on board ships which sail solely within the range of VHF coast stations, taking into account the provisions of the Convention for the Safety of Life at Sea: a holder of a first- or second-class radio electronic certificate or a general operator's certificate or a restricted operator's certificate.

S48.7 § 5. The personnel of ship stations and ship earth stations for which a radio installation is not compulsory under international agreements and which use the frequencies and techniques prescribed in Chapter **SVII** shall be adequately qualified and certificated in accordance with the administration's requirements.

ARTICLE S49

Inspection of Stations

S49.1 § 1. (1) The governments or appropriate administrations of countries which a ship station or ship earth station visits may require the production of the licence for examination. The operator of the station, or the person responsible for the station, shall facilitate this examination. The licence shall be kept in such a way that it can be produced upon request. As far as possible, the licence, or a copy certified by the authority which has issued it, should be permanently exhibited in the station.

S49.2 (2) The inspectors shall have in their possession an identity card or badge, issued by the competent authority, which they shall show on request of the master or person responsible for the ship or other vessel carrying the ship station or the ship earth station.

S49.3 (3) When the licence cannot be produced or when manifest irregularities are observed, governments or administrations may inspect the radio installations in order to satisfy themselves that these conform to the conditions imposed by these Regulations.

S49.4 (4) In addition, inspectors have the right to require the production of the operators' certificates, but proof of professional knowledge may not be demanded.

S49.5 § 2. (1) When a government or an administration has found it necessary to adopt the course indicated in No. **S49.3**, or when the operators' certificates cannot be produced, the government or administration to which the ship station or ship earth station is subject shall be so informed without delay. In addition, the procedure specified in Article **S15** is followed when necessary.

S49.6 (2) Before leaving, the inspector shall report the result of his inspection to the master, or the person responsible for the ship or other vessel carrying the ship station or ship earth station. If any breach of the conditions imposed by these Regulations is observed, the inspector shall make this report in writing.

S49.7 § 3. Members of the Union undertake not to impose upon foreign ship stations or upon foreign ship earth stations, which are temporarily within their territorial waters or which make a temporary stay in their territory, technical and operating conditions more severe than those contemplated in these Regulations. This undertaking in no way affects arrangements which are made under international agreements relating to maritime navigation, and which are therefore not covered by these Regulations.

ARTICLE S50

Working Hours of Stations

S50.1 § 1. In order to permit the application of the following rules on the subject of hours of watch, every station of the maritime mobile service and the maritime mobile-satellite service shall have an accurate clock correctly regulated to Coordinated Universal Time (UTC).

S50.2 § 2. Coordinated Universal Time (UTC), reckoned from 0000 to 2359 h beginning at midnight, shall be used for all entries in the radiocommunication service log and in all similar documents of ships compulsorily equipped with radiocommunication apparatus in compliance with an international agreement; this same provision will apply, as far as possible, to other ships.

S50.3 § 3. (1) The services of coast stations and coast earth stations are, as far as possible, continuous (day and night). Certain coast stations, however, may have a service of limited duration. Each administration or recognized private operating agency duly authorized to that effect fixes the hours of service for coast stations under its jurisdiction.

S50.4 (2) These hours of service shall be notified to the Secretary-General who shall publish them in the List of Coast Stations.

S50.5 § 4. Coast stations whose service is not continuous shall not close before:

S50.6 a) finishing all operations resulting from a distress call or from an urgency or safety signal;

S50.7 b) exchanging all traffic originating in or destined for ship stations which are situated within their service area and have indicated their presence before the actual cessation of work;

S50.8 c) making a general call to all stations announcing the closing down of the service and advising the time of reopening, if other than their normal hours of service.

S50.9 § 5. The services of ship stations for the international public correspondence shall be provided in accordance with the provisions of ITU-R Recommendation (see [Annex **58**]).

ANNEX 2

RESOLUTION No. 13

RELATING TO THE FORMATION OF CALL SIGNS AND THE ALLOCATION OF NEW INTERNATIONAL SERIES[1]

The World Administrative Radio Conference, Geneva, 1979,

considering

a) the recommendation of the International Radio Conference, Atlantic City, 1947, relating to the formation of call signs;

b) the increasing demand for call signs justified by the increased number of Members of the Union and by the increased requirements of countries which are already Members;

c) the information supplied by the Secretary-General regarding allocations of call signs since 1947 and the possibilities of the current system of forming call signs;

believing

that call signs already in use should, as far as possible, not be changed;

noting

a) that the former call sign series formed of three letters, or a figure and two letters, having been exhausted, a new series has been introduced formed of a letter, a figure and a letter; but in no case may the figure be 0 or 1;

MOD

b) that the method mentioned in *noting a)* is not applicable to series beginning with one of the following letters: B, F, G, I, K, M, N, R, ~~U~~V, W;

c) that a proposal has been submitted to this Conference for the formation of new call sign series by replacing the third character, which is a letter, by a digit;

d) however, that this would require consequential changes in Section III of Article **25**;

---

[1] Replaces Resolution No. 8 of the Administrative Radio Conference, Geneva, 1959.

resolves

1. that the Secretary-General shall continue to urge administrations:

   1.1 to make the maximum use of the possibilities of the series at present allocated, to avoid, as far as possible, further requests;

   1.2 to review the call-sign assignments they have already made from their present allocations, with a view to releasing any series and place them at the disposal of the Union;

2. that the Secretary-General shall, upon request, furnish advice to administrations on the means of effecting the greatest economy, which should be the rule, in the use of a series of call signs;

3. that if, nevertheless, before the next competent world administrative radio conference, it appears that all the possibilities of the present system of forming call signs will be exhausted, the Secretary-General shall:

   3.1 explore the possibilitity of forming new series on the basis of the proposal mentioned in *noting c)*;

   3.2 issue a circular-letter:

      3.2.1 explaining the position;

      3.2.2 urging the administrations to send in their proposals for possible solutions;

4. that, from the information thus submitted, the Secretary-General shall prepare a report, together with his comments and suggestions, for submission to the next competent world administrative radio conference.

ANNEX 3

DRAFT RESOLUTION [COM4-XXX]

CONSIDERATION OF CERTAIN OPERATIONAL MATTERS CONCERNING THE RADIO REGULATIONS IN THE AERONAUTICAL MOBILE AND MARITIME MOBILE SERVICES*

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that its decision regarding the recommendations proposed by the Voluntary Group of Experts have resulted in a considerable simplification for the Radio Regulations;

b) that the Radio Regulations contain various provisions, in particular for the aeronautical mobile and maritime mobile services which mainly relate to the operational aspects of these services;

c) that ICAO and IMO have already in place internationally recognized operational provisions pertaining to the aeronautical mobile and the maritime mobile services;

recognizing

that the relevant provisions in the Radio Regulations may be better defined in close collaboration with those organizations;

recognizing also

that the regulatory instruments of the ICAO, IMO and the ITU have different legal foundations and status such as membership, legal status of regulatory instruments, scope of aeronautical mobile and maritime mobile services, and influence on administrations;

resolves to instruct the Secretary-General

1 to arrange for the appropriate study within the ITU, in consultation with ICAO and the IMO and to identify in the Radio Regulations possible provisions, particularly with respect to Chapter S.VIII and S.IX, which have the character of specifying operational procedures of interest only to the aeronautical mobile and maritime mobile services;

2 to investigate legal issues raised by the difference between ICAO, IMO and the ITU as mentioned in *recognizing also*, above;

3 to report on the progress of this work to the World Radiocommunication Conference 1997;

4 to bring this Resolution to the attention of the ICAO and IMO.

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* This Resolution refers to the aeronautical mobile and the maritime mobile services as well as to the aeronautical mobile-satellite and the maritime mobile-satellite services.

ANNEX 4

RESOLUTION [COM4-#]

FURTHER STUDIES CONCERNING APPLICATION OF ARTICLE S19 (IDENTIFICATION OF STATIONS)

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that application of Article **S19** has given rise to *inter alia* legal and political questions arising from uncertainty as to who can be allocated call sign series and blocks of identities and the ambiguity in the use of the terms country, member and administration relative to the provisions of the Article;

b) that this matter is of considerable importance to many administrations and to some international organizations;

c) that the VGE concluded that much more expert study is required before any further changes to Article **S19** are considered;

[d) that this Conference has recommended to the Council the inclusion in the agenda of WRC-97 the review of Article **S19**[1];]

instructs the Secretary-General and the Director of the Radiocommunication Bureau

to arrange for the appropriate studies within the Radiocommunication Sector in consultation with the ICAO and IMO and present a report to WRC-97.

It was decided that a Note to the Working Group of the Plenary should be forwarded with a view to including in the the agenda of WRC-97 an appropriate item.

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[1] See Resolution [[EUR-10] (EUR/5/87)].

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 160-E
13 November 1995
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GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4

Jordan (Hashemite Kingdom of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

Jordan proposes the inclusion of its name in the following footnotes:

JOR/160/1

MOD 657
S5.275 *Additional allocation:* in Finland, Jordan, Libya and Yugoslavia, the bands 430 - 432 MHz and 438 - 440 MHz are also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

JOR/160/2

MOD 659
S5.277 *Additional allocation:* in Angola, Bulgaria, Cameroon, the Congo, Djibouti, Gabon, Hungary, Jordan, Malawi, Mali, Mongolia, Niger, Pakistan, Poland, the German Democratic Republic, Dem. People's Rep. of Korea, Romania, Rwanda, Chad, Czechoslovakia and the U.S.S.R., the band 430 - 440 MHz is also allocated to the fixed service on a primary basis.

JOR/160/3

MOD 730
S5.359 *Additional allocation:* in the Federal Republic of Germany, Austria, Bulgaria, Cameroon, Spain, France, Guinea, Hungary, Indonesia, Jordan, Libya, Mali, Mongolia, Nigeria, Poland, the German Democratic Republic, Romania, Senegal, Tanzania, Czechoslovakia and the U.S.S.R., the bands 1 550 - 1 645.5 MHz and 1 646.5 - 1 660 MHz are also allocated to the fixed service on a primary basis.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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WORKING GROUP 4B

FIRST REPORT FROM THE CHAIRMAN OF WORKING GROUP 4B TO COMMITTEE 4

Attached is my first Report on Articles S7 and S8.

It is to be noted that the United States proposal for an additional phrase to S8.3 dealing with Class of Operation B was not supported.

P. ABOUDARHAM
Chairman, 4B

Attachment: 1

ATTACHMENT

CHAPTER SIII

Coordination, Notification and Recording of Frequency Assignments and Plan Modifications

ARTICLE S7

Application of the Procedures

S7.1 The procedures of this Chapter shall be applied by administrations, the Radio Regulations Board (the Board) and the Radiocommunication Bureau (the Bureau) for the purposes of:

S7.2 a) obtaining coordination with, or the agreement of, other administrations whenever such a requirement is specified in one or more provisions of these Regulations (see Article **S9**);

SUP **S7.3**

S7.4 b) notifying to the Bureau frequency assignments for the purposes of examination and recording in the Master Register (see Article **S11**).

S7.5 Any administration may request the assistance of the Board or the Bureau in the application of any part of the procedures of this Chapter (see Articles **S13** and **S14**).

ADD S7.5bis If a frequency assignment is brought into use before commencement of the coordination procedure under Article S9, when coordination is required, or before notification when coordination is not required, the operation in advance of the application of the procedure shall, in no way, afford any priority of the date.

MOD **S7.6** If requested by any administration, particularly by the administration of a country in need of special assistance, the Bureau and when necessary the ~~Bureau~~Board shall use such means at ~~its~~their disposal as are appropriate in the circumstances and shall render the assistance requested in the application of the procedures of this Chapter.

S7.7 The Board shall, in accordance with the relevant provisions of the Constitution, the Convention and these Regulations, approve the Rules of Procedure which shall be applied by the Bureau (see Article **S13**, Section III).

S7.8 In a case of harmful interference involving the application of the provisions of Article **S15**, Section VI, except when there is an obligation to eliminate harmful interference under the provisions of this Chapter, administrations are urged to exercise the utmost goodwill and mutual

cooperation taking into account all the relevant technical and operational factors of the case.

ARTICLE S8

Status of Frequency Assignments Recorded in the Master International Frequency Register

S8.1 The international rights and obligations of administrations in respect of their own and other administrations' frequency assignments[1] shall be derived from the recordings in the Master International Frequency Register (the Master Register) or from their conformity, where appropriate, with a plan. Such rights shall be conditioned by the provisions of these Regulations and those of any relevant frequency allotment or assignment plan.

S8.1.1 [1] The expression "frequency assignment" wherever it appears in this Chapter shall be understood to refer either to a new frequency assignment or to a change in an assignment already recorded in the Master Register. Additionally, wherever the expression relates to a space station in the geostationary-satellite orbit, it shall be associated with a nominal location in that orbit.

SUP S8.2

MOD S8.3 Any frequency assignment recorded in the Master Register with a favourable finding under [**S11.#** to **S11.#**] shall have the right to international recognition. For such an assignment, this right means that other administrations, recognizing Nos. **S4.2** and **S4.3** in particular, shall take it into account when making their own assignments in order to avoid harmful interference.

S8.4 A frequency assignment shall be known as a non-conforming assignment when it is not in accordance with the Table of Frequency Allocations or the other[1] provisions of these Regulations. Such an assignment shall be recorded for information purposes, only when the notifying administration states that it will be operated in accordance with **S8.5**. (See also **S4.4**.)

ADD S8.4.1 [1] The "other provisions" shall be identified and included in the Rules of Procedure.

MOD S8.5 (3) If harmful interference to the reception of any station whose assignment is in accordance with Nos. [**1240**, **1352** or **1503**], as appropriate, is actually caused by the use of a frequency assignment which is not in conformity with No. [**1503**], the station using the latter frequency assignment must, upon receipt of advice thereof, immediately eliminate this harmful interference.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

REPORT FROM THE CHAIRMAN OF DRAFTING GROUP 4B2 TO COMMITTEE 4

Page 3, please replace MOD S9.2 by the following text:

MOD S9.2 Amendments to the information sent in accordance with the provisions of No. **S9.1** shall also be sent to the Bureau as soon as they become available. ~~Modifications which are of such nature as to significantly change the character of the network may require recommencing the advance publication procedure~~For geostationary satellite networks and non-geostationary satellite networks which are subject to Section II of Article **S9**, the use of an additional frequency band will require the application of the advance publication procedure for this band. For non-geostationary satellite networks which are not subject to Section II of Article **S9**, the use of an additional frequency band or an extension of the service area will require the application or recommencing respectively of the advance publication procedures for these modifications, see Resolution [COM4-#].

Please replace [SUP A.S9.4] by the following text:

MOD A.S9.4 3 See Appendices **S30** and **S30A** for the coordination of frequency assignments of other services in relation to stations of the broadcasting-satellite service and to stations of feeder links for this service in the bands covered by these appendices.**

DRAFT RESOLUTION COM4-#

CONDITIONS FOR RECOMMENCING OF THE PROCEDURES FOR THE ADVANCE PUBLICATION OF INFORMATION (API)

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that No. S9.2 of the Simplified Radio Regulations requires that the advance publication procedure will need to be applied and in one case recommenced as a result of a change to either one or two parameters;

b) it may be appropriate for both NGSO and GSO systems to have a very limited extension of this set of parameters;

c) that this possible list of parameters requires more study,

resolves to invite the Bureau

1 in cooperation with the relevant ITU-R study groups and Special Committee on regulatory/procedural matters to investigate:

- what parameters might be used to require a new advance publication;
- what constitutes a significant change to these parameters which would lead to a new advance publication;

2 to present the results of these investigations to the Conference Preparatory Meeting to WRC-97.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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WORKING GROUP 4B

SECOND REPORT FROM THE CHAIRMAN OF WORKING GROUP 4B TO COMMITTEE 4

Page 3, please replace MOD S9.2 by the following text:

[MOD S9.2 Amendments to the information sent in accordance with the provisions of No. **S9.1** shall also be sent to the Bureau as soon as they become available. ~~Modifications which are of such nature as to significantly change the character of the network may require recommencing the advance publication procedure~~For geostationary satellite networks and non-geostationary satellite networks which are subject to Section II of Article S9, the use of an additional frequency band will require the application of the advance publication procedure for this band. For non-geostationary satellite networks which are not subject to Section II of Article S9, the use of an additonal frequency band or an extension of the service area will require the application of the advance publication procedures for these modifications.]

INTERNATIONAL TELECOMMUNICATION UNION

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WORKING GROUP 4B

SECOND REPORT FROM THE CHAIRMAN OF WORKING GROUP 4B TO COMMITTEE 4

Attached is the second Report of Working Group 4B dealing with Section 1 of Article **S9**.

MOD **S9.5** has been approved on the understanding that the "summary of comments" to be published by the BR will include the substance of the comments received from administrations. It is suggested that this understanding be reflected in the documents of Committee 4.

P. ABOUDARHAM
Chairman of 4B

Annex: 1

ANNEX

ARTICLE S9

Procedure for Effecting Coordination with or Obtaining Agreement of Other Administrations[1, 2, [3, 4]]

Section I. Advance Publication of Information on Planned Satellite Networks or Satellite Systems

A.S9.1 [1] For the application of the provisions of this Article with respect to stations in a space radiocommunication service using frequency bands covered by the fixed-satellite service allotment plan, see also Appendix **S30B** and Resolution **107 (Orb-88)**.

A.S9.2 [2] These procedures may be applicable to stations on board satellite launching vehicles.

SUP A.S9.3

[SUP A.S9.4 [3] See Appendices **S30** and **S30A** for the coordination of frequency assignments of other services in relation to stations of the broadcasting-satellite service and to stations of feeder links for this service in the bands covered by these appendices.**]

MOD S9.1 Before initiating any action under this Article in respect of frequency assignments for a satellite network or a satellite system, an administration, or one[4] acting on behalf of a group of named administrations, shall prior to the coordination procedure described in Section II of Article **S9** below, where applicable, send to the Bureau a general description of the network or system for advance publication in the Weekly Circular not earlier than six years and preferably not later than two years before the planned date of bringing into use of the network or system (see also No. **S11.44**). The characteristics to be provided for this purpose are listed in Appendix **S4**. The coordination or notification information may also be communicated to the Bureau at the same time; it shall be considered as having been received by the Bureau not earlier than six months after the date of receipt of the information for advance publication where coordination is required by Section II of Article **S9**. In the case where coordination is not required by Section II, notification shall be considered as received by the Bureau not earlier than six months after the date of publication of the advance publication information.

** Possible duplication with Articles 6 and 7 of Appendix 30 and Articles 5, 6 and 7 of Appendix 30A.

S9.1.1 [4] Whenever under this provision an administration acts on behalf of a group of named administrations, all members of that group retain the right to respond in respect of their own networks or systems.

[**MOD** **S9.2** Amendments to the information sent in accordance with the provisions of No. **S9.1** shall also be sent to the Bureau as soon as they become available. Modifications which are of such nature as to significantly change the character of the network may require recommencing the advance publication procedure. A list of modifications which are of such nature as to significantly change the character of the network is given in the Rules of Procedure.]

[**MOD** **S9.2** Amendments to the information sent in accordance with the provisions of No. **S9.1** shall also be sent to the Bureau as soon as they become available. Modifications which ~~are of such nature as to significantly change the character of~~involve the use of an additional frequency band to the network ~~may~~shall require ~~recommencing the~~ advance publication ~~procedure~~.]

ADD S9.2bis If the information is found to be incomplete, the Bureau shall immediately seek from the administration concerned any clarification and information not provided.

ADD S9.2ter On receipt of the complete information sent under Nos. **S9.1** and **S9.2**, the Bureau shall publish it in a Special Section of its Weekly Circular within three months. When the Bureau is not in a position to comply, it shall periodically so inform the administrations, giving the reasons therefor.

MOD **S9.3** Upon receipt of the Weekly Circular containing information published under No. ~~**S9.1**~~**S9.2ter**, if an administration believes that interference which may be unacceptable may be caused to its existing or planned satellite networks or systems or terrestrial stations[1] ~~networks or systems~~ it shall within four months of the date of the Weekly Circular communicate ~~its comments and shall, at the same time, give~~ to the publishing administration its comments on the particulars of the interference foreseen to its existing or planned ~~satellite~~ systems. A copy of these comments shall also be sent to the Bureau. Thereafter both administrations shall endeavour to cooperate in joint efforts to resolve any difficulties, ~~with~~ if ~~necessary~~requested by either of the parties, with the assistance of the Bureau, and shall exchange any additional relevant information that may be available. If no such comments are received from an administration within the period mentioned above, it may be assumed that the administration has no basic objections to the planned satellite network(s) of that system on which details have been published.

ADD S9.3.1bis Terrestrial stations or systems to be taken into account are only those for which the requirement to coordinate is included in a footnote of the Table of Frequency Allocations referring to Nos. **S9.11 - S9.11bis** and **S9.21**.

SUP **S9.3.1**

MOD **S9.4** In the case of difficulties, the administration responsible for the planned satellite network shall explore all possible means to resolve the difficulties without considering the possibility of adjustment to networks of other administrations. If no such means can be found, the administration responsible for the planned network may request the other administrations to explore all possible means to meet its requirements. The administrations concerned shall make every possible effort to resolve the difficulties by means of mutually acceptable adjustments to their networks. An administration on behalf of which details of planned satellite networks have been published in accordance with the provisions of No. **S9.2ter** shall after the period of four months inform the Bureau of the progress made in resolving any difficulties. A further report, if necessary shall be provided prior to the commencement of coordination or the sending of notices to the Bureau.

MOD **S9.5** ~~Action under No. **S9.1** shall be taken not earlier than six years and preferably not later than two years before the planned date of introduction of the network or system (see also No. **S11.43**). A response under No. **S9.3** shall be made as soon as possible and in any case within four months after the publication of the relevant Weekly Circular.~~ The Bureau shall inform all administrations of the list of administrations having sent comments under No. **S9.3** and provide a summary of the comments received. ~~These measures shall be taken solely for the purposes of informing all administrations of developments in the use of space radiocommunications and minimizing any difficulties that might otherwise arise during the coordination stage. (See also **S11.47**.)~~

ADD S9.5bis The procedure of Section I shall be considered solely for the purposes of informing all administrations of developments in the use of space radiocommunications and minimizing any difficulties that might otherwise arise during the coordination stage.

ADD S9.5ter *[When, upon expiry of a period of six years plus the extension provided for in No. **S11.44** after the date of the publication of the Weekly Circular referred to in No. **S9.2ter**, the administration responsible for the network has not submitted the Appendix **S4** information for coordination under No. **S9.29** or for notification under No. **S11.2**, as appropriate, the information published under No. **S9.1** shall be cancelled after the administration concerned has been informed.]

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* To be revisited in the context of S11.48.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 163-E
6 November 1995
Original: English

COMMITTEE 2

FIRST REPORT BY WORKING GROUP 2A TO COMMITTEE 2

1. The Working Group of Committee 2 (Credentials) met on 6 November 1995. It examined the credentials of the following delegations (in the French alphabetical order) :

ALBANIA
ALGERIA
GERMANY
ANDORRA
ANGOLA
SAUDI ARABIA
AUSTRALIA
AUSTRIA
BAHRAIN
BANGLADESH
BELARUS
BELGIUM
BENIN
BRUNEI DARUSSALAM
BULGARIA
BURKINA FASO
BURUNDI
CAMEROON
CANADA
CHILE
CHINA
VATICAN CITY STATE
COLOMBIA
KOREA (REP. OF)
CROATIA
CUBA
DENMARK
EGYPT
UNITED ARAB EMIRATES
ECUADOR
SPAIN
ESTONIA
UNITED STATES
ETHIOPIA
FINLAND
FRANCE
GHANA
GUINEA
INDIA
IRAN (ISLAMIC REP. OF)
IRELAND
ICELAND
ISRAEL
ITALY
JAMAICA
JAPAN
JORDAN
KENYA
LESOTHO
LATVIA

THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA
LIBERIA
LIECHTENSTEIN
LUXEMBOURG
MALAYSIA
MALDIVES
MALI
MALTA
MONACO
MONGOLIA
NAMIBIA
NORWAY
OMAN
UGANDA
PAKISTAN
PAPUA NEW GUINEA
PARAGUAY
NETHERLANDS
POLAND
PORTUGAL
QATAR
SYRIA
KYRGYZSTAN
SLOVAKIA
CZECH REPUBLIC
ROMANIA
UNITED KINGDOM
RUSSIA
SAN MARINO
SENEGAL
SIERRA LEONE
SINGAPORE
SLOVENIA
SRI LANKA
SOUTH AFRICA
SWEDEN
SWITZERLAND
SURINAME
SWAZILAND
TANZANIA
CHAD
THAILAND
TOGO
TONGA
TRINIDAD AND TOBAGO
TUNISIA
TURKEY
UKRAINE
URUGUAY
VENEZUELA
VIET NAM
ZAMBIA
ZIMBABWE

(103 delegations in all)

All the above credentials are in order.

2. In addition, the Working Group found the following instrument of transfer of powers to be in order:

ARMENIA - RUSSIA

3. The Working Group noted that some delegations present at the Conference had not yet deposited their credentials. Those delegations are urged to deposit their credentials or get in touch with the Secretariat of the Committee.

William TALLAH
Chairman of Working Group 2A

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 164(Rev.1)-E
7 November 1995
Original: English

COMMITTEE 6

FIRST SERIES OF TEXTS SUBMITTED BY THE WORKING GROUP OF THE PLENARY TO THE EDITORIAL COMMITTEE

The Working Group of the Plenary has concluded its consideration of agenda item 3b) of the Conference and has unanimously adopted the attached text (Document 140) that is submitted for your consideration with a view to its subsequent submission to the Plenary.

R. TAYLOR
Chairman of the Working Group of the Plenary

Annex: 1

ANNEX

DRAFT REVISION OF RESOLUTION 712 (REV.WRC-95)

CONSIDERATION BY FUTURE COMPETENT WORLD RADIOCOMMUNICATION CONFERENCES OF ISSUES DEALING WITH ALLOCATIONS TO SPACE SERVICES

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that the agenda of WARC-92 called for the development of new recommendations and resolutions relating to allocations to space services which were not placed on the agenda of that Conference;

b) that Recommendation ITU-R SA.363-5 recommends that frequencies below 1 GHz are technically suitable for telecommand of satellites operating below 2 000 km altitude;

c)bis that the UNCED Conference (Rio de Janeiro, 1992) identified an urgent need for systematic observations of forest cover, and that such observations can best be performed using frequencies in the range 420 - 470 MHz;

d) that Resolution 35 of the ITU Plenipotentiary Conference (Kyoto, 1994) considered that application of the latest telecommunication and information technologies, especially those associated with space systems, can be extremely useful in implementing and conducting environment protection activities such as monitoring air, river, harbour and sea pollution, remote sensing, wildlife studies, forestry development, and others;

e) that the status of existing allocations available for use by active space-based sensors between 1 and 25 GHz, in frequency bands which are shared with radiolocation or radionavigation systems, needs to be reviewed in order to facilitate worldwide usage by active space-based sensors;

f) that the allocations to the earth exploration-satellite service in the frequency bands 8.025 - 8.4 GHz and 18.6 - 18.8 GHz are complex and not uniform worldwide, and that the band 18.6 - 18.8 GHz is vital for passive sensing ecologically important data;

g) that the allocation of the frequency band 13.75 - 14 GHz to the fixed-satellite service by WARC-92 reduced the total bandwidth available for active space-based sensors in the frequency range 13 - 14 GHz, which is an important region for wideband sensor instruments e.g., radar altimeters, scatterometers;

h) that future active Earth sensing requirements for monitoring environmental data in the 35 and 95 GHz range have been identified;

i) that the ITU-R has agreed to certain important technical parameters required for coordination of the space services under Appendix **28** [**S7**] of the Radio Regulations;

resolves

that, based on proposals from Administrations and taking into account the results of studies in the ITU-R study groups and the Conference Preparatory Meeting (CPM-97), the 1997 World Radiocommunication Conference should consider the following matters:

1 provision of up to 3 MHz of frequency spectrum for the implementation of telecommand links in the space research and space operation services in the frequency range between 100 MHz and 1 GHz;

2 provision of up to 3.5 MHz of frequency spectrum to the earth exploration-satellite service (active) in the frequency range 420 to 470 MHz;

3 use of existing allocations by space-based active sensors operating in the earth exploration-satellite and space research services in frequency bands shared with the radiolocation or radionavigation services, between 1 and 25 GHz, with a view to the possibility of establishing common worldwide primary allocations;

4 use of existing allocations in the frequency range from 7 to 20 GHz to the earth exploration-satellite, meteorological-satellite, space research and space operation services, with a view to the possibility of establishing common worldwide primary allocations to these services in appropriate bands, taking into account Recommendation 706 (WARC-79);

5 provision of up to 500 MHz of frequency spectrum around 35 GHz and up to 1 GHz of frequency spectrum around 95 GHz for use by space-based active Earth sensors;

6 inclusion of ITU-R approved technical coordination parameters in Appendix **28** [**S7**] of the Radio Regulations taking into account Resolution 60 (WARC-79) and Recommendation 711 (WARC-79);

invites the ITU-R Study Groups

to carry out the necessary studies taking into account the present uses of allocated bands with a view to presenting, at the appropriate time, the technical information likely to be required as a basis for the work of the Conference;

instructs the Secretary-General

to bring this Resolution to the attention of concerned international and regional organizations.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 164-E
6 November 1995
Original: English

COMMITTEE 6

FIRST SERIES OF TEXTS SUBMITTED BY THE WORKING GROUP OF THE PLENARY TO THE EDITORIAL COMMITTEE

The Working Group of the Plenary has concluded its consideration of agenda item 3b) of the Conference and has unanimously adopted the attached text (Document 140) that is submitted for your consideration with a view to its subsequent submission to the Plenary.

R. TAYLOR
Chairman of the Working Group of the Plenary

Annex: 1

ANNEX

DRAFT REVISION OF RESOLUTION 712 (REV.WRC-95)

CONSIDERATION BY FUTURE COMPETENT WORLD RADIOCOMMUNICATION CONFERENCES OF ISSUES DEALING WITH ALLOCATIONS TO SPACE SERVICES

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that the agenda of WARC-92 called for the development of new recommendations and resolutions relating to allocations to space services which were not placed on the agenda of that Conference;

b) that Recommendation ITU-R SA.363-5 recommends that frequencies below 1 GHz are technically suitable for telecommand of satellites operating below 2 000 km altitude;

c)bis that the UNCED Conference (Rio de Janeiro, 1992) identified an urgent need for systematic observations of forest cover, and that such observations can best be performed using frequencies in the range 420 - 470 MHz;

d) that Resolution 35 of the ITU Plenipotentiary Conference (Kyoto, 1994) considered that application of the latest telecommunication and information technologies, especially those associated with space systems, can be extremely useful in implementing and conducting environment protection activities such as monitoring air, river, harbour and sea pollution, remote sensing, wildlife studies, forestry development, and others;

e) that the status of existing allocations available for use by active space-based sensors between 1 and 25 GHz, in frequency bands which are shared with radiolocation or radionavigation systems, needs to be reviewed in order to facilitate worldwide usage by active space-based sensors;

f) that the allocations to the earth exploration-satellite service in the frequency bands 8.025 - 8.4 GHz and 18.6 - 18.8 GHz are complex and not uniform worldwide, and that the band 18.6 - 18.8 GHz is vital for passive sensing ecologically important data;

g) that the allocation of the frequency band 13.75 - 14 GHz to the fixed-satellite service by WARC-92 reduced the total bandwidth available for active space-based sensors in the frequency range 13 - 14 GHz, which is an important region for wideband sensor instruments e.g., radar altimeters, scatterometers;

h) that future active Earth sensing requirements for monitoring environmental data in the 35 and 95 GHz range have been identified;

i) that the ITU-R has agreed to certain important technical parameters required for coordination of the space science services under Appendix **28 [S7]** of the Radio Regulations;

resolves

that, based on proposals from Administrations and taking into account the results of studies in the ITU-R study groups and the Conference Preparatory Meeting (CPM-97), the 1997 World Radiocommunication Conference should consider the following matters:

1 provision of up to 3 MHz of frequency spectrum for the implementation of telecommand links in the space research and space operation services in the frequency range between 100 MHz and 1 GHz;

2 provision of up to 3.5 MHz of frequency spectrum to the earth exploration-satellite service (active) in the frequency range 420 to 470 MHz;

3 use of existing allocations by space-based active sensors operating in the earth exploration-satellite and space research services in frequency bands shared with the radiolocation or radionavigation services, between 1 and 25 GHz, with a view to the possibility of establishing common worldwide primary allocations;

4 use of existing allocations in the frequency range from 7 to 20 GHz to the earth exploration-satellite, meteorological-satellite, space research and space operation services, with a view to the possibility of establishing common worldwide primary allocations to these services in appropriate bands, taking into account Recommendation 706 (WARC-79);

5 provision of up to 500 MHz of frequency spectrum around 35 GHz and up to 1 GHz of frequency spectrum around 95 GHz for use by space-based active Earth sensors;

6 inclusion of ITU-R approved technical coordination parameters in Appendix **28** [**S7**] of the Radio Regulations taking into account Resolution 60 (WARC-79) and Recommendation 711 (WARC-79);

invites the ITU-R Study Groups

to carry out the necessary studies with a view to presenting, at the appropriate time, the technical information likely to be required as a basis for the work of the Conference;

instructs the Secretary-General

to bring this Resolution to the attention of the ITU Council at its next session with a view to including these matters in the agenda of WRC-97.

F

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-95 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

Corrigendum 3 au
Document 165-F/E/S
14 novembre 1995
Original: français

GENÈVE, 23 OCTOBRE – 17 NOVEMBRE 1995

GROUPE DE TRAVAIL 5A

Brunéi Darussalam, Chine (République populaire de), Corée (République de), Iran (République islamique d'), Japon, Malaisie, Mali (République du) Pakistan (République islamique du), Russie (Fédération de), Singapour (République de), Thaïlande

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Ajouter **"Sénégal (République du)"** dans la liste des pays signataires de ce document.

*Add **"Senegal (Republic of)"** in the list of countries cosponsoring this document.*

Añádase **"Senegal (República de)"** a la lista de países firmantes de este documento.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

E

CMR-95 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 23 OCTOBRE – 17 NOVEMBRE 1995

Corrigendum 2 au Document 165-F/E/S 9 novembre 1995

Original: anglais

GROUPE DE TRAVAIL 5A

Brunéi Darussalam, Chine (République populaire de), Corée (République de), Iran (République islamique d'), Japon, Malaisie, Pakistan (République islamique du), Russie (Fédération de), Singapour (République de), Thaïlande

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Ajouter **"Mali (République du)"** dans la liste des pays signataires de ce document.

*Add **"Mali (Republic of)"** in the list of countries cosponsoring this document.*

Añádase **"Malí (República de)"** a la lista de países firmantes de este documento.

F

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-95 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 23 OCTOBRE – 17 NOVEMBRE 1995

Corrigendum 1 au Document 165-F/E/S 7 novembre 1995

Original: anglais

GROUPE DE TRAVAIL 5A

Brunéi Darussalam, Chine (République populaire de), Corée (République de), Iran (République islamique d'), Japon, Malaisie, Pakistan (République islamique du), Singapour (République de), Thaïlande

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Ajouter **"Fédération de Russie"** dans la liste des pays signataires de ce document.

*Add **"Russian Federation"** in the list of countries cosponsoring this document.*

Añádase **"Federación de Rusia"** a la lista de países firmantes de este documento.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 165-E
6 November 1995
Original: English

WORKING GROUP 5A

Brunei Darussalam, China (People's Republic of), Korea (Republic of), Iran (Islamic Republic of), Japan, Malaysia, Pakistan (Islamic Republic of), Singapore (Republic of), Thailand

PROPOSALS FOR THE WORK OF THE CONFERENCE

THE ALLOCATION OF FREQUENCY IN THE 216 - 218 MHz BAND

considering

a) that the 174 - 230 MHz band is allocated to the broadcasting service in Region [3]. This band is heavily used by the TV broadcasting service in countries in this Region. Broadcasting networks diffuse nationwide and broadcasting receivers are very widely spread;

b) that with regard to the TV broadcasting service, the picture quality is essential to meet viewers' requirements;

c) that a large number of low-power transmitters in the bands indicated above are used as gap-fillers for appropriate coverage by the TV signals. The signal received from such low-power transmitters will face severe interference from the MSS emissions if they share the same band;

d) that the current use of extremely high-power TV transmitters in this band; the protection to other services is impossible;

e) that the introduction of the MSS in a part of this band might cause harmful interference to several hundred million TV receivers, and disturb the development of TV broadcasting technology. It is, therefore, impossible or extremely difficult to share the frequency band between the MSS and the broadcasting service.

Proposal

BRU/CHN/KOR/
IRN/J/MLA/PAK/
SNG/THA/165/1

Allocation of 216 - 218 MHz to the MSS is not acceptable.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CMR-95 CONFÉRENCE MONDIALE DES RADIOCOMMUNICATIONS

GENÈVE, 23 OCTOBRE – 17 NOVEMBRE 1995

Corrigendum 1 au Document 166-F/E/S 7 novembre 1995

Original: anglais

GROUPE DE TRAVAIL 5A

Brunéi Darussalam, Chine (République populaire de), Corée (République de), Inde (République de l'), Japon, Malaisie, Philippines (République des), Singapour (République de), Thaïlande

PROPOSITIONS POUR LES TRAVAUX DE LA CONFÉRENCE

Ajouter **"Fédération de Russie"** dans la liste des pays signataires de ce document.

*Add **"Russian Federation"** in the list of countries cosponsoring this document.*

Añádase **"Federación de Rusia"** a la lista de países firmantes de este documento.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 166-E
6 November 1995
Original: English

WORKING GROUP 5A

Brunei Darussalam, China (People's Republic of), Korea (Republic of), India (Republic of), Japan, Malaysia, Philippines (Republic of the), Singapore (Republic of), Thailand

PROPOSALS FOR THE WORK OF THE CONFERENCE

THE ALLOCATION OF FREQUENCY IN THE 450 - 460 MHz BAND

This proposal has been drawn up with the following key issues as background.

1 Introduction

The 450 - 460 MHz band is allocated to the mobile and fixed services. This band is heavily used by many radio stations, especially land mobile stations such as for public safety.

2 Discussion point

2.1 As radio utilization has progressed, the number of mobile stations in this band, has become very numerous. Mobile radio stations in this band easily move around because the size of the equipment is small enough to be portable. Therefore, emission from mobile stations scatter densely in a very wide area. The dense and widespread use of spectrum make it very difficult to allocate this frequency band additionally to other services.

2.2 More efficient use of spectrum through new technologies such as narrowband technology and time division duplex (TDD) technology is currently being adopted gradually, and adopting these technologies further increases the difficulty of sharing the spectrum with other services.

3 Proposal

BRU/CHN/KOR/
IND/J/MLA/PHL/
SNG/THA/166/1

The introduction of the MSS in this band might cause harmful interference to existing services. It is, therefore, impossible or extremely difficult to share the frequency band between existing services and the MSS.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Addendum 1 to Document 167-E 10 November 1995 Original: English

COMMITTEE 4

Pakistan (Islamic Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

Pakistan proposes the inclusion of its name in the following footnote.

PAK/167/2

MOD 730 *Additional allocation:* in the Federal Republic of Germany,
S5.359 Austria, Bulgaria, Cameroon, Spain, France, Guinea, Hungary, Indonesia, Libya, Mali, Mongolia, Nigeria, Pakistan, Poland, the German Democratic Republic, Romania, Senegal, Tanzania, Czechoslovakia and the U.S.S.R., the bands 1 550 - 1 645.5 MHz and 1 646.5 - 1 660 MHz are also allocated to the fixed service on a primary basis.

Deletion of the name of Pakistan in the following footnote.

PAK/167/3

MOD 727 *Additional allocation:* In Afghanistan, Saudi Arabia, Bahrain,
S5.355 Bangladesh, the Congo, Egypt, the United Arab Emirates, Ethiopia, Iran, Iraq, Israel, Jordan, Kuwait, the Lebanon, Malta, Morocco, Niger, Oman~~, Pakistan~~, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, Thailand, Togo, Yemen (P.D.R. of) and Zambia, the bands 1 540 - 1 645.5 MHz and 1 646.5 - 1 660 MHz are also allocated to the fixed service on a secondary basis.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 167-E
6 November 1995
Original: English

WORKING GROUP OF THE PLENARY

Islamic Republic of Pakistan

PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda item 3a)

"future consideration of the Plans for the broadcasting-satellite service for Regions 1 and 3 as contained in Appendices 30 and 30A of the Radio Regulations"

Introduction

Resolution 524 (WARC-92) invited the ITU-R, as a matter of priority, to study the technical possibilities for improving the efficiency and the flexibility of the Plans for Regions 1 and 3 in Appendices 30 and 30A of the Radio Regulations.

The CPM Report provides the current status of studies carried out so far.

2 Proposals

PAK/167/1

This Administration proposes, when adopting agenda items for the WRC-97, to take into account the following:

a) The allocations as contained at present in Appendices 30 and 30A of the Radio Regulations shall be maintained notwithstanding any updating/review that might be carried out by WRC-97.

b) The systems which are already filed or will be filed until WRC-97 with the Radiocommunication Bureau, pursuant to the Procedures of Appendices 30 and 30A, should be protected in any eventual revision of Appendices 30 and 30A.

c) Further studies should be carried out with the following objectives:

- equitable access of orbit and spectrum to all countries be provided;
- procedures be simplified for easy implementation of plans;
- requirements of developing countries are satisfied.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 168-E
6 November 1995
Original: English

COMMITTEE 5

Chairman, Working Group 5B

FIRST REPORT OF THE CHAIRMAN OF WORKING GROUP 5B TO COMMITTEE 5

Working Group 5B has adopted the attached text(s) which it submits to Committee 5 for consideration.

Note to the Editorial Committee – If the draft revision of Recommendation 100 is adopted, as a consequential amendment, "Recommendation 100 (WARC-92)" in No. 2509A of Article 27 should be replaced by "Recommendation 100(Rev.WRC-95)".

N. KISRAWI
Chairman of Working Group 5B

RECOMMENDATION 100(Rev.WRC-95)

RELATING TO PREFERRED FREQUENCY BANDS FOR SYSTEMS USING TROPOSPHERIC SCATTER

The World Radiocommunication Conference (Geneva, 1995),

considering

a) the technical and operational difficulties pointed out by Recommendation ITU-R F.698 in the bands shared by tropospheric scatter systems, space systems and other terrestrial systems;

b) the additional allocation of frequency bands which WARC-79 and WARC-92 have made for the space services in view of their increasing development;

c) that the Radiocommunication Bureau requires administrations to supply specific information on systems using tropospheric scatter in order to verify compliance with certain provisions of the Radio Regulations (such as Nos. **763**, **2560** and **2564**);

recognizing nevertheless

that, to meet certain telecommunication requirements, administrations will wish to continue using tropospheric scatter systems;

noting

that the proliferation of such systems in all frequency bands and particularly in those shared with the space systems is bound to aggravate an already difficult situation;

recommends that administrations

1 for the assignment of frequencies to new stations in systems using tropospheric scatter, take into account the latest information prepared by the ITU-R to ensure that systems established in the future use a limited number of certain frequency bands;

2 in frequency assignment notifications to the Radiocommunication Bureau, indicate expressly whether they relate to stations of tropospheric scatter systems;

instructs the Director of the Radiocommunication Bureau

to report on the application of this Recommendation to WRC-97;

invites the Council

to make the necessary arrangements for a future world radiocommunication conference to consider the frequency bands of the fixed service which shall be used in preference by the new tropospheric scatter systems, taking into account the allocations to the space radiocommunication services and the relevant ITU-R Recommendations.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 169-E
7 November 1995
Original: English

PLENARY MEETING

MINUTES

OF THE

THIRD PLENARY MEETING

Thursday, 2 November 1995, at 1435 hours

Chairman: Mr. S. AL-BASHEER (Saudi Arabia)

Subjects discussed		**Documents**
1	Approval of the minutes of the first Plenary Meeting	97
2	Report of the ad hoc Group of the Plenary on non-GSO FSS systems	126, DT/38(Rev.2), DT/42
3	Oral reports by the Chairmen of Committees and the Working Group of the Plenary	-
4	Allocation of documents to Committees (continued)	Add.1 to 7
5	Requests for participation received from international organizations (continued)	48
6	Status of the Radio Regulations revised by WRC-95 (continued)	-

1 Approval of the minutes of the first Plenary Meeting (Document 97)

1.1 The minutes of the first Plenary Meeting were **approved**, subject to an amendment to the title of the cover page requested by the **delegate of Saudi Arabia**.

2 Report of the ad hoc Group of the Plenary on non-GSO FSS systems (Documents 126; DT/38(Rev.2), DT/42)

2.1 The **Chairman of the ad hoc Group of the Plenary**, which had been set up at the second Plenary Meeting to study immediate action in relation to Addendum 15 to Document 9 and proposal INS/56/6, introduced Document DT/38, which offered a compromise solution in the form of a draft footnote and a new draft resolution on the use of certain bands (as yet unspecified) by non-GSO FSS systems.

2.2 The **delegates of Kuwait, Saudi Arabia, Jamaica, Syria, Bahrain, the United Arab Emirates, Cameroon, Tunisia, Zambia, Jordan, Trinidad and Tobago, Pakistan, Ethiopia, Burkina Faso, Guinea, Oman** and **Ghana** endorsed Document DT/38(Rev.2).

2.3 The **delegate of the United Kingdom** reminded the Plenary of his delegation's difficulty in dealing with Addendum 15 to Document 9 and proposal INS/56/6 at the present Conference, but was willing to adopt a pragmatic view to enable the Conference to adopt a decision that would allow for the further development of the Teledesic system. He provisionally supported the draft footnote and draft Resolution proposed in Document DT/38(Rev.2) pending agreement on the bands and date to be inserted in the square brackets in *resolves* 1 of the draft Resolution. He went on to make the following statement:

> "We propose that the Conference should recognize that the rights and obligations of administrations acquired in accordance with the Radio Regulations in force at the time they were acquired cannot be taken away from administrations retrospectively. This is a basic principle of national and international law."

2.4 The **delegate of Germany** appreciated every effort to provide countries with new telecommunication technology but expressed concern over the protection and development of existing services. He stressed that many countries had not had sufficient time to study all the implications that non-GSO FSS systems would have for those services and drew attention to the negative impact for fixed services in the 17.7 - 19.7 GHz band. Coordination with non-GSO FSS earth stations would be difficult, and problems would also arise with regard to space stations since the power flux-density limits were established on the basis of GSO usage and in many cases might not be appropriate for LEOs, for which alternative frequency bands should be considered.

2.5 The **delegate of Luxembourg** supported the views expressed by the delegates of the United Kingdom and Germany and requested that Document DT/42 be attached to the minutes of the present Plenary Meeting since European approval of Document DT/38(Rev.2) was based on the interpretation provided by the Director of the Radiocommunication Bureau in Document DT/42.

2.6 The **delegate of Japan** supported Document DT/38(Rev.2) despite the fact that the allocation of frequencies to non-GSO FSS systems did not seem to come within the scope of the agenda of the Conference and there had not been sufficient time to deal with the matter in the relevant ITU-R study groups.

2.7 The **delegate of France** expressed support for Document DT/38(Rev.2), subject to the understanding set out in Document DT/42 and to agreement on the frequency bands and the date of entry into force. He agreed with the delegate of the United Kingdom that decisions should not be applied retroactively to systems that had already been planned. It was important to encourage development of the fixed-satellite service through both non-GSO and GSO networks.

2.8 The **delegates of Spain, the United Arab Emirates, Algeria** and **Italy** also supported the draft Resolution in principle, provided that satisfactory agreement was reached on the appropriate frequency bands and the date of entry into force of allocations.

2.9 The **delegate of Mauritania** emphasized the benefits of non-GSO FSS technology to countries that were geographically or economically disadvantaged and appealed for support in making the necessary arrangements to maintain a legitimate choice of options. He endorsed Document DT/38(Rev.2) and expressed the hope that non-GSO FSS systems would be introduced as quickly as possible.

2.10 The **delegate of Bangladesh** stressed the importance of spectrum management to ensure the best use of a limited resource. In particular, frequency assignments should be made according to climatic and local geographical conditions. Although it was essential to facilitate the introduction of innovative communication technologies, especially MSS technology, the developing countries required sympathetic consideration to allow the technical constraints of their existing terrestrial networks to be accommodated, until such time as they were in a position to use the new systems.

2.11 The **delegate of Chad** expressed full support for Document DT/38(Rev.2) as MSS networks would provide top-quality communication at low cost, thereby benefiting many people in developing countries.

2.12 The **delegate of India** endorsed the proposals in Document DT/38(Rev.2). He emphasized the key role that non-GSO FSS systems would play in providing an information infrastructure to remote locations, especially in least developed countries, and highlighted the heavy investment and guidance required. Although insufficient technical studies had been conducted as to the implications of non-GSO FSS, the latter affected only a small segment of the Ka-band across the world and could therefore be accommodated.

2.13 The **delegate of Mexico** also supported Document DT/38(Rev.2) and drew attention to Document 130 which reflected the view of members of the Inter-American Telecommunications Commission (CITEL) that the option of using a portion of the Ka-band for non-GSO FSS should be maintained, a point which was also emphasized by the **delegate of Brazil.**

2.14 The **delegate of Indonesia** supported Document DT/38(Rev.2) and expressed his appreciation of the understanding displayed by the United Kingdom and Japan. Although the compromise solution could be reviewed by WRC-97, it was essential to take a decision on the matter as soon as possible since the non-GSO FSS was of crucial importance to developing countries and any postponement of the discussion would lead to greater problems later.

2.15 The **delegate of Qatar** supported document DT/38(Rev.2) but hoped that measures would be taken to protect existing systems. That view was also expressed by the **delegates of Egypt, Senegal** and **Italy.**

2.16 The **delegate of Mali** supported Document DT/38(Rev.2), as the new technologies would enable vast land-locked countries like his own to develop their telecommunication systems.

2.17 The **delegate of Gabon** supported the draft Resolution, referring to *considering* a) which mentioned the extension of the benefit of the new telecommunication technologies to all the world's inhabitants, and requested the ITU-R to make further studies with a view to enabling equatorial countries with heavy rainfall to benefit from the new systems.

2.18 The **delegate of Morocco** expressed his support for the proposals by the United States and Indonesia. Recalling WARC-92 where similar proposals had been tabled, and where those in favour of developing a geostationary-satellite system had competed with those favouring low-Earth orbiting satellites, each claiming to provide a better service, he stressed that it was too early to decide which system would be best. It was also necessary to provide the MSS with feeder links. The aim should therefore be first to give an opportunity to develop both systems and put them into operation, and only then to consider which would be most useful. However, the present discussion should in no way be taken to imply acceptance of a large number of satellites which existed only on paper and served either for business purposes or to hinder the development of other systems. Drawing attention to the possibility of certain administrations making block reservations of spectrum for television purposes, he stressed the need to establish priorities and to ensure that a sufficient portion of the spectrum was allocated to telecommunications for the purposes of development. For example, his country would like the INTELSAT and ARABSAT systems to be given the opportunity to use the bands in question for telecommunications. Regarding the suggestion to attach the text of Document DT/42 to the minutes of the meeting, he observed that his delegation had difficulty with certain parts of that document. As to the question of bands and date of entry into force of the allocations, he stressed the need for the Plenary to give specific instructions to Committee 5. That view was supported by the **delegate of Oman**.

2.19 The **delegate of Brazil** commended the Chairman for his efforts aiming at successful achievements concerning the discussion on the non-geostationary-satellite systems in the FSS. He also expressed his gratitude for the help by the RRB members and the Director of the ITU-R with the same objectives. He also appreciated the United Kingdom delegate's words with the spirit of cooperation which he hoped were on behalf of all CEPT countries. He supported that view expressed by the delegate of Morocco which, he felt, was important for the future of the ITU. He indicated that about fifteen countries of CITEL, including his own, supported, in Document 130, actions to preserve the option of using the 20 and 30 GHz frequency bands by these systems. He supported Document DT/38(Rev.2).

2.20 The **delegate of Colombia** supported Document DT/38(Rev.2), pointing out that it already contained tacit instructions for Committee 5 in that the bands to be allocated had to be the minimum needed to develop the system.

2.21 The **delegate of South Africa** supported Document DT/38(Rev.2) and endorsed the proposal to refer spectrum issues to Committee 5, adding that the band-sharing criteria should be investigated in time for WRC-97.

2.22 The **Chairman** welcomed the broad support for Document DT/38(Rev.2) which reflected the importance of the issue at stake, and noted the agreement on the need to make use of new technologies for telecommunication development in developing countries. He suggested that the question of the appropriate bands should be referred to Committee 5 along with the question of the date of entry into force of the allocations, after which the Plenary would discuss Committee 5's proposals. He further suggested that Document DT/38(Rev.2) might be approved provisionally, pending the outcome of the discussions in Committee 5.

2.23 The **delegate of Morocco** supported the suggestion that Committee 5 should discuss the appropriate bands, but in view of the sensitivity of the question of date of entry into force, he proposed that the Chairman himself should consult with all administrations and regional groups concerned and make appropriate suggestions to a subsequent Plenary Meeting.

2.24 It was so **agreed**.

2.25 The **Chairman of Committee 5** agreed that the question of date of entry into force did not come within the purview of Committee 5. Regarding bandwidth requirements, however, he asked whether the discussion would be limited to the frequency bands mentioned in Addendum 15 to Document 9 and in Documents 56 and 115, or whether the Committee could also consider adjacent bands. Following informal consultations, the **Chairman** suggested that Committee 5 should be given full leeway to discuss whatever frequency bands it considered appropriate before reporting back to the Plenary.

2.26 It was so **agreed**.

2.27 The **delegate of Luxembourg** requested that information should be provided on all relevant GSO and non-GSO filings, so as to assist Committee 5 in its deliberations. The **Director of the Radiocommunication Bureau** confirmed that the Bureau could provide summary information on that subject, particularly once the relevant frequency bands had been identified.

2.28 Document DT/38(Rev.2) was **approved** provisionally pending discussion in Committee 5 concerning the appropriate bands to be inserted in the draft footnote and pending discussion in the ad hoc Group of the Plenary on the appropriate date of entry into force of the allocations.

2.29 It was **agreed** that the findings of both Committee 5 and the ad hoc Group would be submitted to a later Plenary meeting for consideration.

2.30 Document DT/42 was **noted**, on the understanding that it would be reproduced in Annex 1 to the minutes.

2.31 The **Chairman**, referring to the proposal concerning the rights and obligations of administrations made by the delegate of the United Kingdom, suggested that the matter might be studied outside the framework of the Plenary, in informal consultations.

2.32 The **delegate of Germany** considered that the proposal was straightforward and that the Plenary should confirm that no decision taken by the WRC should affect the previously acquired rights and obligations of administrations. The **delegate of the Netherlands**, emphasizing that the delegate of the United Kingdom had spoken also on behalf of the CEPT countries, stressed the importance of the principle concerned.

2.33 The **delegate of Morocco**, supported by the **delegate of Syria**, said he could accept the proposal as worded by the United Kingdom, subject to the insertion of the phrase "taking account of action taken by previous radiocommunication conferences in similar situations" after the word "retrospectively". He also wished to see the study of the principle include the problem of "paper" satellites, that of satellites broadcasting direct to the home in bands allocated to the FSS, and other uses not necessarily in conformity with the Radio Regulations.

2.34 The **delegate of Indonesia** stressed that the Radio Regulations should facilitate rather than impede the development of systems. Referring to the date of entry into force of the band allocations in respect of non-GSO FSS systems, he said that the implications of all the proposals under consideration should be clarified fully before the Plenary Meeting took any decisions.

2.35 The **delegate of Saudi Arabia** said that there would be ample opportunity to discuss the matter in depth when the question of band allocation was taken up. Formal discussion in Plenary should therefore be deferred, leaving sufficient latitude for future debate in committee and informal consultations.

2.36 The **Chairman** said that if he heard no objection he would take it that the meeting could accept that suggestion.

2.37 It was so **agreed**.

2.38 The **delegate of Luxembourg** introduced Document 126, put forward by his country on behalf of the CEPT countries, and dealing with the future use of the 20/30 GHz band by the FSS as part of a global scenario. The document sought to identify ways of using current GSO satellite technology to help bridge the gap between developed and developing countries. He drew particular attention to §§ 4, 5 and 7; to the importance of studies on the crucial issue of sharing (§ 9 *et seq*) with due regard to choice of and exclusive use of bands; to the potential conflict between GSO FSS and non-GSO FSS systems, owing especially to the placing of Teledesic antennas on rooftops with a free view of the sky; and to the fact that if Teledesic or a single similar non-GSO FSS system were catered for but not implemented, the development of all GSO FSS systems in the designated bands would suffer needlessly. The document's conclusions had been written several days previously, and since then the European countries had shown considerable goodwill in tentatively agreeing to the draft Resolution in Document DT/38(Rev.2) and to the allocation of a small portion of band to non-GSO FSS.

2.39 Document 126 was **noted**.

2.40 The **delegate of Indonesia** expressed surprise that proposals like those contained in Document 126 should be brought before a body of such standing as the WRC. In particular, its conclusions were subjective and negative, doing little to promote an environment of compromise with room for all technologies and systems to develop side by side.

3 Oral reports by the Chairmen of Committees and the Working Group of the Plenary

3.1 The **Chairman of Committee 2** reported that there were 124 Member States of the ITU present at the Conference, of which 91 had deposited their credentials so far. The Working Group set up by the Committee would proceed with its work, with a view to publishing a complete list of verified credentials at the beginning of the following week. The 33 countries which had not deposited their credentials were urged to do so as soon as possible, to allow the Committee to complete its work on or before 14 November.

3.2 The **Chairman of Committee 3** drew attention to Document 110, in which he requested the Chairmen of Committees 4, 5 and the Working Group of the Plenary to provide him with the information he required to estimate, in accordance with Article 32 of the Convention, the costs that might be entailed by the execution of the WRC's decisions. He hoped to receive that information by 7 November, in order to prepare the Committee's final report.

3.3 The **Chairman of Committee 4** said that his Committee and its working and drafting groups were making good progress. Agreement had been reached on the main parts of texts for Articles S1, S2, S3, S15, S16 and S17 of the simplified Radio Regulations, and work was advancing well on the remaining fifty-odd Articles and their associated Appendices. One major task still to be completed was on the regulatory procedures for the coordination, notification and recording of frequency assignments, including the new version of Resolution 46 (WARC-92). He hoped that all the

working groups would have finished by the middle of the following week, allowing the Committee to complete its work by the end of the same week. The principles agreed to by the Committee with regard to incorporation by reference were set out in Document 124(Rev.1).

3.4 The **delegate of Spain** announced that Working Group 4C2 had been set up, and would be chaired by Ms. A. Allison (United States).

3.5 The **Chairman of Committee 5** reported that its working groups were making good progress towards consensus on a number of sensitive issues, and its other work was well in hand. He provided administrative details on the Committee's forthcoming meeting arrangements.

3.6 The **Chairman of the Working Group of the Plenary** said that the Group had held two full meetings since the previous Plenary Meeting. There had been one meeting of an ad hoc Group, to address the difficult and important question of Appendices 30 and 30A (WRC-95 agenda item 3a)); although the matter had not yet been resolved, a consensus was emerging on the approach to be adopted. As to Resolution 712 (WARC-92) (WRC-95 agenda item 3b)), very tentative agreement had been reached on a document which would be discussed further the following day. Extensive informal work had been carried out on HFBC (WRC-95 agenda item 3c)), to which the delegate of Morocco had contributed substantially; the work would continue. It was the Working Group's intention next to take up WRC-95 agenda item 6.2, namely, the draft and preliminary agendas for, respectively, WRC-97 and WRC-99.

3.7 The **Chairman of Committee 6** reported that her Committee had not convened since its first meeting, as it had not received a sufficient number of input documents.

3.8 The **Chairman** commended the Chairmen of all the Committees and their associated working groups on the progress they had made, and urged them to continue their efforts.

4 Allocation of documents to Committees (continued) (Addendum 1 to Document 7)

4.1 The **delegate of Russia** introduced Addendum 1 to Document 7, the purpose of which was to protect the Russian GSO space research system Prognoz, operating in the band 2 160 - 2 200 MHz, from unacceptable interference from other services, in particular MSS, if the WRC decided to allow use of the band in question by other services prior to 1 January 2005. The Russian Administration wished to see the Addendum allocated to Committee 5 for consideration.

4.2 It was so **agreed**.

5 Requests for participation received from international organizations (continued) (Document 48)

5.1 The **Secretary-General** announced that a formal request had been received for admission to the Conference from the International Federation of Red Cross and Red Crescent Societies. He suggested that the Plenary Meeting should approve the request, thereby adding the Federation to the list of international organizations contained in Document 48.

5.2 It was so **agreed**.

6 Status of the Radio Regulations revised by WRC-95 (continued)

6.1 The **Secretary-General** announced that it had not yet been possible to prepare a document for consideration by the Plenary Meeting, further to its discussions on the early implementation of the simplified Radio Regulations. Informal consultations were nevertheless making good progress, and all interested delegations were invited to participate.

The meeting rose at 1740 hours.

The Secretary:
Pekka TARJANNE

The Chairman:
S. AL-BASHEER

Annex: 1

ANNEX 1

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document DT/42-E
1 November 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Note by the Director of the Radiocommunication Bureau

The following understanding is presented by the Director of the Radiocommunication Bureau after having consulted the members of the Radio Regulations Board.

1 Non-GSO networks outside the bands governed by Resolution 46 currently in force

The current regulations do not require the coordination of non-geostationary-satellite networks among each other nor with respect to geostationary-satellite networks. However, non-geostationary-satellite networks have to observe No. 2613 with respect to GSO space systems of the FSS.

2 FSS networks in bands to be covered by Resolution [DT/38(Rev.2)]

Upon entry into force of this Resolution [DT/38(Rev.2)] [18 November 1995 unless otherwise specified in the Resolution], in addition to the normal coordination and notification procedures of Articles 11 and 13, *resolves* 1** of this Resolution requires the application of the coordination and notification procedures set forth in Resolution 46.

2.1 In particular, Resolution 46 currently requires:

2.1.1 that, pending the adoption of a permanent procedure by a future competent conference, the use of frequency assignments by:

a) non-geostationary-satellite systems in the space services in relation to other non-geostationary-satellite systems, geostationary-satellite systems and terrestrial systems;

b) geostationary-satellite systems in relation to non-geostationary-satellite systems; and

c) terrestrial systems in relation to the earth stations of non-geostationary-satellite networks,

to which Resolution 46 applies shall be regulated in accordance with the interim procedures and the associated provisions in the Annex to Resolution 46;

** "*resolves* 1" applies to all GSO and non-GSO FSS networks for which complete coordination information is received by the Bureau after the data specified in [ ] (if maintained) or 18 November 1995 if a date is not specified in *resolves* 1.

2.1.2 that the interim procedures annexed to Resolution 46 apply in addition to those of Articles 11 and 13 for geostationary-satellite networks and replace those of Articles 11 and 13 for non-geostationary-satellite networks.

2.2 As from the date of entry into force of this Resolution [DT/38(Rev.2)], a non-geostationary FSS system to which *resolves* 1** of Resolution DT/38(Rev.2) applies, has to effect coordination with geostationary FSS systems currently under coordination, coordinated, notified or recorded* in the MIFR. In this coordination process, No. 2613 shall not be taken into account.

The non-geostationary FSS system also has to effect coordination with other non-geostationary systems under coordination, coordinated, notified or recorded* in the MIFR.

Coordination of non-geostationary networks is also required with terrestrial stations recorded* in the MIFR or in operation (not recorded) or planned to be brought into use within the next three years (paragraphs 2.5.4 and 2.5.5 of the procedures contained in the Annex to Resolution 46).

2.3 As from the date of entry into force of this Resolution [DT/38(Rev.2)], a geostationary FSS network to which *resolves* 1** of this Resolution applies, in addition to the need to coordinate in accordance with Article 11, would also have to effect coordination in accordance with Resolution 46 prior to being recorded.

3 Treatment of GSO FSS networks after date [x] [18 November 1995] for which complete coordination information was communicated to the Bureau before that date

3.1 For networks recorded* in the MIFR the entry remains unchanged.

3.2 Networks notified under Article 13 but not yet recorded, will be processed only under the provisions of Articles 11 and 13.

3.3 Networks under coordination on the above date pursuant to Article 11 will not need to effect coordination under Resolution 46.

4 Treatment of non-GSO FSS networks after date [x] [18 November 1995] for which complete notification information was communicated to the Bureau before that date

4.1 Space stations of non-GSO FSS networks recorded* in the MIFR will continue to have to observe No. 2613 with respect to GSO networks to which *resolves* 1** does not apply. With respect to GSO networks, for which *resolves* 1** applies, non-GSO networks do not have to observe No. 2613.

4.2 Networks notified before the date [x] but not yet recorded will be processed and recorded under the old regime (No. 1503 - conformity examination only).

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* with a favourable regulatory finding.

** "*resolves* 1" applies to all GSO and non-GSO FSS networks for which complete coordination information is received by the Bureau after the data specified in [ ] (if maintained) or 18 November 1995 if a date is not specified in *resolves* 1.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 170-E
6 November 1995
Original: English

WORKING GROUP OF THE PLENARY

Australia, China (People's Republic of), India (Republic of), Indonesia (Republic of), Iran (Islamic Republic of), Japan, Malaysia, Mongolia, Pakistan (Islamic Republic of), Thailand

PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda item 3c)

"the availability of the newly allocated HFBC bands"

A draft Resolution [...] (Annex) is forwarded for the consideration of the Conference.

ANNEX

**AUS/CHN/IND/INS/
IRN/J/MLA/MNG/
PAK/THA/170/1
ADD**

DRAFT RESOLUTION [AUS/CHN/IND/INS/IRN/J/MLA/MNG/PAK/THA/1]

AVAILABILITY OF THE NEW HFBC BANDS

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that the WARC-79 (Geneva, 1979) allocated new HF bands to the broadcasting service while resolving (Resolution 508) that the use of the newly allocated bands should be subject to planning by a competent WARC;

b) that the WARC-92 (Malaga-Torremolinos) further increased the spectrum available to HFBC service with effect from 1 April 2007 only for use by SSB emissions and subject to planning;

c) that Resolution 20 of the Plenipotentiary Conference, 1994 (Kyoto) stipulated that broadcasting in the bands referred to above shall not be operated until planning is completed and the conditions stipulated in the Radio Regulations are fulfilled;

d) that the Radiocommunication Assembly, 1993, approved and assigned a Question to the Radiocommunication Sector entitled "Planning Procedures for HF Broadcasting" with the request to complete the studies by 1997 so that an alternative planning procedure could be adopted by WRC-97;

e) that the work carried out by Task Group 10/5 in the Radiocommunication Sector and the Conference Preparatory Meeting is to be taken into account, with a view to WRC-97 taking action, on "availability of the newly allocated HFBC bands" as per the agenda item for WRC-95;

f) that the two HFBC Conferences (Geneva, 1984 and 1987) could not succeed to evolve a planning procedure;

g) that the Radiocommunication Sector is engaged in the development of a simple and flexible planning procedure based on the concept of coordination;

resolves

1 to support the new HFBC planning procedure being developed in the Radiocommunication Sector, inviting the WRC-97 to consider its adoption;

2 that the Radiocommunication Sector should continue to develop this new HFBC planning procedure based on the concept of coordination, incorporating in it necessary flexibility and ease of application;

3 that in this planning procedure, interference and incompatibility be determined by simple and flexible technical methods, as approved by WRC-97;

4 that the WRC-97 should decide on the date of introduction of the new HFBC planning procedure, which should be the nearest possible date after the conclusion of that Conference;

5 that, taking into account the needs of the other services in the bands affected, WRC-97 consider the advancement of the date of availability of the bands allocated by the WARC-92 to the broadcasting service (HFBC);

instructs the Director of the Radiocommunication Bureau

to provide the necessary assistance to Task Group 10/5 in carrying out its task.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 171-E
6 November 1995
Original: English

COMMITTEE 4
COMMITTEE 5
WORKING GROUP
OF THE PLENARY

Islamic State of Afghanistan

PROPOSALS FOR THE WORK OF THE CONFERENCE

1 The delegation of the Islamic State of Afghanistan to WRC-95 is of the opinion that the Conference will take important decisions towards simplification of the Radio Regulations, which is the prime and basic regulatory and operational document dealing with the allocation, coordination and registration of radio-frequency assignments.

While we support the efforts made by the VGE in this regard, we propose the following:

Agenda item 1

In response to the VGE enquiry concerning removal of some footnotes from the Table of Frequency Allocations, the Afghan Administration has closely studied the footnotes identified by the VGE, and those which are no longer required to be included in the Radio Regulations are identified in Annex 1.

Agenda item 2.1

a) The Afghan delegation fully supports the comments from the CPM and is of the opinion that a combination of measures needs to be taken in order to facilitate interference-free utilization and sharing of the frequencies within the bands below 3 GHz for the services to which the bands are allocated.

b) The Afghan delegation is of the opinion that steps should be taken by the Conference to enable MSS services to be accommodated as early as planned, and that suitable technical sharing criteria should also be foreseen in the regulations so that harmful interference will not be caused to the existing terrestrial services which share the frequency bands in question and with which the frequencies will be shared.

Agenda item 2.2 (Power limits for stations in the Earth exploration-satellite, space research and space operation services)

The Afghan Administration is of the opinion that the e.i.r.p. limit of earth stations operating between 1 - 15 GHz should not exceed the power specified in No. 2541, to enable avoidance of interference to any of the increasing number of operating and planned space stations.

Agenda item 3

a) The Afghan Administration's opinion with regard to this agenda item is that while each country's minimum assigned capacity in Appendices 30 and 30A should be maintained and protected, new studies and planning exercises may be undertaken that may result in the development of a more efficient, flexible and resource-saving plan.

Agenda item 3c) (Availability of the newly allocated HFBC bands)

b) The Afghan delegation is of the opinion that revision of Article 17 should be held in abeyance and that additional HFBC planning exercises should be conducted to accommodate the increasing frequency requirements for HFBC.

Annex: 1

ANNEX 1

Article 8 - Footnotes

ADMIN	FREQ. BAND	SERVICE	STATUS	PROCEDURE	FOOTNOTE NO.	CONT. REQ. YES/NO
AFG	415-495 kHz	AER NAV	DCS/2		469	NO
AFG	4063-4123 kHz	FX	[-/3]		518	NO
AFG	4130-4133 kHz	FX	[-/3]		518	YES
AFG	4408-4438 kHz	FX	[-/3]		518	NO
AFG	14250-14350 kHz	FX	ADA/1		535	NO
AFG	50-54 MHz	FX/MOB/BC	ALA/1		557	NO
AFG	74.8-75.2 MHz	MOB	ADA/3	Article 14	572A	NO
AFG	85-87 MHz	BC	ADA/1		579	NO
AFG	108-111.975 MHz	MOB	ADA/3		590A	NO
AFG	137-138 MHz	FX/MOB	DCS/1		596	YES
AFG	146-148 MHz	FX/MOB	ALA/1		607	YES
AFG	167-174 MHz	BC	ADA/1		617	YES
AFG	328.6-335.4 MHz	MOB	ADA/3		645A	NO
AFG	400.05-401 MHz	FX/MOB	ADA/1		647	NO
AFG	430-440 MHz	FX	ADA/1		658	YES
AFG	430-435 MHz	FX/MOB	ADA/1		658	NO
AFG	438-440 MHz	FX/MOB	ADA/1		658	NO
AFG	460-470 MHz	EM	DOS/1	Article 14	672	YES
AFG	1215-1300 MHz	FX/MOS	ADA/1		711	NO
AFG	1525-1530 MHz	MOB	DCS/1		724	NO
AFG	1540-1645.5 MHz	FX	ADA/3		727	NO
AFG	1646.5-1660 MHz	FX	ADA/3		727	NO
AFG	1660.5-1668.4MHz	FX/MOB	DCS/1	Expired 1/1/90	737	NO
AFG	1690-1700 MHz	FX/MOB	ADA/1		740	NO
AFG	1750-1850 MHz	TT/TH	[ADA/1]	Article 14	745	NO
AFG	1750-1850 MHz	TT/TH	[ADA/1]	Article 14	745	NO
AFG	2690-2700 MHz	FX/MOB	ADA/1		769	NO
AFG	3300-3400 MHz	FX/MOB	ADA/1		779	NO
AFG	5470-5650 MHz	AERO NAV	ADA/1		800	NO
AFG	5650-5850 MHz	FX/MOB	ADA/1		803	NO
AFG	9800-10000 MHz	FX	DCS/1		826	NO
AFG	10.6-10.68 GHz	FX/MOB	[-/1]		831	NO
AFG	13.4-14 GHz	FX/MOB	ADA/1		854	NO
AFG	14-14.3 GHz	FX	ADA/1		857	NO
AFG	15.35-15.4 GHz	FX/MOB	ADA/3		865	NO
AFG	15.7-17.3 GHz	FX/MOB	ADA/1		866	NO
AFG	17.3-17.7 GHz	FX/MOB	ADA/3		868	NO
AFG	19.7-21.2 GHz	FX/MOB	ADA/1		873	YES
AFG	29.5-31 GHz	FX/MOB	ADA/3		883	NO
AFG	33.4-36 GHz	FX/MOB	ADA/1		894	NO

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

Jamaica

PROPOSALS FOR THE WORK OF THE CONFERENCE

JMC/172/1

MOD 608C
S5.221

Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from stations of the fixed or mobile services in the following countries: Algeria, the Federal Republic of Germany, Saudi Arabia, Australia, Austria, Bangladesh, Belarus, Belgium, Brunei Darussalam, Bulgaria, Cameroon, Canada, Cyprus, Colombia, Congo, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Spain, Ethiopia, the Russian Federation, Finland, France, Ghana, Greece, Honduras, Hungary, Iran, Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kenya, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Mozambique, Namibia, Norway, New Zealand, Oman, Pakistan, Panama, Papua New Guinea, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Romania, the United Kingdom, Singapore, Sri Lanka, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, the Czech and Slovak Federal Republic, Thailand, Tunisia, Turkey, Ukraine, Yemen and Yugoslavia that operate in accordance with the Table of Frequency Allocations.

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COMMITTEE 4

Trinidad and Tobago

PROPOSALS FOR THE WORK OF THE CONFERENCE

TRD/173/1

MOD 608C
S5.221

Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from stations of the fixed or mobile services in the following countries: Algeria, the Federal Republic of Germany, Saudi Arabia, Australia, Austria, Bangladesh, Belarus, Belgium, Brunei Darussalam, Bulgaria, Cameroon, Canada, Cyprus, Colombia, Congo, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Spain, Ethiopia, the Russian Federation, Finland, France, Ghana, Greece, Honduras, Hungary, Iran, Ireland, Iceland, Israel, Italy, Japan, Jordan, Kenya, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Mozambique, Namibia, Norway, New Zealand, Oman, Pakistan, Panama, Papua New Guinea, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Romania, the United Kingdom, Singapore, Sri Lanka, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, the Czech and Slovak Federal Republic, Thailand, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Yemen and Yugoslavia that operate in accordance with the Table of Frequency Allocations.

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COMMITTEE 4

Republic of Moldova

PROPOSALS FOR THE WORK OF THE CONFERENCE

MDA/174/1

MOD 608C
S5.221 Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from stations of the fixed or mobile services in the following countries: Algeria, the Federal Republic of Germany, Saudi Arabia, Australia, Austria, Bangladesh, Belarus, Belgium, Brunei Darussalam, Bulgaria, Cameroon, Canada, Cyprus, Colombia, Congo, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Spain, Ethiopia, the Russian Federation, Finland, France, Ghana, Greece, Honduras, Hungary, Iran, Ireland, Iceland, Israel, Italy, Japan, Jordan, Kenya, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Moldova, Mozambique, Namibia, Norway, New Zealand, Oman, Pakistan, Panama, Papua New Guinea, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Romania, the United Kingdom, Singapore, Sri Lanka, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, the Czech and Slovak Federal Republic, Thailand, Tunisia, Turkey, Ukraine, Yemen and Yugoslavia that operate in accordance with the Table of Frequency Allocations.

INTERNATIONAL TELECOMMUNICATION UNION

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COMMITTEE 4

Republic of Sierra Leone

PROPOSALS FOR THE WORK OF THE CONFERENCE

The Republic of Sierra Leone proposes the inclusion of its name in the following footnote.

SRL/175/1

MOD 608C
S5.221 Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from stations of the fixed or mobile services in the following countries: Algeria, the Federal Republic of Germany, Saudi Arabia, Australia, Austria, Bangladesh, Belarus, Belgium, Brunei Darussalam, Bulgaria, Cameroon, Canada, Cyprus, Colombia, Congo, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Spain, Ethiopia, the Russian Federation, Finland, France, Ghana, Greece, Honduras, Hungary, Iran, Ireland, Iceland, Israel, Italy, Japan, Jordan, Kenya, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Mozambique, Namibia, Norway, New Zealand, Oman, Pakistan, Panama, Papua New Guinea, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Romania, the United Kingdom, Sierra Leone, Singapore, Sri Lanka, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, the Czech and Slovak Federal Republic, Thailand, Tunisia, Turkey, Ukraine, Yemen and Yugoslavia that operate in accordance with the Table of Frequency Allocations.

INTERNATIONAL TELECOMMUNICATION UNION

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COMMITTEE 4

REPORT BY THE CHAIRMAN OF WORKING GROUP 4C

Please find attached texts of Article S51.

ARTICLE S51

NOC **Conditions to Be Observed in the Maritime Services**

NOC **Section I. Maritime Mobile Service**

NOC **S51.1** *A. General*

MOD **S51.2** § 1. The energy radiated by receiving apparatus shall be reduced to the lowest ~~practicable~~practical value and shall not cause harmful interference to other stations.

NOC **S5.3 to S5.5**

ADD S51.5A The operation of a broadcasting service (see No. S1.38) by a ship station at sea is prohibited. (See also No. S23.2.)

NOC **S51.6** § 4. Ship stations and ship earth stations other than survival craft stations shall be provided with the documents enumerated in the appropriate section of Appendix **S16**.

(MOD) **S5.17** § 5. When any ship station transmitter itself cannot be controlled in such a way that its frequency satisfies the tolerance specified in [~~Annex AP 7~~Recommendation ITU-R [1A/XF]], the ship station shall be provided with a device, having a precision equal to at least one-half of this tolerance, for measuring the frequency of the emission.

NOC **S5.18 to S5.24**

[NOC] **S51.25** § 12. The characteristics of the digital selective calling equipment shall be in accordance with the ITU-R Recommendations.

NOC **S51.26 to S51.34**

(MOD) **S51.35** b) send and receive class F1B or J2B emissions on an international calling channel (see [~~Annex 62B, Nos. 4683 and 4684~~Recommendation ITU-R M.541-5]) in each of the HF maritime mobile bands necessary for their service;

NOC **S51.36 to S51.40**

(MOD) **S51.41** (2) The characteristics of the narrow-band direct-printing equipment shall be in accordance with [~~Annex AP 38~~Recommendations ITU-R M.476, M.625-2 and M.627].

NOC **S51.42 to S51.64**

NOC **Section II. Maritime Mobile-Satellite Service**

MOD **S51.65** § 17. The energy radiated by receiving apparatus shall be reduced to the lowest ~~practicable~~practical value and shall not cause harmful interference to other stations.

NOC **S51.66 to S51.70**

(MOD) **S51.71** § 20. In the case of communication between stations on board aircraft and stations of the maritime mobile service, radiotelephone calling may be renewed as specified in [~~Annex 65A, Nos. 4933 and 4934~~Recommendation ITU-R [RR Annex 65A]] and radiotelegraph calling may be renewed after an interval of five minutes, notwithstanding [~~Annex 63, No. 4735~~Recommendation ITU-R [RR Annex 63]].

NOC **S51.72**
to
S51.76

(MOD) **S51.77** d) except as provided in No. **S51.75**, aircraft station transmitters shall comply with the technical characteristics given in [~~Annex **AP 19**~~Recommendation ITU-R M.489-1];

NOC **S51.78**
to
S51.80

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COMMITTEE 4

REPORT BY THE CHAIRMAN OF WORKING GROUP 4C

At its seventh meeting on 6 November 1995, the Group decided:

1 To adopt texts of Articles **S51-S58** (attached).

2 To adopt texts of Appendices **S1, S9-S18** (attached).

3 To reconsider the provisions containing references to the materials which should be of mandatory status after a decision has been taken on proposals developed by ad hoc Group 4C2.

V. RUBIO CARRETÓN
Chairman of Working Group 4C

NOC

ARTICLE S52

NOC

Special Rules Relating to the Use of Frequencies

NOC

Section I. General Provisions

NOC **S52.1 to S52.12**

(MOD) **S52.13** § 6. (1) Bands exclusively allocated to the maritime mobile service between 4 000 kHz and 27 500 kHz (see Article **S5**) are subdivided into the categories and sub-bands~~. Frequencies are to be assigned~~ as indicated in Appendix **S17**.

NOC **S52.14 to S52.19**

B1. Call and Reply

(MOD) **S52.20** § 10. (1) The frequency 500 kHz is the international distress frequency for Morse radiotelegraphy ((see Appendix **S13**~~,~~) ~~[No. 2970]~~ for details of its use for distress, urgency and safety purposes).

NOC **S52.21 to S52.22**

(MOD) **S52.23** b) by coast stations to announce by means of Morse telegraphy the transmission of their traffic lists under the conditions provided for in [~~Annex 63, Nos. 4727, 4728 and 4729~~Recommendation ITU-R [RR Annex 63]].

NOC **S52.24**

(MOD) **S52.25** (4) Before transmitting on 500 kHz, stations must listen on this frequency for a reasonable period to make sure that no distress traffic is being sent (see [~~Annex 63, No. 4713~~Recommendation ITU-R [Annex 63]]).

NOC **S52.26**

(MOD) **S52.27** § 11. (1) The general calling frequency which, except as provided under [~~Annex 64, No. 4849~~Recommendation ITU-R M.492-5], shall be used by any ship station or coast station engaged in radiotelegraphy in the authorized bands between 415 kHz and 535 kHz, and by aircraft stations desiring to enter into communication with a station of the maritime mobile service using frequencies in these bands, is the frequency 500 kHz.

NOC **S52.28 to S.52.30**

(MOD) **S52.31** § 13. (1) The frequency for replying to a call sent on the general calling frequency (see No. **S52.27**) shall be as follows:

- either 500 kHz,
- or the frequency specified by the calling station (see Nos. **S52.29** and [~~Annex 63, No. 4769~~Recommendation ITU-R [Annex 63]]).

(MOD) **S52.32** (2) In regions of heavy traffic, coast stations may answer calls made by ship stations of their own nationality in accordance with special arrangements made by the administration concerned (see [~~Annex 63, No. 4769~~Recommendation ITU-R [Annex 63]]).

NOC **S52.33 to S52.62**

(MOD) **S52.63** (2) So far as is practicable, a coast station shall transmit its calls at specified times in the form of traffic lists on the frequency or frequencies indicated in the List of Coast Stations (see [~~Annex 63, Nos. 4722 and 4726~~Recommendation ITU-R [Annex 63]]).

NOC **S52.64 to S52.68**

(MOD) **S52.69** § 28. In order to reduce interference on Morse radiotelegraphy calling frequencies, a coast station shall take adequate steps to ensure, under normal conditions, the prompt receipt of Morse radiotelegraphy calls (see [~~Annex 63, No. 4755~~Recommendation ITU-R [Annex 63]]).

NOC **S52.70 to S52.82**

(MOD) **S52.83** § 38. Administrations shall ensure, as far as possible, that ship stations under their jurisdiction are capable of keeping their transmission within the limits of the assigned Morse radiotelegraphy channels (see [~~Annex AP 7~~Recommendation ITU-R [1A/XF]]).

NOC **S52.84 to S52.111**

[NOC] **S52.112** § 51. The characteristics of the digital selective-calling equipment shall be in accordance with [the relevant ITU-R Recommendations].

NOC **S52.113 to S52.147**

(MOD) S52.148 b) subject to the provisions of No. **S52.149**, one of the international digital selective-calling frequencies indicated in [~~Annex 62B, No. 4683~~Recommendation ITU-R M.541-5].

(MOD) S52.149 (2) The international digital selective-calling frequencies indicated in [~~Annex 62B, No. 4683~~Recommendation ITU-R M.541-5] may be used by any ship station. In order to reduce interference on these frequencies, they shall only be used when calling cannot be made on nationally assigned frequencies.

NOC S52.150

(MOD) S52.152 b) subject to the provisions of No. **S52.153**, one of the international digital selective-calling frequencies indicated in [~~Annex 62B, No. 4684~~Recommendation ITU-R M.541-5].

(MOD) S52.153 (2) The international digital selective-calling frequencies indicated in [~~Annex 62B, No. 4684~~Recommendation ITU-R M.541-5] may be assigned to any coast station. In order to reduce interference on these frequencies, they may be used as a general rule by coast stations to call ships of another nationality, or in cases where it is not known on which digital selective-calling frequencies within the bands concerned the ship station is maintaining watch.

NOC S52.154 to S52.158

E2. Call and Acknowledgement

(MOD) S52.159 § 71. (1) The frequency 156.525 MHz is an international frequency in the maritime mobile service used for distress, urgency, safety and calling by digital selective-calling techniques (see Nos. **S33.8**, **S33.31**, Appendix **S15** and [~~Annex 62B, Nos. 4686 to 4687K~~Recommendation ITU-R M.541-5]).

NOC S52.160 to S52.187

(MOD) S52.188 (4) Transmissions in the bands 2 170 - 2 173.5 kHz and 2 190.5 - 2 194 kHz with the carrier frequency 2 170.5 kHz and the carrier frequency 2 191 kHz respectively are limited to class J3E emissions and are limited to a peak envelope power of 400 W. However, on the frequency 2 170.5 kHz and with the same power limit, coast stations may also use class H2B emissions when using the selective calling system defined in [~~Annex AP 39~~Recommendation ITU-R M.489-1] and exceptionally, in Regions 1 and 3 and in Greenland, may also use class H3E for safety messages.

NOC S52.189 to S52.191

(MOD) S52.192 b) by coast stations to announce the transmission, on another frequency, of traffic lists (see [~~Annex 65A, Nos. 4925 to 4929~~Recommendation ITU-R [RR Annex 65A]]).

NOC S52.193 to S52.194

(MOD) S52.195 § 89. (1) Before transmitting on the carrier frequency 2 182 kHz, a station shall listen on this frequency for a reasonable period to make sure that no distress traffic is being sent (see [~~Annex 65A, No. 4915~~Recommendation ITU-R [RR Annex 65A]]).

NOC S52.196 to S52.212

(MOD) S52.213 (2) In exceptional circumstances, if frequency usage according to Nos. **S52.203, S52.204, S52.205, S52.206, S52.207** and **S52.208** or No. **S52.210** is not possible, a ship station may use one of its own assigned national ship-to-shore frequencies for communication with a coast station of another nationality, under the express condition that the coast station as well as the ship station take precautions (see [~~Annex 65A, No. 4915~~Recommendation ITU-R [RR Annex 65A]]) to ensure that the use of such a frequency will not cause harmful interference to the service for which the frequency in question is authorized.

NOC S52.214 to S52.222

(MOD) S52.222.1 [4] These frequencies may also be used by coast stations with class H2B emission, when using the selective calling system defined in [~~Annex AP 39~~Recommendation ITU-R M.489-1].

NOC S52.222.2 to S52.223

(MOD) S52.224 § 99. (1) Before transmitting on the carrier frequencies 4 125 kHz, 6 215 kHz, 8 291 kHz, 12 290 kHz or 16 420 kHz a station shall listen on the frequency for a reasonable period to make sure that no distress traffic is being sent (see [~~Annex 65A, No. 4915~~Recommendation ITU-R [Annex 65A]]).

NOC S52.225 to S52.228

(MOD) S52.229 (4) The technical characteristics of transmitters used for radiotelephony in the bands between 4 000 kHz and 27 500 kHz are specified in [~~Annex AP 17~~Recommendation ITU-R [RR Appendix 17]].

NOC S52.230

(MOD) S52.231 § 101. (1) The frequency 156.8 MHz is the international frequency for distress traffic and for calling by radiotelephony when using frequencies in the authorized bands between 156 MHz and 174 MHz (see Appendix **S13** for

details of use). The class of emission to be used for radiotelephony on the frequency 156.8 MHz shall be G3E (see [~~Annex AP 19~~Recommendation ITU-R M.489-1]).

NOC **S52.232 to S52.233**

(MOD) **S52.234** b) by coast stations to announce the transmission on another frequency of traffic lists and important maritime information (see [~~Annex 65A, Nos. 4925 to 4929~~Recommendation ITU-R [RR Annex 65A]]).

(MOD) **S52.235** (3) The frequency 156.8 MHz may be used by ship stations and coast stations for selective calling as defined in [~~Annex AP 39~~Recommendation ITU-R M.489-1].

NOC **S52.236 to S52.239**

(MOD) **S52.240** (8) Before transmitting on the frequency 156.8 MHz, a station should listen on this frequency for a reasonable period to make sure that no distress traffic is being sent (see [~~Annex 65A, No. 4915~~Recommendation ITU-R [RR Annex 65A]]).

NOC **S52.241 to S52.260**

NOC ARTICLE S53

NOC **Order of Priority of Communications**

NOC ARTICLE S54

NOC **Selective Calling**

NOC **S54.1**

(MOD) **S54.2** (2) Selective calling may be carried out using a sequential single-frequency code system in accordance with ITU-R Recommendation (see [~~Annex 62A~~Recommendation ITU-R M.257-2]) or a digital selective-calling system in accordance with ITU-R Recommendations ~~493-5, 541-4, 821, and 825 (see [Annexes 62B and 65B])~~M.493-5, M.541-4, M.821 and M.825 in the shore-to-ship, ship-to-shore and ship-to-ship directions.

NOC

ARTICLE S55

NOC

Morse Radiotelegraphy

NOC

ARTICLE S56

NOC

Narrow-Band Direct-Printing Telegraphy

NOC **S56.1**

(MOD) **S56.2** § 2. The procedures specified in ITU-R Recommendation (see [~~Annex 64~~Recommendation ITU-R M.492-5]) should be employed except in cases of distress, urgency or safety in which case alternate or non-standard procedures may be used.

NOC **S56.3 to S56.7**

NOC

ARTICLE S57

NOC

Radiotelephony

(MOD) **S57.1** § 1. The procedure detailed in Recommendation ITU-R ~~([~~Annex **65A**]~~)~~ is applicable to radiotelephone stations, except in cases of distress, urgency or safety, to which the provisions of Appendix **S13** are applicable.

NOC **S57.2 to S57.10**

NOC

ARTICLE S58

NOC

Charging and Accounting for Maritime Radiocommunications [1, 2], Except for Distress and Safety Communications

SUP **A.S58.1**

SUP **A.S58.2**

NOC **S58.1**

APPENDIX S1

Classification of Emissions and Necessary Bandwidths

(see Article **S2**)

§ 1. (1) Emissions shall be designated according to their necessary bandwidth and their classification as explained in this Appendix.

(MOD) (2) Formulae and examples of emissions designated in accordance with this Appendix are given in ~~ITU-R~~ Recommendation [~~Annex AP 6~~ITU-R [1A/XG]]. Further examples may be provided in other ITU-R Recommendations. These examples may also be published in the Preface to the International Frequency List.

Section I. Necessary Bandwidth

§ 2. (1) The necessary bandwidth, as defined in No. **S1.152** and determined in accordance with the formulae and examples, shall be expressed by three numerals and one letter. The letter occupies the position of the decimal point and represents the unit of bandwidth. The first character shall be neither zero nor K, M or G.

(2) Necessary bandwidths[1]:

between 0.001 and 999 Hz shall be expressed in Hz (letter H);

between 1.00 and 999 kHz shall be expressed in kHz (letter K);

between 1.00 and 999 MHz shall be expressed in MHz (letter M);

between 1.00 and 999 GHz shall be expressed in GHz (letter G).

---

[1] Examples:

0.002	Hz	= H002	6	kHz	= 6K00	1.25	MHz	= 1M25
0.1	Hz	= H100	12.5	kHz	= 12K5	2	MHz	= 2M00
25.3	Hz	= 25H3	180.4	kHz	= 180K	10	MHz	= 10M0
400	Hz	= 400H	180.5	kHz	= 181K	202	MHz	= 202M
2.4	kHz	= 2K40	180.7	kHz	= 181K	5.65	GHz	= 5G65

(3) For the full designation of an emission, the necessary bandwidth, indicated in four characters, shall be added just before the classification symbols. When used, the necessary bandwidth shall be determined by one of the following methods:

(MOD) (3.1) use of the formulae and examples of necessary bandwidths and designation of corresponding emissions given in ~~ITU-R~~ Recommendation [~~Annex AP 6~~ITU-R [1A/XG]];

(3.2) computation in accordance with other ITU-R Recommendations;

(3.3) measurement, in cases not covered by (3.1) or (3.2) above.

Section II. Classification

§ 3. The class of emission is a set of characteristics conforming to § 4 below.

§ 4. Emissions shall be classified and symbolized according to their basic characteristics as given in Sub-Section IIA and any optional additional characteristics as provided for in Sub-Section IIB.

§ 5. The basic characteristics (see Sub-Section IIA) are:

(1) first symbol – type of modulation of the main carrier;

(2) second symbol – nature of signal(s) modulating the main carrier;

(3) third symbol – type of information to be transmitted.

Modulation used only for short periods and for incidental purposes (such as, in many cases, for identification or calling) may be ignored provided that the necessary bandwidth as indicated is not thereby increased.

Sub-Section IIA. Basic Characteristics

§ 6. (1) First symbol – type of modulation of the main carrier

(1.1)	Emission of an unmodulated carrier	N
(1.2)	Emission in which the main carrier is amplitude-modulated (including cases where sub-carriers are angle-modulated)	
(1.2.1)	Double-sideband	A
(1.2.2)	Single-sideband, full carrier	H
(1.2.3)	Single-sideband, reduced or variable level carrier	R
(1.2.4)	Single-sideband, suppressed carrier	J
(1.2.5)	Independent sidebands	B
(1.2.6)	Vestigial sideband	C
(1.3)	Emission in which the main carrier is angle-modulated	
(1.3.1)	Frequency modulation	F
(1.3.2)	Phase modulation	G
(1.4)	Emission in which the main carrier is amplitude- and angle-modulated either simultaneously or in a pre-established sequence	D
(1.5)	Emission of pulses[2]	
(1.5.1)	Sequence of unmodulated pulses	P

(1.5.2)	A sequence of pulses		
	(1.5.2.1)	modulated in amplitude	K
	(1.5.2.2)	modulated in width/duration	L
	(1.5.2.3)	modulated in position/phase	M
	(1.5.2.4)	in which the carrier is angle-modulated during the angle-period of the pulse	Q
	(1.5.2.5)	which is a combination of the foregoing or is produced by other means	V
(1.6)	Cases not covered above, in which an emission consists of the main carrier modulated, either simultaneously or in a pre-established sequence, in a combination of two or more of the following modes: amplitude, angle, pulse		W
(1.7)	Cases not otherwise covered		X

---

[2] Emissions where the main carrier is directly modulated by a signal which has been coded into quantized form (e.g. pulse code modulation) should be designated under (1.2) or (1.3).

§ 6. (2) Second symbol – nature of signal(s) modulating the main carrier

(2.1)	No modulating signal	0
(2.2)	A single channel containing quantized or digital information without the use of a modulating sub-carrier[3]	1
(2.3)	A single channel containing quantized or digital information with the use of a modulating sub-carrier[3]	2
(2.4)	A single channel containing analogue information	3
(2.5)	Two or more channels containing quantized or digital information	7
(2.6)	Two or more channels containing analogue information	8
(2.7)	Composite system with one or more channels containing quantized or digital information, together with one or more channels containing analogue information	9
(2.8)	Cases not otherwise covered	X

---

[3] This excludes time-division multiplex.

§ 6. (3) Third symbol - type of information to be transmitted[4]

(3.1)	No information transmitted	N
(3.2)	Telegraphy – for aural reception	A
(3.3)	Telegraphy – for automatic reception	B
(3.4)	Facsimile	C

(3.5) Data transmission, telemetry, telecommand	D
(3.6) Telephony (including sound broadcasting)	E
(3.7) Television (video)	F
(3.8) Combination of the above	W
(3.9) Cases not otherwise covered	X

[4] In this context the word "information" does not include information of a constant, unvarying nature such as is provided by standard frequency emissions, continuous wave and pulse radars, etc.

Sub-Section IIB. Optional Characteristics for the Classification of Emissions

§ 7. Two optional characteristics should be added for a more complete description of an emission. These are (see also Recommendation **62**):

Fourth symbol — Details of signal(s)

Fifth symbol — Nature of multiplexing

Where the fourth or fifth symbol is used it shall be as indicated below.

Where the fourth or the fifth symbol is not used this should be indicated by a dash where each symbol would otherwise appear.

§ 7. (1) *Fourth symbol* — Details of signal(s)

(1.1)	Two-condition code with elements of differing numbers and/or durations	A
(1.2)	Two-condition code with elements of the same number and duration without error-correction	B
(1.3)	Two-condition code with elements of the same number and duration with error-correction	C
(1.4)	Four-condition code in which each condition represents a signal element (or one or more bits)	D
(1.5)	Multi-condition code in which each condition represents a signal element (of one or more bits)	E
(1.6)	Multi-condition code in which each condition or combination of conditions represents a character	F
(1.7)	Sound of broadcasting quality (monophonic)	G
(1.8)	Sound of broadcasting quality (stereophonic or quadraphonic)	H
(1.9)	Sound of commercial quality (excluding categories given in sub-paragraphs 1.10 and 1.11)	J
(1.10)	Sound of commercial quality with the use of frequency inversion or band-splitting	K

	(1.11)	Sound of commercial quality with separate frequency-modulated signals to control the level of demodulated signal	L
	(1.12)	Monochrome	M
	(1.13)	Colour	N
	(1.14)	Combination of the above	W
	(1.15)	Cases not otherwise covered	X

§ 7. (2) *Fifth symbol* — Nature of multiplexing

(2.1)	None	N
(2.2)	Code-division multiplex[5]	C
(2.3)	Frequency-division multiplex	F
(2.4)	Time-division multiplex	T
(2.5)	Combination of frequency-division multiplex and time-division multiplex	W
(2.6)	Other types of multiplexing	X

[5] This includes bandwidth expansion techniques.

APPENDIX S9

Report of an Irregularity or Infringement

(see Article **S15**, Section V)

(The contents of this Appendix have not been reproduced since no change of substance is recommended to the present Appendix 22.)

APPENDIX S10

Report of Harmful Interference

(see Article **S15**, Section VI)

(The contents of this Appendix have not been reproduced since no change of substance is recommended to the present Appendix 23.)

APPENDIX S11

Double-Sideband (DSB) or Single-Sideband (SSB) System Specifications in the HF Broadcasting Service

(The contents of this Appendix have not been reproduced since no change of substance is recommended to the present Appendix 45.)

APPENDIX S12

Special Rules Applicable to Radiobeacons

(see Article **S28**)

Section I. Aeronautical Radiobeacons

(1) The assignment of frequencies to aeronautical radiobeacons operating in the bands between 160 kHz and 535 kHz shall be based on a protection ratio against interference of at least 15 dB for each beacon throughout its service area.

(2) The radiated power should be kept to the minimum value necessary to give the desired field strength at the service range.

(3) The daylight service range of radiobeacons referred to in (1) above shall be based on the following field strengths:

(4) *Regions 1 and 2*

- 70 microvolts per metre for radiobeacons north of 30° N;
- 120 microvolts per metre for radiobeacons between 30° N and 30° S;
- 70 microvolts per metre for radiobeacons south of 30° S.

(5) *Region 3*

- 70 microvolts per metre for radiobeacons north of 40° N;
- 120 microvolts per metre for radiobeacons between 40° N and 50° S;
- 70 microvolts per metre for radiobeacons south of 50° S.

Section II. Maritime Radiobeacons

(1) The protection ratio required for assignment of frequencies to maritime radiobeacons operating in the bands between 283.5 kHz and 335 kHz shall be based on the effective radiated power being kept to the minimum value necessary to give the desired field strength at the service range and the need to provide adequate geographical separation between radiobeacons operating on the same frequency and at the same time, to avoid harmful interference.

(2) The daylight service range of the radiobeacons referred to in (1) above shall be based on the following field strengths:

(3) *Region 1*

- 50 microvolts per metre for radiobeacons north of 43° N;
- 75 microvolts per metre for radiobeacons between 43° N and 30° N;
- 100 microvolts per metre for radiobeacons between 30° N and 30° S;
- 75 microvolts per metre for radiobeacons between 30° S and 43° S;
- 50 microvolts per metre for radiobeacons south of 43° S.

(4) *Region 2*

- 50 microvolts per metre for radiobeacons north of 40° N;
- 75 microvolts per metre for radiobeacons between 40° N and 31° N;
- 100 microvolts per metre for radiobeacons between 31° N and 30° S;
- 75 microvolts per metre for radiobeacons between 30° S and 43° S;
- 50 microvolts per metre for radiobeacons south of 43° S.

(5) *Region 3*

- 75 microvolts per metre for radiobeacons north of 40° N;
- 100 microvolts per metre for radiobeacons between 40° N and 50° S;
- 75 microvolts per metre for radiobeacons south of 50° S.

(6) The carrier frequencies of maritime radiobeacons and the separation between channels shall be based on the use of integer multiples of 100 Hz. The separation between adjacent carrier frequencies should be based on relevant ITU-R Recommendations.

MOD APPENDIX S13

NOC **Distress and Safety Communications (Non-GMDSS)**

(see Article **S30**)

This Appendix contains two parts: A and B: Part A of this Appendix will contain the complete texts of the present Chapter IX. The present Chapter IX contains the following articles, which are to be included without change and are therefore not reproduced here:

a. ARTICLE **37** - General Provisions

b. ARTICLE **38** - Frequencies for Distress and Safety

c. ARTICLE **39** - Distress Communications

d. ARTICLE **40** - Urgency and Safety Transmissions, and Medical Transports

e. ARTICLE **41** - Alarm and Warning Signals

f. ARTICLE **42** - Special Services Relating to Safety

In order to have all the provisions of the present RR related to non-GMDSS distress and safety communications assembled in one place, the provisions of Sections II and III of Article **55** and Section II of Article **56**, amended as recommended by VGE, are also included in this annex and reproduced in Part B of this Appendix.

PART B

Requirements for personnel

Section I. Categories of Certificates

1.1 There are four categories of certificates, shown in descending order of requirements, for radiotelegraph operators, Each lower order certificate has lesser requirements and except for code speed, its requirements are a subset of the next higher certificate. The highest order Morse code speed certificate is the 1st Class radiotelegraph;

a) the radiocommunication operator's general certificate;

b) the first-class radiotelegraph operator's certificate;

c) the second-class radiotelegraph operator's certificate;

d) the radiotelegraph operator's special certificate.

There are two categories of radiotelephone operators' certificates, general and restricted.

1.2 The holder of a radiocommunication operator's general certificate, or of a first-class or second-class radiotelegraph operator's certificate, may carry out the radiotelegraph or radiotelephone service of any ship station.

1.3 The holder of a radiotelephone operator's general certificate may carry out the radiotelephone service of any ship station.

1.4 The holder of a radiotelephone operator's restricted certificate may carry out the radiotelephone service of any ship station, provided that the operation of the transmitter requires only the use of simple external controls, and excludes all manual adjustment of frequency determining elements, with the stability of the frequencies maintained by the transmitter itself within the limits of tolerance specified by [~~Annex AP 7~~Recommendation ITU-R [1A/XF]], and the peak envelope power of the transmitter does not exceed 1.5 kW.

1.5 The radiotelephone operator's restricted certificate may be limited exclusively to one or more of the maritime mobile frequency bands. In such cases the certificate shall be suitably endorsed.

1.6 The radiotelegraph service of ships for which a radiotelegraph installation is not made compulsory by international agreements, as well as the radiotelephone service of ship stations for which only a radiotelephone operator's restricted certificate is required, may be carried out by the holder of a radiotelegraph operator's special certificate[1].

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[1] The radiotelegraph service of ships equipped with a radiotelegraph installation in accordance with Regulation 131 (2) (a) of the Torremolinos International Convention for the Safety of Fishing Vessels, 1977, may be carried out by the holder of a radiotelegraph operator's special certificate.

1.7 However, where the conditions specified in Table [AR55A] are satisfied, the radiotelegraph service of ships for which a radiotelegraph installation is not made compulsory by international agreements, as well as the radiotelephone service of any ship station, may be carried out by the holder of a radiotelegraph operator's special certificate[2].

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[2] The radiotelegraph service of ships equipped with a radiotelegraph installation in accordance with Regulation 131 (2) (a) of the Torremolinos International Convention for the Safety of Fishing Vessels, 1977, may be carried out by the holder of a radiotelegraph operator's special certificate.

1.8 Exceptionally, the second-class radiotelegraph operator's certificate as well as the radiotelegraph operator's special certificate may be limited exclusively to the radiotelegraph service. In such cases the certificate shall be suitably endorsed.

Section II. Conditions for the Issue of Certificates

A. General

2.1 The conditions to be imposed for obtaining the various certificates are contained in the following paragraphs and represent the minimum requirements.

2.2 Each administration is free to fix the number of examinations necessary to obtain each certificate.

2.3 The administration which issues a certificate may, before authorizing an operator to carry out the service on board a ship, require the fulfilment of other conditions (for example: experience with automatic communication devices; further technical and professional knowledge relating particularly to navigation; physical fitness; etc.).

2.4 Administrations should take whatever steps they consider necessary to ensure the continued proficiency of operators after prolonged absences from operational duties.

2.5 However, with respect to the maritime mobile service, administrations should also take whatever steps they consider necessary to ensure the continued proficiency of operators while in service.

2.6 The requirements which candidates, for one of the certificates of this section, must show proof of the technical and professional knowledge and qualification are shown in the following Table.

TABLE [AR55A]

Conditions for the Issue of Operator's Certificate

The relevant certificate is issued to a candidate who has given proof of the technical and professional knowledge and qualifications enumerated below, as applicable, and indicated by an asterisk (*) in the appropriate box	**Radiocom-municat. Operator's General Certificate**	**1st-Class Radio telegraph Operator's Certificate**	**2nd-Class Radio-Telegraph Operator's Certificate**	**Radio-Telegraph Operator's Special Certificate**
Knowledge of the principles of electricity and the theory of radio and of electronics sufficient to meet the requirements specified below:	*			
Theoretical knowledge of modern radiocommunication equipment, including marine radiotelegraph and radiotelephone transmitters and receivers, marine antenna systems, automatic alarm devices, radio equipment for lifeboats and other survival craft, direction-finding equipment, together with all auxiliary items including power supply (such as motors, alternators, generators, inverters, rectifiers and accumulators), as well as a general knowledge of the principles of other apparatus generally used for radionavigation, with particular reference to maintaining the equipment in service.	*			
Practical knowledge of the operation, adjustment and maintenance of the apparatus mentioned above, including the taking of direction-finding bearings and knowledge of the principles of the calibration of radio direction-finding apparatus.	*			
Practical knowledge necessary for the location and remedying (using appropriate testing equipment and tools) of faults in the apparatus mentioned above which may occur during a voyage.	*			
Knowledge both of the general principles of electricity and of the theory of radio, knowledge of the adjustment and practical working of various types of radiotelegraph and radiotelephone apparatus used in the mobile service, including apparatus used for radio direction-finding and the taking of direction-finding bearings, as well as a general knowledge of the principles of operation of other apparatus generally used for radionavigation.		*		
Elementary theoretical and practical knowledge of electricity and radio, knowledge of the adjustment and practical working of various types of radiotelegraph and radiotelephone apparatus used in the mobile service, including apparatus used for radio direction-finding and the taking of direction-finding bearings, as well as a general knowledge of the principles of operation of other apparatus generally used for radionavigation.			*	
Theoretical and practical knowledge of the operation and maintenance of apparatus, such as motor-generators, storage batteries, etc., used in the operation and adjustment of the radiotelegraph, radiotelephone and radio direction-finding apparatus mentioned above.		*		

(CONT.)

Elementary theoretical and practical knowledge of the operation and maintenance of apparatus, such as motor-generators, storage batteries, etc., used in the operation and adjustment of the radiotelegraph, radiotelephone and radio direction-finding apparatus mentioned above.			*	
Practical knowledge necessary to repair, with the means available on board, damage which may occur to the radiotelegraph, radiotelephone and radio direction-finding apparatus during a voyage.		*		
Practical knowledge sufficient for effecting repairs in the case of minor damage which may occur to the radiotelegraph, radiotelephone and radio direction-finding apparatus during a voyage.			*	
Ability to send correctly by hand and to receive correctly by ear, in the Morse code, code groups (mixed letters, figures and punctuation marks) at a speed of sixteen groups a minute, and a plain language text at a speed of twenty words a minute. Each code group shall comprise five characters, each figure or punctuation mark counting as two characters. The average word of the text in plain language shall contain five characters. The duration of each test of sending and receiving shall be, as a rule, five minutes.	*		*	*
Ability to send correctly by hand and to receive correctly by ear, in the Morse code, code groups (mixed letters, figures and punctuation marks) at a speed of twenty groups a minute, and a plain language text at a speed of twenty-five words a minute. Each code group shall comprise five characters, each figure or punctuation mark counting as two characters. The average word of the text in plain language shall contain five characters. The duration of each test of sending and receiving shall be, as a rule, five minutes.		*		
Knowledge of the practical operation and adjustment of radiotelegraph apparatus.				*
Ability to send correctly and to receive correctly by radiotelephone.	*	*		*
Ability to send correctly and to receive correctly by radiotelephone except in the case provided for in 1.8 of Part B to this Appendix.			*	
Knowledge of the Regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommunications and knowledge of the provisions of the Convention for the Safety of Life at Sea which relate to radio.	*		*	
Detailed knowledge of the Regulations applying to radiocommunications, knowledge of the documents relating to charges for radiocommunications and knowledge of the provisions of the Convention for the Safety of Life at Sea which relate to radio.		*		

(CONT.)

Knowledge of the Regulations applying to radiotelegraph communications and specifically of that part of those Regulations relating to the safety of life.				*
A sufficient knowledge of world geography, especially the principal shipping routes and the most important telecommunication routes.	*	*	*	
Knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing. Each administration shall decide for itself the language or languages required.	*			
Sufficient knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing. Each administration shall decide for itself the language or languages required.		*		
If necessary, an elementary knowledge of one of the working languages of the Union. Candidates should be able to express themselves satisfactorily in that language, both orally and in writing. Each administration shall decide for itself the language or languages required.			*	

B. Radiotelephone Operators' Certificates

2.7 The radiotelephone operator's general certificate is issued to candidates who have given proof of the knowledge and professional qualifications enumerated below (see also paragraphs **1.2, 1.3, 1.6** and **1.7**):

a) a knowledge of the elementary principles of radiotelephony;

b) detailed knowledge of the practical operation and adjustment of radiotelephone apparatus;

c) ability to send correctly and to receive correctly by radiotelephone;

d) detailed knowledge of the Regulations applying to radiotelephone communications and specifically of that part of those Regulations relating to the safety of life.

2.8 The restricted radiotelephone operator's certificate is issued to candidates who have given proof of the knowledge and professional qualifications enumerated below:

a) practical knowledge of radiotelephone operation and procedure;

b) ability to send correctly and to receive correctly by telephone;

c) general knowledge of the Regulations applying to radiotelephone communications and specifically of that part of those Regulations relating to the safety of life.

2.9 For ship radiotelephone stations where the peak envelope power of the transmitter does not exceed 400 watts, each administration may itself fix these conditions for obtaining a restricted radiotelephone operator's certificate, provided that the operation of the transmitter requires only the use of simple external switching devices, excluding all manual adjustment of frequency determining

elements, and that the stability of the frequencies is maintained by the transmitter itself within the limits of tolerance specified in [~~Annex AP 7~~Recommendation ITU-R [1A/XF]]. However, in fixing the conditions, administrations shall ensure that the operator has an adequate knowledge of radiotelephone operation and procedure particularly as far as distress, urgency and safety are concerned. This in no way contravenes the provisions of paragraph **2.13**.

2.10 Administrations in Region 1 do not issue certificates under paragraph **2.9**.

2.11 A radiotelephone operator's certificate shall show whether it is a general certificate or a restricted certificate and, in the latter case, if it has been issued in conformity with the provisions of paragraph **2.9**.

2.12 In the maritime mobile service a radiotelephone operator's restricted certificate shall show whether it is also limited as provided for in paragraph **1.5**.

2.13 In order to meet special needs, special agreements between administrations may fix the conditions to be fulfilled in order to obtain a radiotelephone operator's certificate, intended to be used in radiotelephone stations complying with certain technical conditions and certain operating conditions. These agreements, if made, shall be on the condition that harmful interference to international services shall not result therefrom. These conditions and agreements shall be mentioned in the certificates issued to such operators.

Section III. Class and Minimum Number of Operators

3.1 In the public correspondence service, each government shall take the necessary steps to ensure that stations on board ships of its own nationality have personnel adequate to perform efficient service.

3.2 The personnel of ship stations in the public correspondence service shall, having regard to the provisions of Part A of Appendix **S13**, include at least:

a) ship stations of the first category, except in the case provided for in paragraph **3.2** *e)*: a chief operator holding a radiocommunication operator's general certificate or a first-class radiotelegraph operator's certificate;

b) ship stations of the second and third categories, except in the case provided for in paragraph **3.2** *e)*: a chief operator holding a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate;

c) ship stations of the fourth category, except in the cases provided for in paragraphs **3.2** *d)* and **3.2** *e)*: one operator holding a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate;

d) ship stations in which a radiotelegraph installation is provided but not prescribed by international agreements: one operator holding a radiocommunication operator's general certificate or a first- or second-class radiotelegraph operator's certificate, or a radiotelegraph operator's special certificate;

e) ship stations equipped with a radiotelephone installation only: one operator holding either a radiotelephone operator's certificate or a radiotelegraph operator's certificate.

APPENDIX S14

Phonetic Alphabet and Figure Code

(see Articles **S30**, **S57** and Appendix **S13**)

(The contents of this Appendix have not been reproduced since no change of substance is recommended to the present Appendix 24.)

MOD

APPENDIX S15

NOC

Frequencies for Distress and Safety Communications for the GMDSS

(see Article **S31**)

ADD

Table I. Frequencies < 30 MHz

Frequency (in kHz)	Description of usage	Notes
490	MSI	The frequency 490 kHz will be used exclusively for maritime safety information (**MSI**) after full completion of the GMDSS (see also Resolution **210 (Mob-87)**.
518	MSI	The frequency 518 kHz is used exclusively by the international **NAVTEX** system
*2 174.5	NBDP-COM	
*2 182	RTP-COM	The frequency 2182 kHz uses class of emission J3E. See also No. **S52.190** and Appendix **S13**.
*2 187.5	DSC	
3 023	AERO-SAR	The aeronautical carrier (reference) frequencies 3023 kHz and 5680 kHz may be used for intercommunication between mobile stations when they are engaged in coordinated search and rescue operations, and for communication between these stations and participating land stations , in accordance with the provisions of Appendix **S27, Aer2** (see Nos. **S5.111** and **S5.115**)
*4 125	RTP-COM	See also Nos. **S52.222** and Appendix **S13**. The carrier frequency 4125 kHz may be used by aircraft stations to communicate with stations of the maritime mobile service for distress and safety purposes, including search and rescue (see No. **S30.11**).
*4 177.5	NBDP-COM	
*4 207.5	DSC	
4 209.5	MSI	The frequency 4209.5 kHz is exclusively used for NAVTEX-type transmissions (see Resolution **332 (Mob-87)**).
4 210	MSI-HF	
5 680	AERO-SAR	See note under 3023 kHz, above
*6 215	RTP-COM	See also No. **S52.222** and Appendix **S13**
*6 268	NBDP-COM	

Legend

MSI In the maritime mobile service, these frequencies are used exclusively for the transmission of Maritime Safety Information-(MSI) (to include meteorological and navigational warnings and urgent information) by coast stations to ships, by means of narrow band direct-printing telegraphy.

NBDP-COM These frequencies are used exclusively for distress and safety communications (traffic) using narrow-band direct-printing telegraphy.

RTP-COM These carrier frequencies are used for distress and safety communications (traffic) by radiotelephony.

DSC These frequencies are used exclusively for distress and safety calls using digital selective calling [in accordance with No. **S32.5** (see Nos. **S32.9**, **S33.11** and **S33.34**)]

AERO-SAR These aeronautical carrier (reference) frequencies may be used for distress and safety purposes by mobile stations engaged in coordinated search and rescue operations.

(*) Except as provided for in these Regulations, any emission capable of causing harmful interference to distress, alarm, urgency or safety communications on the frequencies denoted by an asterisk (*) is prohibited. Any emission causing harmful interference to distress and safety communications on any of the discrete frequencies identified in Appendices **S13** and **S15** is prohibited.

Reasons: Eliminates the undefined concept of "absolute protection" and returns to the original wording while maintaining the VGE intent to eliminate repetition of the frequency lists.

Frequency (in kHz)	Description of usage	Notes
*6 312	DSC	
6 314	MSI-HF	
*8 291	RTP-COM	
*8 376.5	NBDP-COM	
*8 414.5	DSC	
8 416.5	MSI-HF	
*12 290	RTP-COM	
*12 520	NBDP-COM	
*12 577	DSC	
12 579	MSI-HF	
*16 420	RTP-COM	
*16 695	NBDP-COM	
*16 804.5	DSC	
16 806.5	MSI-HF	
19680.5	MSI-HF	
22 376	MSI-HF	
26 100.5	MSI-HF	

Legend
MSI-HF In the maritime mobile service, these frequencies are used exclusively for the transmission of high seas MSI by coast stations to ships, by means of narrow-band direct-printing telegraphy (see Resolution **333 (Mob-87)**).
(*) Except as provided for in these Regulations, any emission capable of causing harmful interference to distress, alarm, urgency or safety communications on the frequencies denoted by an asterisk (*) is prohibited. Any emission causing harmful interference to distress and safety communications on any of the discrete frequencies identified in Appendices **S13** and **S15** is prohibited.
Reasons: Eliminates the undefined concept of "absolute protection" and returns to the original wording while maintaining the VGE intent to eliminate repetition of the frequency lists.

Table II. Frequencies > 30 MHz (VHF / UHF)

Frequency in MHz	Description of usage	Notes
*121.5	AERO-SAR	The aeronautical emergency frequency 121.5 MHz is used for the purposes of distress and urgency for radiotelephony by stations of the aeronautical mobile service using frequencies in the band between 117.975 MHz and 137 MHz. This frequency may also be used for these purposes by survival craft stations. Emergency position-indicating radio beacons use the frequency 121.5 MHz as indicated in [Annex **AP37A**]. Mobile stations of the maritime mobile service may communicate with stations of the aeronautical mobile service on the aeronautical emergency 121.5 MHz for the purposes of distress and urgency only, and on the aeronautical auxiliary frequency 123.1 MHz for coordinated search and rescue operations, using class A3E emissions for both frequencies (see also Nos. **S5.111** and **S5.200**). They shall then comply with any special arrangement between governments concerned by which the aeronautical mobile service is regulated
123.1	AERO-SAR	The aeronautical auxiliary frequency 123.1 MHz, which is auxiliary to the aeronautical emergency frequency 121.5 MHz, is for use by stations of the aeronautical mobile service and by other mobile and land stations engaged in coordinated search and rescue operations (see also No **S5.200**). Mobile stations of the maritime mobile service may communicate with stations of the aeronautical mobile service on the aeronautical emergency 121.5 MHz for the purposes of distress and urgency only, and on the aeronautical auxiliary frequency 123.1 MHz for coordinated search and rescue operations, using class A3E emissions for both frequencies (see also Nos. **S5.111** and **S5.200**). They shall then comply with any special arrangement between governments concerned by which the aeronautical mobile service is regulated
156.3	VHF-CH06	The frequency 156.3 MHz may be used for communication between ship stations and aircraft stations engaged in coordinated search and rescue operations. It may also be used by aircraft stations to communicate with ships stations for other safety purposes (See also note g) in App.**S18**)
*156.525	VHF-CH70	The frequency 156.525 MHz is used in the maritime mobile service for distress and safety calls using digital selective calling (see also **Nos. S4.9, S5.227, S30.2** and **S30.3**)
156.650	VHF-CH13	The frequency 156.650 MHz is used for ship-to-ship communications relating to the safety of navigation in accordance with Note p) in Appendix **S18**
*156.8	VHF-CH16	The frequency 156.8 MHz is used for distress and safety communications by radiotelephony (see also Appendix **S13**). Additionally, the frequency 156.8 MHz may be used by aircraft stations for safety purposes only.
*406 - 406.1	406-EPIRB	This frequency band is used exclusively by satellite emergency position-indicating radio beacons in the Earth-to-space direction (see No. **S5.266**).
1 530 - 1 544	SAT-COM	In addition to its availability for routine non-safety purposes, the band 1 530 - 1 544 MHz is used for distress and safety purposes in the space-to-earth direction in the maritime mobile-satellite service.

Legend

AERO-SAR These aeronautical carrier (reference) frequencies may be used for distress and safety purposes by mobile stations engaged in coordinated search and rescue operations.

VHF-CH# These VHF frequencies are used for distress and safety purposes. The channel number (CH#) refers to the VHF channel as listed in Appendix **S18,** which also should be consulted.

SAT-COM These frequency bands are available for distress and safety purposes in the maritime mobile-satellite service (see Notes).

D&S-OPS The use of these bands is limited to distress and safety operations of satellite emergency position-indicating radio beacons (EPIRBs)

(*) Except as provided for in these Regulations, any emission capable of causing harmful interference to distress, alarm, urgency or safety communications on the frequencies denoted by an asterisk (*) is prohibited. Any emission causing harmful interference to distress and safety communications on any of the discrete frequencies identified in Appendices **S13** and **S15** is prohibited.

Reasons: Eliminates the undefined concept of "absolute protection" and returns to the original wording while maintaining the VGE intent to eliminate repetition of the frequency lists.

TABLE II. FREQUENCIES > 30 MHZ (VHF / UHF) (CONTINUED)

Frequency (in MHz)	Description of usage	Notes
*1 544-1 545	D&S-OPS	Use of the band 1.544 - 1 545 MHz (space-to-Earth) is limited to distress and safety operations (see No **S5.356**), including feeder links of satellites needed to relay the emissions of satellite emergency position indicating radio beacons to earth stations and narrow band (space-to-Earth) links from space stations to mobile stations.
1 626.5 - 1 645.5	SAT-COM	In addition to its availability for routine non-safety purposes, the band 1.626.5 - 1 646.5 MHz is used for distress and safety purposes in the Earth-to-space direction in the maritime mobile-satellite service.
*1 645.5 - 1 646.5	D&S-OPS	Use of the band 1 645.5 - 1 646.5 MHz (Earth-to-space) is limited to distress and safety operations (see No. **S5.375**), including transmissions from satellites EPIRBs and relay of distress alerts received by satellites in low polar earth orbits to geostationary satellites.
9 200-9 500	SARTS	This frequency band is used by radar transponders to facilitate search and rescue.

Legend
(*) Except as provided for in these Regulations, any emission capable of causing harmful interference to distress, alarm, urgency or safety communications on the frequencies denoted by an asterisk (*) is prohibited. Any emission causing harmful interference to distress and safety communications on any of the discrete frequencies identified in Appendices **S13** and **S15** is prohibited. **Reasons:** Eliminates the undefined concept of "absolute protection" and returns to the original wording while maintaining the VGE intent to eliminate repetition of the frequency lists

APPENDIX S16

Documents with Which Stations on Board Ships and Aircraft Shall be Provided

(see Articles **S42** and **S51**)

(The contents of this Appendix have not been reproduced since no change of substance is recommended to the present Appendix 11.)

APPENDIX S17

Frequencies and Channelling Arrangements in the High Frequency Bands for the Maritime Mobile Service

(see Article **S52**)

Introduction

This Appendix contains two parts, the second of which is divided into five sections:

Part A - Table of Subdivided Bands
(Present Appendix **31**)

Part B - Channelling Arrangements

Section I - Radiotelephony
(Present Appendix **16**)

Section II - Narrow-Band Direct-Printing Telegraphy (Paired)
(Present Appendix **32**)

Section III - Narrow-Band Direct-Printing Telegraphy (Non-Paired)
(Present Appendix **33**)

Section IV - Morse Telegraphy (Calling)
(Present Appendix **34**)

Section V - Morse Telegraphy (Working)
(Present Appendix **35**)

(The contents of these appendices have not been reproduced since no changes of substance to the text are recommended.)

APPENDIX S18

Table of Transmitting Frequencies in the VHF Maritime Mobile Band

(see Article **S52**)

(The contents of this Appendix have not been reproduced since no change of substance is recommended to the present Appendix 18.)

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 2 to Document 177-E
10 November 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 5

SUMMARY RECORD

OF THE

FIFTH MEETING OF COMMITTEE 5

(MSS AND OTHER MATTERS)

Please replace paragraph 2.20 as follows:

2.20 The **delegate of Japan** said that the frequencies for non-GSO FSS suggested in proposal J/115/1, namely, 20.7 - 21.2 GHz and 30.5 - 31.0 GHz, took account of sharing problems with existing GSO FSS and terrestrial FS systems. Japan already had six GSO FSS systems in operation or nearly in operation and a further six were planned in the Ka-band. The frequency allocations proposed by the United States were already in use and sharing would give rise to serious technical difficulties, particularly in respect of the downlink. Furthermore, in Japan and probably in Europe, there are many terrestrial fixed stations operating in the range 17.7 - 19.7 GHz, and in some countries wireless CATV networks are operating in the range 27.5 - 29.1 GHz. Although not opposed to allocations of frequency to accommodate the new technology, Japan had expressed concerns about the identification of frequency bands for non-GSO FSS since the beginning of WRC-95, and considered that they should not give rise to sharing difficulties with existing systems. Non-GSO FSS systems were not the only means of developing economical broadband networks; there were at least three options which had equally good potential. Japan, which recognized the effectiveness and convenience of wireless access through cordless and cellular telephone technologies for the timely construction of low-cost telephone networks and also the potential of broadband wireless access and GSO FSS in the Ka-band for the timely development of economical broadband networks, had been making significant efforts in that regard for more than 10 years. Japan would therefore have serious difficulty in accepting the proposed frequency bands from the United States since it may mean foregoing the option to introduce non-GSO FSS in Japan.
A compromise should be sought that would be acceptable to all. He agreed that informal discussions to provide more technical background would be most useful.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Corrigendum 1 to Document 177-E
8 November 1995
Original: English

COMMITTEE 5

SUMMARY RECORD

OF THE

FIFTH MEETING OF COMMITTEE 5

(MSS AND OTHER MATTERS)

Please replace paragraph 2.13 as follows:

2.13 The **delegate of Germany** observed that many countries would be unable to use the frequency bands proposed by the United States. Some could not provide the required protection in those bands due to the intensive use of radio-relay equipment, while others would have problems regarding rain attenuation. He wondered whether such aspects had been taken into account by the United States when choosing the bands in question. The **delegate of the United States** replied that they had, drawing attention to Document 84 which indicated that the system was designed with earth-fixed cells and individually-controlled satellite beams to each of those cells. As a result, countries with several fixed services could choose to block the non-GSO FSS service so as to avoid interference with existing fixed services. As to the problem of rain attenuation, the system had been designed to provide 99.9% reliability. For that reason, and in the interest of avoiding interference with fixed services, the system used an elevation angle of over 40° to combat the effects of rain attenuation. The **delegate of Germany** said that his country would like to use the system but would be unable to do so because it was impossible to protect reception in the 19 GHz range at its earth stations, owing *inter alia* to the intensive use of transportable radio-relay equipment in the country; this would equally apply to similar systems in the same band.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 177-E
8 November 1995
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COMMITTEE 5

SUMMARY RECORD

OF THE

FIFTH MEETING OF COMMITTEE 5

(MSS AND OTHER MATTERS)

Friday, 3 November 1995, at 0940 hours

Chairman: Mr. G.F. JENKINSON (Australia)

Subjects discussed		**Documents**
1	Allocation of late documents (continued)	Add.1 to 7
2	Non-GSO FSS systems	Add.15 (+ Corr.1) to 9, 56, 84, 115; DT/38(Rev.2)

1 Allocation of late documents (continued) (Addendum 1 to Document 7)

1.1 The **Chairman** said that Addendum 1 to Document 7, submitted by Russia, would be allocated to Working Group 5B.

2 Non-GSO FSS systems (Addendum 15 (and Corrigendum 1) to Document 9, Documents 56, 84, 115; DT/38(Rev.2))

2.1 The **Chairman** said that the Committee's task was to identify both an appropriate bandwidth of spectrum for non-GSO FSS, as well as specific bands where that bandwidth could best be accommodated. He would invite delegations to introduce their proposals, after which there would be discussion. He himself wished to ascertain whether it was essential to have the same bandwidth for both the uplink and the downlink, as was assumed in all the proposals submitted thus far, or whether there might be scope for a different bandwidth in each direction. The discussions on MSS feeder links currently taking place in Working Group 5C were closely related to the issue of non-GSO FSS, and guidance might need to be sought from the Chairman of that Working Group in due course. In the meantime, it was hoped that informal discussion of some of the technical issues involved might be of assistance in reaching a harmonious conclusion.

2.2 The **delegate of the United States** introduced proposals USA/9/235 and 236 set out in Addendum 15 to Document 9, observing in response to a query by the **Chairman** that the same bandwidth was required in both the space-to-Earth and Earth-to-space directions. He further drew attention to the fact that the draft Resolution in Document DT/38(Rev.2) contained many of the essential elements of the United States proposals. Turning to Document 84, which was intended for delegates' information, he said that Section I described the characteristics of a non-geostationary FSS system proposed to operate in the 30/20 GHz bands. After outlining the main features of the system, he drew attention to Attachment 1 of Corrigendum 1 to Addendum 15 of Document 9 summarizing a study carried out in the United States on non-GSO FSS codirectional frequency sharing with GSO FSS in the 30/20 GHz band, in which the characteristics of the non-GSO system described in Document 84 were compared with those of a representative GSO FSS network. The results of the study showed that there was a very low occurrence of interference from the non-GSO FSS to the GSO uplink and from the GSO to the non-GSO FSS downlink, whereas the other two modes studied presented substantially more interference. A more detailed discussion of the technical issues involved could perhaps take place informally.

2.3 The **Chairman** drew particular attention to Attachment 2 of Corrigendum 1 to Addendum 15 of Document 9, which would no doubt be of interest to a number of delegations in view of the comments made in the Plenary Meeting on the use of the bands in question.

2.4 The **delegate of the United States** introduced Attachment 2 to Corrigendum 1 to Addendum 15 to Document 9, which provided a brief summary of sharing between non-GSO FSS systems and the fixed service in the 30/20 GHz band. The characteristics used were the same as those referred to earlier in connection with Document 84. A typical characteristic of an FSS network had been used for the purposes of models and assumptions, with the basic results set out in the latter half of the attachment. He drew particular attention to the text in bold type in §§ 4 and 5, which gave results for short-term and long-term interference from non-GSO FSS satellites to a FS receiver and the worst-case scenario for interference from FS transmitters to a non-GSO FSS satellite, respectively. Other types of interference that occurred could be dealt with by using separation distances between transmitters and receivers. Another important element of the United States

contribution that was worth noting was Section II (Frequency sharing between a non-GSO FSS network and FS stations in the 20 GHz and 30 GHz bands) of Document 84, which provided a detailed analysis of frequency sharing in the bands concerned.

2.5 The **delegate of the United Kingdom** asked whether Committee 5 was to focus its attention on the technical characteristics of a specific system or the general characteristics of systems that might be operated within the band concerned, given that its task was to propose allocations for the fixed-satellite service. The **Chairman** said that the United States proposal was based on a specific system and should provide guidance without limiting in any way the scope of the Committee's deliberations on the issue.

2.6 The **delegate of France** observed that the United States delegate had mentioned earth station antennas with a diameter as small as 16 cm, which suggested that larger types of antenna existed. Such a lack of homogeneity, which meant that power flux-density levels might vary according to the earth stations in question, might well have implications for interference and sharing criteria. Figure 7 of Document 84 indicated that 100 of the 500 MHz available in the band would be used for a different purpose and he was aware that an earlier version of the document had mentioned the use of that portion by mobile service stations. In order to get a clearer picture of possible sharing criteria for the system, he would welcome more information on the types of terminal to be used. Furthermore, a detailed discussion of such issues was clearly essential before any consideration could be given to which frequencies should be allocated.

2.7 The **delegate of the United States,** on the question of antennas, said that the system was a broadband service, which provided bandwidth on demand and thus services with data rates of between 16 kbit/s and 2 Mbit/s. The antenna size for a given terminal would therefore differ according to the data rate used. In other words, a whole range of antennas of different sizes would be available to provide different data rates. Regarding the issue of interference, one aspect to be borne in mind was that power basically increased in proportion to the data rate, so that e.i.r.p. from the antenna per MHz was the same in all cases and would not affect interference calculations. The system would provide fixed-satellite services in the band to be allocated by the Conference and differed from the MSS services in that it provided fixed services to fixed locations on the Earth. The mobile terminals referred to in Figure 7 of Document 84 provided services to ambulances, ships and aircraft and would not be covered by the band in question.

2.8 The **delegate of France** said he would welcome further detailed discussion of such issues in a smaller forum. However, he found it difficult to believe that if the power per MHz was the same in all cases a service could be guaranteed to earth stations of different sizes.

2.9 The **delegate of the United Kingdom** said that it would be interesting to know what systems other than the one described by the United States delegation could be implemented in the band and whether they were likely to cause interference to fixed services. Corrigendum 1 to Addendum 15 to Document 9 provided information relating to certain scenarios, but other scenarios too should be taken into consideration. A case in point was the analysis based on a single fixed-service station transmitter. What of countries with multiple fixed-service stations operating in broadcast mode to multiple receiving stations? All those issues called for careful consideration and he was anxious to know how and where they would receive it, particularly since they had not been covered during the preparatory work for the Conference.

2.10 In response to a suggestion by the **Chairman** that the delegates concerned should hold informal consultations on specific sharing and interference issues pending the next full Committee meeting, the **delegate of the United Kingdom** stated his preference for a more formal arrangement in order to make headway on the subject, stressing the heavy workload generated by the large number of informal meetings scheduled for the coming days. The **Chairman** pointed out that for a number of reasons, including the shortage of interpretation facilities, it would not be practicable to organize a formal meeting before the next full Committee meeting. He would therefore leave it to the delegations concerned to find the most suitable arrangement for their informal consultations, in the hope that their input would expedite the Committee's debate on the issue at its next meeting.

2.11 The **delegate of Finland** said that her Administration shared previous speakers' concerns regarding protection for fixed services in the downlink. Since neither the results of the United States studies nor work done by ITU-R study groups had been made available during the preparations for the Conference, it was very difficult to establish whether the United States proposal was feasible. She stressed that allocations should not be made until sharing problems had been properly studied and conclusive results were available.

2.12 The **Chairman** said that Committee 5 faced the problem of putting the cart before the horse in so far as it was required under Document DT/38(Rev.2) to provide advice on allocations to be made by the Conference for use by non-GSO FSS, on the understanding that sharing studies would be carried out in the interval between the present Conference and WRC-97. The Committee had no choice but to comply with the directives given to it by the Plenary.

2.13 The **delegate of Germany** observed that many countries would be unable to use the frequency bands proposed by the United States. Some could not provide the required protection in those bands due to the intensive use of radio-relay equipment, while others would have problems regarding rain attenuation. He wondered whether such aspects had been taken into account by the United States when choosing the bands in question. The **delegate of the United States** replied that they had, drawing attention to Document 84 which indicated that the system was designed with earth-fixed cells and individually-controlled satellite beams to each of those cells. As a result, countries with several fixed services could choose to block the non-GSO FSS service so as to avoid interference with existing fixed services. As to the problem of rain attenuation, the system had been designed to provide 99.9% reliability. For that reason, and in the interest of avoiding interference with fixed services, the system used an elevation angle of over 40° to combat the effects of rain attenuation. The **delegate of Germany** said that his country would like to use the system but would be unable to do so because it was impossible to protect Teledesic receiving stations in the 19 GHz range and similar systems in the same bands, owing *inter alia* to the intensive use of transportable radio-relay equipment in the country.

2.14 The **delegate of Belgium** shared the concern expressed about the impact of the system advocated by the United States on existing services in the frequency bands in question. He therefore suggested that a small working group should endeavour to work out the maximum permissible power flux-density limit, irrespective of the total power radiated from the satellite. He did not entirely agree with the United States delegate that the diameter of the earth station antenna depended on the data rate used; in his view, only quality of reception should be affected by antenna size.

2.15 The **delegate of the United States**, replying to a request by the **delegate of the Netherlands** for further information on potential interference from non-GSO FSS systems to multiple FS networks, said that the bands under discussion were allocated to both FSS and FS systems and coordination would be required in each country to determine the extent of sharing. The potential for difficulties was believed to be no greater for sharing between non-GSO FSS and FS than between GSO FSS and FS systems, and might even be lower because the elevation angles involved were greater. The urgent need for further studies by the ITU-R on the question of sharing was recognized in the draft Resolution in Document DT/38(Rev.2) and such studies would be reviewed at WRC-97.

2.16 In reply to a question by the **delegate of Morocco**, the **Chairman** stressed that the Committee was discussing allocations for a type of service and not for a specific system, although the information outlined in Document 84 provided useful guidance.

2.17 In answer to a query by the **Chairman,** the **delegate of the United States**, confirmed that the specific system described in Document 84 had the facility to switch off transmission to cells or groups of cells, and hence to particular countries not wishing to use it. Moreover, when the system was not transmitting to an area it could not receive from that area, thus preventing unauthorized transmissions. In reply to a question by the **delegate of Italy** concerning the compatibility of non-GSO and GSO FSS systems within the same frequency band if RR 2613 was not applied, he said that the results of the study reported in Corrigendum 1 to Addendum 15 to Document 9 showed that sharing would be difficult. Responding to the **delegate of Finland**, who expressed concern that subsequent ITU-R studies might show that in some instances sharing was not feasible, he pointed out that the Committee's current task was to identify, within the spectrum allocated to FSS, the frequencies and bandwidths that could be used by non-GSO FSS systems. Any studies on sharing difficulties undertaken after WRC-95 would have to be considered at WRC-97. The **Chairman** observed that any changes in the allocations decided at WRC-95 that might be necessitated because of sharing difficulties identified at WRC-97 would pose considerable practical problems for systems developed beyond the paper stage. The **delegate of the United Kingdom** considered that the facility to switch off transmission to specific territories should be a requirement of all non-GSO FSS systems operating within the bands under consideration. He pointed out that the proposal to adopt the draft footnote and Resolution in Document DT/38(Rev.2) was being made on the understanding that Committee 5 would consider the proposals in Addendum 15 to Document 9 and identify specific bands.

2.18 The **delegate of the United States**, in reply to questions raised by the **delegates of the United Kingdom** and **Luxembourg** concerning measures to mitigate interference from FS transmitters to non-GSO FSS satellites, suggested that such technical detail could perhaps best be provided at an informal meeting.

2.19 The **delegate of Indonesia** said that proposal INS/56/6 was similar to the United States proposals introduced earlier in the meeting. Systems in the bands proposed, namely, 18.8 - 19.3 GHz (space-to-Earth) and 28.6 - 29.1 GHz (Earth-to-space), were of great interest, especially to developing countries, since they could provide high quality, "fibre-like", broadband services to remote areas at an economical cost. They would also allow a high degree of frequency re-use and thus save scarce spectrum resources. The need was for a system that could be fully developed within a 500 MHz bandwidth, using an elevation angle of more than 40° to reduce interference and avoid rain attenuation. Although an exclusive band for non-GSO FSS would be preferable, it was apparent that the possibilities of sharing would have to be explored. The

opportunity to obtain more technical information through some form of informal meeting before any decision was taken would be most useful.

2.20 The **delegate of Japan** said that the frequencies for non-GSO FSS suggested in proposal J/115/1, namely, 20.7 - 21.2 GHz and 30.5 - 31.0 GHz, took account of sharing problems with existing GSO FSS and terrestrial FS systems. Japan already had six GSO FSS systems in operation and a further six were planned in the Ka-band. The frequency allocations proposed by the United States were already in use and sharing would give rise to serious technical difficulties, particularly in respect of the downlink. Furthermore, in Japan and probably in Europe, there were many terrestrial fixed stations operating in the range 17.7 - 19.7 GHz, as well as wireless CB networks operating in the range 27.5 - 29.1 GHz. Although not opposed to allocations to accommodate the new technology, Japan had expressed concerns about the identification of frequency bands for non-GSO FSS since the beginning of WRC-95, and considered that they should not give rise to sharing difficulties with existing systems. Non-GSO FSS systems were not the only means of developing economical broadband networks; there were at least three options which had equally good potential. Japan, which recognized the effectiveness and convenience of wireless access through cordless and cellular telephone technologies for the timely construction of low-cost telephone networks and also the potential of broadband wireless access and GSO FSS in the Ka-band for the timely development of economical broadband networks, had been making significant efforts in that regard for more than 10 years. Japan would therefore have serious difficulty in accepting the United States proposal since it would mean foregoing the option to introduce non-GSO FSS. A compromise should be sought that would be acceptable to all. He agreed that informal discussions to provide more technical background would be most useful.

2.21 At the suggestion of the **Chairman,** the **delegates of the United States, Indonesia** and **Japan** designated specific members of their delegations and indicated points of contact for informal consultations for the provision of technical information prior to the next meeting of Committee 5.

The meeting rose at 1055 hours.

The Secretary:
G. KOVACS

The Chairman:
G.F. JENKINSON

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 1 to Document 178-E
10 November 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 6

Note by the Chairman of Committee 4

ARTICLE S10A (ex RR ARTICLE S16)

The following changes should be introduced in Document 209 (B.2):

1 On page B.2/6

1.1 Modify the band limits in the title and suppress the asterisk:

Procedure for Bringing Up to Date the Frequency Allotment[1]
Plan for Coast Radiotelephone Stations Operating in the
Exclusive Maritime Mobile Bands Between
4 000 kHz and ~~23 000~~27 500 kHz~~*~~

(Appendix 25)

1.2 Add the following text:

(Make the following editorial changes:

- the reference to No. 18 in the current A16.1 becomes S1.17;
- the reference to Appendix 5 in the current Nos. 1684 and 1690 becomes Appendix S4;
- the reference to No. 1416 in the current No. 1712 should be placed in square brackets;
- the reference to the Board and IFRB becomes "Bureau".)

2 On page B.2/39, replace *considering* h) to read:

h) that this Conference, in reviewing VGE Recommendation 2/4, has decided to maintain the existing modification procedure of Article 16 as Article S10A,

M. GODDARD
Chairman of Committee 4

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Addendum 1 to Document 178-E
8 November 1995
Original: English

COMMITTEE 6

SECOND SERIES OF TEXTS SUBMITTED BY COMMITTEE 4 TO THE EDITORIAL COMMITTEE

Committee 4 has adopted the attached texts, which it submits to the Editorial Committee for consideration and subsequent transmission to the Plenary Meeting.

M. GODDARD
Chairman of Committee 4

Annex: 1

ANNEX

ARTICLE S4

Assignment and Use of Frequencies

Section I. General Rules

NOC **S4.3** Any new assignment or any change of frequency or other basic characteristic of an existing assignment (see Appendix **S4**) shall be made in such a way as to avoid causing harmful interference to services rendered by stations using frequencies assigned in accordance with the Table of Frequency Allocations in this Chapter and the other provisions of these Regulations, the characteristics of which assignments are recorded in the Master International Frequency Register.

NOC **S4.4** Administrations of the Members shall not assign to a station any frequency in derogation of either the Table of Frequency Allocations given in this Chapter or the other provisions of these Regulations, except on the express condition that such a station shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station operating in accordance with the provisions of the Constitution, the Convention and of these Regulations.

NOC **S4.9** No provision of these Regulations prevents the use by a station in distress, or by a station providing assistance to it, of any means of radiocommunication at its disposal to attract attention, make known the condition and location of the station in distress, and obtain or provide assistance.

NOC **S4.21** In exceptional cases, land mobile earth stations in the land mobile-satellite service may communicate with stations in the maritime mobile-satellite and aeronautical mobile-satellite services. Such operations shall comply with the relevant provisions of the Radio Regulations relating to those services and shall be subject to agreement among administrations concerned, taking due account of No. **S4.10**.

ARTICLE S19 - Identification of Stations

RR	Action by VGE	VGE	Action by WRC-95
2095		S19.44	
2096		S19.45	
2097		S19.46	
2098		S19.47	
2099		S19.48	
2100		S19.49	
2101		S19.50	
2102		S19.51	
2103		S19.52	
2104		S19.53	
2105		S19.54	
2106		S19.55	
2107		S19.56	
2108		S19.57	
2109		S19.58	
2110		S19.59	
2111		S19.60	
2112		S19.61	
2113		S19.62	
2114		S19.63	
2115		S19.64	
2116		S19.65	
2117		S19.66	
2118		S19.67	
2119		S19.68	
2120		S19.69	
2121		S19.70	
2122		S19.71	
2123		S19.72	
2124		S19.73	
2125		S19.74	
2126		S19.75	
2127		S19.76	
2128		S19.77	
2129		S19.78	
2130		S19.79	
2131		S19.80	
2132		S19.81	
2133		S19.82	
2134		S19.83	
2135		S19.84	

RR	Action by VGE	VGE	Action by WRC-95
2136		S19.85	
2137		S19.86	
2138		S19.87	
2139		S19.88	
2140		S19.89	
2154		S19.131	
2155 - 2179 not allocated			
FOOTNOTES			
2055.1		S19.1.1	
2069.1	SUP Mob-87	--	
2083.1	SUP Mob-87	--	
2087.1	SUP Mob-87	--	
2087.2		S19.34.1	
2087A.1		S19.35.1	
2087A.2	(ADD)	S19.35.2	
2095.1		S19.44.1	
2101.1		S19.50.1	MOD
2149.1	ADD	S19.99.1	

ARTICLE S19

Identification of Stations

NOC **S19.3** (2) Where practicable and in appropriate services, identification signals should be automatically transmitted in accordance with relevant ITU-R Recommendations.

NOC **S19.16** § 3. In transmissions carrying identification signals a station shall be identified by a call sign, by a maritime mobile service identity or by other recognized means of identification which may be one or more of the following: name of station, location of station, operating agency, official registration mark, flight identification number, selective call number or signal, selective call identification number or signal, characteristic signal, characteristic of emission or other clearly distinguishing features readily recognized internationally.

NOC **S19.30** (2) As the need arises, ship stations and ship earth stations to which the provisions of Chapter **SIX** apply, and coast stations or coast earth stations capable of communicating with such ships, shall have assigned to them maritime mobile service identities in accordance with Section VI of this Article.

NOC **S19.34** § 15. The Secretary-General shall be responsible for allocating maritime identification digits to countries[1] and shall regularly publish information regarding allocated Maritime Identification Digits (MIDs).

NOC **S19.35** § 15A. The Secretary-General shall be responsible for allocating additional maritime identification digits to countries[1] within the limits specified,[2] provided that he is satisfied that the possibilities offered by the MIDs allocated to an administration will soon be exhausted despite judicious ship station identity assignment as outlined in Section VI and in conformity with the guidelines contained in the relevant ITU-R and ITU-T Recommendations.

NOC **S19.38** § 17. (1) Each country shall choose the call signs and, if the selective calling system used is in accordance with [Annex **AP 39**], the ship station selective call number and the coast station identification numbers of its stations from the international series allocated or supplied to it; and shall, notify this information to the Secretary-General together with the information which is to appear in Lists I, II, IV, V, VI and VIII A. These notifications do not include call signs assigned to amateur and experimental stations.

Section VI. Maritime Mobile Service Identities in the Maritime Mobile Service and the Maritime Mobile-Satellite Service

(See Note by the Secretariat)

NOC **S19.98** A. General

NOC **S19.99** § 37. When a station[1], in the maritime mobile service or the maritime mobile-satellite service is required to use maritime mobile service identities, the responsible administration shall assign the identity to the station in accordance with the provisions described in Nos. **S19.100** to **S19.126**, in accordance with relevant ITU-R and ITU-T Recommendations.

NOC **S19.99.1** [1] In this Section a reference to a ship station or a coast station may include the respective earth stations.

Note by the Secretariat - Provisions **S19.99.1** to **S19.126** are taken from Appendix **43**.

ARTICLE S20

Service Documents

NOC **S20.3** (1) This list shall contain:

NOC **S20.16** § 12. Administrations shall take all appropriate measures to notify the Bureau immediately as changes in operational information contained in the Lists IV, V and VI are made, in view of the importance of this information particularly with regard to safety. In the case of other documents administrations shall communicate the changes in the information contained in them as soon as possible.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4

SECOND SERIES OF TEXTS SUBMITTED BY COMMITTEE 4 TO THE EDITORIAL COMMITTEE

Committee 4 has adopted the attached texts, which it submits to the Editorial Committee for consideration and subsequent transmission to the Plenary Meeting.

M. GODDARD
Chairman of Committee 4

Annex

ARTICLE S4 - Assignment and Use of Frequencies

RR	Action by VGE	VGE	Action by WRC-95
339	MOD	S4.1	MOD
340		S4.2	
341	MOD	S4.3	
342	MOD	S4.4	
343		S4.5	
344		S4.6	
345		S4.7	
346		S4.8	
347	MOD	S4.9	
348	SUP*	S4.9	
349 - 373 not allocated			
953		S4.10	
954		S4.11	
955		S4.12	
956		S4.13	
957		S4.14	
958		S4.15	
959		S4.16	
960		S4.17	
961		S4.18	
962		S4.19	
963		S4.20	
963A	ADD	S4.21	
964		S4.22	
965 - 989 not allocated			
FOOTNOTE			
339.1	(MOD)	S4.1.1	SUP

ANNEX

Radio Regulations

CHAPTER SII

Frequencies

ARTICLE S4

Assignment and Use of Frequencies

Section I. General Rules

MOD 339
S4.1 Members shall endeavour to limit the number of frequencies and the spectrum used to the minimum essential to provide in a satisfactory manner the necessary services. To that end they shall endeavour to apply the latest technical advances as soon as possible[1]. **(CS195)**

SUP 339.1
S4.1.1

NOC **S4.2**
to
S4.22

ARTICLE S7 - Application of the Procedures

N.B.: The provisions of Articles S7 to S14 are new and do not correspond to the present RR Nos. The texts are therefore reproduced in full.

CHAPTER SIII

Coordination, Notification and Recording of Frequency Assignments and Plan Modifications

ARTICLE S7

Application of the Procedures

S7.1 The procedures of this Chapter shall be applied by administrations, the Radio Regulations Board (the Board) and the Radiocommunication Bureau (the Bureau) for the purposes of:

S7.2 a) obtaining coordination with, or the agreement of, other administrations whenever such a requirement is specified in one or more provisions of these Regulations (see Article **S9**);

SUP **S7.3**

S7.4 b) notifying to the Bureau frequency assignments for the purposes of examination and recording in the Master Register (see Article **S11**).

S7.5 Any administration may request the assistance of the Board or the Bureau in the application of any part of the procedures of this Chapter (see Articles **S13** and **S14**).

ADD S7.5bis If a frequency assignment is brought into use before commencement of the coordination procedure under Article S9, when coordination is required, or before notification when coordination is not required, the operation in advance of the application of the procedure shall, in no way, afford any priority.

MOD **S7.6** If requested by any administration, particularly by the administration of a country in need of special assistance, the Bureau and when necessary the ~~Bureau~~Board shall use such means at ~~its~~their disposal as are appropriate in the circumstances and shall render the assistance requested in the application of the procedures of this Chapter.

S7.7 The Board shall, in accordance with the relevant provisions of the Constitution, the Convention and these Regulations, approve the Rules of Procedure which shall be applied by the Bureau (see Article **S13**, Section III).

S7.8 In a case of harmful interference involving the application of the provisions of Article **S15**, Section VI, except when there is an obligation to eliminate harmful interference under the provisions of this Chapter, administrations are urged to exercise the utmost goodwill and mutual cooperation taking into account all the relevant technical and operational factors of the case.

SUP ARTICLE S10

Procedure for Modification of a Frequency Allotment or Assignment Plan

(Article S10 as revised in the CPM Report has now become Article T10 and has been annexed to Recommendation COM4/B)

ADD ARTICLE S10A (ex RR ARTICLE 16)

Procedure for Bringing Up to Date the Frequency Allotment[1] Plan for Coast Radiotelephone Stations Operating in the Exclusive Maritime Mobile Bands Between 4 000 kHz and 23 000 kHz*

(Appendix 25)

(Article 16 and Appendix 25 of the RR are to be reintroduced *in extenso* and will be renumbered Article S10A and Appendix S25, respectively)

APPENDIX S25

Frequency Allotment Plan for Coast Radiotelephone Stations Operating in the Exclusive Maritime Mobile Bands Between 4 000 kHz and 27 500 kHz

(The contents of this Appendix have not been reproduced since no change of substance is recommended to the present Appendix 25)

SUP ARTICLE S12

Planning and Procedure for the Bands Allocated Exclusively to the Broadcasting Service Between 5 950 kHz and 26 100 kHz

(Article S12, see Annex to Resolution COM4/2)

ADD

ARTICLE S12A (ex RR ARTICLE 17)

Planning and Procedures for the Bands Allocated Exclusively to the Broadcasting Service Between 5 950 kHz and 26 100 kHz

(Make the following editorial changes (MOD):

the reference to No. 1240 becomes S11.31
the reference to No. 1454 becomes S13.19
the reference to Article 22 becomes Section VI of Article S15)

ARTICLE S19 - Identification of Stations

RR	Action by VGE	VGE	Action by WRC-95
2055		S19.1	
2056		S19.2	
2057	MOD	S19.3	
2058		S19.4	
2059		S19.5	
2060		S19.6	
2061		S19.7	
2062		S19.8	
2063		S19.9	
2064		S19.10	
2064A		S19.11	
2065		S19.12	
2066		S19.13	
2067		S19.14	
2068		S19.15	
2069	MOD	S19.16	
2070		S19.17	
2071		S19.18	
2072		S19.19	
2073		S19.20	
2074		S19.21	
2075	(MOD)	S19.22	
2076	(MOD)	S19.23	
2077	(MOD)	S19.24	
2078		S19.25	
2079		S19.26	
2080		S19.27	
2081		S19.28	
2082	MOD	S19.29	MOD
2083	MOD	S19.30	
2084		S19.31	
2085	MOD	S19.32	MOD
2086		S19.33	
2087	MOD	S19.34	
2087A	MOD	S19.35	
2087B	(ADD)	S19.36	
2088		S19.37	
2089	MOD	S19.38	

2090		S19.39	
2091		S19.40	
2092		S19.41	
2093		S19.42	
2094		S19.43	
2141		S19.90	
2142		S19.91	
2143		S19.92	
2144		S19.93	
2145		S19.94	
2146		S19.95	
2147		S19.96	
2148		S19.97	
2148A	ADD	S19.98	
2149	MOD	S19.99	
2149A	(ADD)	S19.100	
2149B	Not allocated		
2149C	(ADD)	S19.101	
2149D	(ADD)	S19.102	
2149E	(ADD)	S19.103	
2149F	(ADD)	S19.104	
2149G	(ADD)	S19.105	
2149H	(ADD)	S19.106	
2149I	(ADD)	S19.107	
2149J	(ADD)	S19.108	
2149K	Not allocated		
2149L	Not allocated		
2149M	(ADD)	S19.109	
2149N	(ADD)	S19.110	
2149O	(ADD)	S19.111	
2149P	(ADD)	S19.112	
2149Q	(ADD)	S19.113	
2149R	(ADD)	S19.114	
2149S	(ADD)	S19.115	
2149T	(ADD)	S19.116	
2149U	(ADD)	S19.117	
2149V	(ADD)	S19.118	
2149W	(ADD)	S19.119	
2149X	(ADD)	S19.120	
2149Y	(ADD)	S19.121	
2149Z	(ADD)	S19.122	

2149AA	(ADD)	S19.123	
2149AB	(ADD)	S19.124	
2149AC	(ADD)	S19.125	
2149AD	(ADD)	S19.126	
2150		S19.127	
2151		S19.128	
2152		S19.129	
2153		S19.130	

ARTICLE S19

Identification of Stations

Section I. General Provisions

NOC **S19.1 to S19.28**

Section II. Allocation of International Series and Assignment of Call Signs

MOD **S19.29** § 12. (1) All stations open to the international public correspondence service, all amateur stations, and other stations which are capable of causing harmful interference beyond the boundaries of the country to which they belong, shall have call signs from the international series allocated to each country as given in the Table of Allocation of International Call Sign Series ~~published by the Secretary General~~in Appendix **S42**.

NOC **S19.30 to S19.31**

MOD **S19.32** § 13. Should the available call sign series in Appendix **S42** be exhausted, new call sign series may be allocated according to the principles set out in Resolution **13** relating to the formation of call signs and the allocation of new international series.

NOC **S19.33 to S19.50**

MOD **S19.50.1** [2] For call sign series beginning with B, F, G, I, K, M, N, R~~, U~~ and W, only the first character is required for nationality identification. In the cases of half series, the first three characters are required for nationality identification.

NOC **S19.51 to S19.131**

ARTICLE S20 - Service Documents

RR	Action by VGE	VGE	Action by WRC-95
2180		S20.1	
2181		S20.2	
2182	MOD	S20.3	
2183		S20.4	
2184		S20.5	
2185	(MOD)	S20.6	
2186 - 2200	SUP	--	
2201		S20.7	
2201A	SUP	--	
2202	SUP	--	
2202A - 2202E	SUP	--	
2203	SUP	--	
2204		S20.8	
2205 - 2211	SUP	--	
2212		S20.9	
2213 - 2214	SUP	--	
2215		S20.10	
2216 - 2218	SUP	--	
2219		S20.11	
2220 - 2221	SUP	--	
2222		S20.12	
2223 - 2224	SUP	--	
2225		S20.13	
2226 - 2229	SUP	--	
2230		S20.14	
2231 - 2236	SUP	--	
2236A	ADD	S20.15	MOD
2237	MOD	S20.16	
2238 - 2245	SUP	--	
2246		S20.17	
2247 - 2500 not allocated			
FOOTNOTES			
2190.1	SUP	--	
2202B.1	SUP	--	

ARTICLE S25 - Amateur Services

RR	Action by VGE	VGE	Action by WRC-95
2731		S25.1	
2732		S25.2	
2733		S25.3	
2734		S25.4	
2735		S25.5	
2736		S25.6	
2737		S25.7	
2738	(MOD)	S25.8	
2739		S25.9	
2740		S25.10	
2741	(MOD)	S25.11	
2742 - 2766 not allocated			

ARTICLE S20

Service Documents

NOC **S20.1 to S20.14**

MOD **S20.15** § 11. The form, the content and the periodicity of each publication shall be decided by the Bureau in consultation with administrations and the international organizations concerned.

NOC **S20.16 to S20.17**

ARTICLE S25

Amateur Services

NOC **S25.1 to S25.11**

ADD

APPENDIX S42

Table of Allocation of International Call Sign Series

(See Article S19)

Call Sign Series	Allocated to
AAA-ALZ	United States of America
AMA-AOZ	Spain
APA-ASZ	Pakistan (Islamic Republic of)
ATA-AWZ	India (Republic of)
AXA-AXZ	Australia
AYA-AZZ	Argentine Republic
A2A-A2Z	Botswana (Republic of)
A3A-A3Z	Tonga (Kingdom of)
A4A-A4Z	Oman (Sultanate of)
A5A-A5Z	Bhutan (Kingdom of)
A6A-A6Z	United Arab Emirates
A7A-A7Z	Qatar (State of)
A8A-A8Z	Liberia (Republic of)
A9A-A9Z	Bahrain (State of)
BAA-BZZ	China (People's Republic of)
CAA-CEZ	Chile
CFA-CKZ	Canada
CLA-CMZ	Cuba
CNA-CNZ	Morocco (Kingdom of)
COA-COZ	Cuba
CPA-CPZ	Bolivia (Republic of)
CQA-CUZ	Portugal
CVA-CXZ	Uruguay (Eastern Republic of)
CYA-CZZ	Canada
C2A-C2Z	Nauru (Republic of)
C3A-C3Z	Andorra (Principality of)
C4A-C4Z	Cyprus (Republic of)
C5A-C5Z	Gambia (Republic of the)

Call Sign Series	Allocated to
C6A-C6Z	Bahamas (Commonwealth of the)
*C7A-C7Z	World Meteorological Organization
C8A-C9Z	Mozambique (Republic of)
DAA-DRZ	Germany (Federal Republic of)
DSA-DTZ	Korea (Republic of)
DUA-DZZ	Philippines (Republic of the)
D2A-D3Z	Angola (Republic of)
D4A-D4Z	Cape Verde (Republic of)
D5A-D5Z	Liberia (Republic of)
D6A-D6Z	Comoros (Islamic Federal Republic of the)
D7A-D9Z	Korea (Republic of)
EAA-EHZ	Spain
EIA-EJZ	Ireland
EKA-EKZ	Armenia (Republic of)
ELA-ELZ	Liberia (Republic of)
EMA-EOZ	Ukraine
EPA-EQZ	Iran (Islamic Republic of)
ERA-ERZ	Moldova (Republic of)
ESA-ESZ	Estonia (Republic of)
ETA-ETZ	Ethiopia
EUA-EWZ	Belarus (Republic of)
EXA-EXZ	Kyrgyz Republic
EYA-EYZ	Tajikistan (Republic of)
EZA-EZZ	Turkmenistan
E2A-E2Z	Thailand
E3A-E3Z	Eritrea
FAA-FZZ	France
GAA-GZZ	United Kingdom of Great Britain and Northern Ireland
HAA-HAZ	Hungary (Republic of)
HBA-HBZ	Switzerland (Confederation of)

Call Sign Series	Allocated to
HCA-HDZ	Ecuador
HEA-HEZ	Switzerland (Confederation of)
HFA-HFZ	Poland (Republic of)
HGA-HGZ	Hungary (Republic of)
HHA-HHZ	Haiti (Republic of)
HIA-HIZ	Dominican Republic
HJA-HKZ	Colombia (Republic of)
HLA-HLZ	Korea (Republic of)
HMA-HMZ	Democratic People's Republic of Korea
HNA-HNZ	Iraq (Republic of)
HOA-HPZ	Panama (Republic of)
HQA-HRZ	Honduras (Republic of)
HSA-HSZ	Thailand
HTA-HTZ	Nicaragua
HUA-HUZ	El Salvador (Republic of)
HVA-HVZ	Vatican City State
HWA-HYZ	France
HZA-HZZ	Saudi Arabia (Kingdom of)
H2A-H2Z	Cyprus (Republic of)
H3A-H3Z	Panama (Republic of)
H4A-H4Z	Solomon Islands
H6A-H7Z	Nicaragua
H8A-H9Z	Panama (Republic of)
IAA-IZZ	Italy
JAA-JSZ	Japan
JTA-JVZ	Mongolia
JWA-JXZ	Norway
JYA-JYZ	Jordan (Hashemite Kingdom of)
JZA-JZZ	Indonesia (Republic of)
J2A-J2Z	Djibouti (Republic of)
J3A-J3Z	Grenada
J4A-J4Z	Greece

Call Sign Series	Allocated to
J5A-J5Z	Guinea-Bissau (Republic of)
J6A-J6Z	Saint Lucia
J7A-J7Z	Dominica (Commonwealth of)
J8A-J8Z	Saint Vincent and the Grenadines
KAA-KZZ	United States of America
LAA-LNZ	Norway
LOA-LWZ	Argentine Republic
LXA-LXZ	Luxembourg
LYA-LYZ	Lithuania (Republic of)
LZA-LZZ	Bulgaria (Republic of)
L2A-L9Z	Argentine Republic
MAA-MZZ	United Kingdom of Great Britain and Northern Ireland
NAA-NZZ	United States of America
OAA-OCZ	Peru
ODA-ODZ	Lebanon
OEA-OEZ	Austria
OFA-OJZ	Finland
OKA-OLZ	Czech Republic
OMA-OMZ	Slovak Republic
ONA-OTZ	Belgium
OUA-OZZ	Denmark
PAA-PIZ	Netherlands (Kingdom of the)
PJA-PJZ	Netherlands Antilles
PKA-POZ	Indonesia (Republic of)
PPA-PYZ	Brazil (Federative Republic of)
PZA-PZZ	Suriname (Republic of)
P2A-P2Z	Papua New Guinea

Call Sign Series	Allocated to
P3A-P3Z	Cyprus (Republic of)
P4A-P4Z	Aruba
P5A-P9Z	Democratic People's Republic of Korea
RAA-RZZ	Russian Federation
SAA-SMZ	Sweden
SNA-SRZ	Poland (Republic of)
SSA-SSM	Egypt (Arab Republic of)
SSN-SSZ	Sudan (Republic of the)
STA-STZ	Sudan (Republic of the)
SUA-SUZ	Egypt (Arab Republic of)
SVA-SZZ	Greece
S2A-S3Z	Bangladesh (People's Republic of)
S5A-S5Z	Slovenia (Republic of)
S6A-S6Z	Singapore (Republic of)
S7A-S7Z	Seychelles (Republic of)
S9A-S9Z	Sao Tome and Principe (Democratic Republic of)
TAA-TCZ	Turkey
TDA-TDZ	Guatemala (Republic of)
TEA-TEZ	Costa Rica
TFA-TFZ	Iceland
TGA-TGZ	Guatemala (Republic of)
THA-THZ	France
TIA-TIZ	Costa Rica
TJA-TJZ	Cameroon (Republic of)
TKA-TKZ	France
TLA-TLZ	Central African Republic
TMA-TMZ	France
TNA-TNZ	Congo (Republic of the)
TOA-TQZ	France
TRA-TRZ	Gabonese Republic
TSA-TSZ	Tunisia
TTA-TTZ	Chad (Republic of)

Call Sign Series	Allocated to
TUA-TUZ	Côte d'Ivoire (Republic of)
TVA-TXZ	France
TYA-TYZ	Benin (Republic of)
TZA-TZZ	Mali (Republic of)
T2A-T2Z	Tuvalu
T3A-T3Z	Kiribati (Republic of)
T4A-T4Z	Cuba
T5A-T5Z	Somali Democratic Republic
T6A-T6Z	Afghanistan (Islamic State of)
T7A-T7Z	San Marino (Republic of)
T8A-T8Z	Palau (Republic of)
T9A-T9Z	Bosnia and Herzegovina (Republic of)
UAA-UIZ	Russian Federation
UJA-UMZ	Uzbekistan (Republic of)
UNA-UQZ	Kazakhstan (Republic of)
URA-UTZ	Ukraine
UUA-UZZ	Ukraine
VAA-VGZ	Canada
VHA-VNZ	Australia
VOA-VOZ	Canada
VPA-VSZ	United Kingdom of Great Britain and Northern Ireland
VTA-VWZ	India (Republic of)
VXA-VYZ	Canada
VZA-VZZ	Australia
V2A-V2Z	Antigua and Barbuda
V3A-V3Z	Belize
V4A-V4Z	Saint Kitts and Nevis
V5A-V5Z	Namibia (Republic of)
V6A-V6Z	Micronesia (Federated States of)
V7A-V7Z	Marshall Islands (Republic of the)

Call Sign Series	Allocated to
V8A-V8Z	Brunei Darussalam
WAA-WZZ	United States of America
XAA-XIZ	Mexico
XJA-XOZ	Canada
XPA-XPZ	Denmark
XQA-XRZ	Chile
XSA-XSZ	China (People's Republic of)
XTA-XTZ	Burkina Faso
XUA-XUZ	Cambodia (Kingdom of)
XVA-XVZ	Viet Nam (Socialist Republic of)
XWA-XWZ	Lao People's Democratic Republic
XXA-XXZ	Portugal
XYA-XZZ	Myanmar (Union of)
YAA-YAZ	Afghanistan (Islamic State of)
YBA-YHZ	Indonesia (Republic of)
YIA-YIZ	Iraq (Republic of)
YJA-YJZ	Vanuatu (Republic of)
YKA-YKZ	Syrian Arab Republic
YLA-YLZ	Latvia (Republic of)
YMA-YMZ	Turkey
YNA-YNZ	Nicaragua
YOA-YRZ	Romania
YSA-YSZ	El Salvador (Republic of)
YTA-YUZ	Yugoslavia (Federal Republic of)
YVA-YYZ	Venezuela (Republic of)
YZA-YZZ	Yugoslavia (Federal Republic of)
Y2A-Y9Z	Germany (Federal Republic of)
ZAA-ZAZ	Albania (Republic of)
ZBA-ZJZ	United Kingdom of Great Britain and Northern Ireland
ZKA-ZMZ	New Zealand

Call Sign Series	Allocated to
ZNA-ZOZ	United Kingdom of Great Britain and Northern Ireland
ZPA-ZPZ	Paraguay (Republic of)
ZQA-ZQZ	United Kingdom of Great Britain and Northern Ireland
ZRA-ZUZ	South Africa (Republic of)
ZVA-ZZZ	Brazil (Federative Republic of)
Z2A-Z2Z	Zimbabwe (Republic of)
Z3A-Z3Z	The Former Yugoslav Republic of Macedonia
2AA-2ZZ	United Kingdom of Great Britain and Northern Ireland
3AA-3AZ	Monaco (Principality of)
3BA-3BZ	Mauritius (Republic of)
3CA-3CZ	Equatorial Guinea (Republic of)
3DA-3DM	Swaziland (Kingdom of)
3DN-3DZ	Fiji (Republic of)
3EA-3FZ	Panama (Republic of)
3GA-3GZ	Chile
3HA-3UZ	China (People's Republic of)
3VA-3VZ	Tunisia
3WA-3WZ	Viet Nam (Socialist Republic of)
3XA-3XZ	Guinea (Republic of)
3YA-3YZ	Norway
3ZA-3ZZ	Poland (Republic of)
4AA-4CZ	Mexico
4DA-4IZ	Philippines (Republic of the)
4JA-4KZ	Azerbaijani Republic
4LA-4LZ	Georgia (Republic of)
4MA-4MZ	Venezuela (Republic of)
4NA-4OZ	Yugoslavia (Federal Republic of)
4PA-4SZ	Sri Lanka (Democratic Socialist Republic of)
4TA-4TZ	Peru
*4UA-4UZ	United Nations

Call Sign Series	Allocated to
4VA-4VZ	Haiti (Republic of)
4XA-4XZ	Israel (State of)
*4YA-4YZ	International Civil Aviation Organization
4ZA-4ZZ	Israel (State of)
5AA-5AZ	Libya (Socialist People's Libyan Arab Jamahiriya)
5BA-5BZ	Cyprus (Republic of)
5CA-5GZ	Morocco (Kingdom of)
5HA-5IZ	Tanzania (United Republic of)
5JA-5KZ	Colombia (Republic of)
5LA-5MZ	Liberia (Republic of)
5NA-5OZ	Nigeria (Federal Republic of)
5PA-5QZ	Denmark
5RA-5SZ	Madagascar (Republic of)
5TA-5TZ	Mauritania (Islamic Republic of)
5UA-5UZ	Niger (Republic of the)
5VA-5VZ	Togolese Republic
5WA-5WZ	Western Samoa (Independent State of)
5XA-5XZ	Uganda (Republic of)
5YA-5ZZ	Kenya (Republic of)
6AA-6BZ	Egypt (Arab Republic of)
6CA-6CZ	Syrian Arab Republic
6DA-6JZ	Mexico
6KA-6NZ	Korea (Republic of)
6OA-6OZ	Somali Democratic Republic
6PA-6SZ	Pakistan (Islamic Republic of)
6TA-6UZ	Sudan (Republic of the)
6VA-6WZ	Senegal (Republic of)
6XA-6XZ	Madagascar (Republic of)
6YA-6YZ	Jamaica

Call Sign Series	Allocated to
6ZA-6ZZ	Liberia (Republic of)
7AA-7IZ	Indonesia (Republic of)
7JA-7NZ	Japan
7OA-7OZ	Yemen (Republic of)
7PA-7PZ	Lesotho (Kingdom of)
7QA-7QZ	Malawi
7RA-7RZ	Algeria (People's Democratic Republic of)
7SA-7SZ	Sweden
7TA-7YZ	Algeria (People's Democratic Republic of)
7ZA-7ZZ	Saudi Arabia (Kingdom of)
8AA-8IZ	Indonesia (Republic of)
8JA-8NZ	Japan
8OA-8OZ	Botswana (Republic of)
8PA-8PZ	Barbados
8QA-8QZ	Maldives (Republic of)
8RA-8RZ	Guyana
8SA-8SZ	Sweden
8TA-8YZ	India (Republic of)
8ZA-8ZZ	Saudi Arabia (Kingdom of)
9AA-9AZ	Croatia (Republic of)
9BA-9DZ	Iran (Islamic Republic of)
9EA-9FZ	Ethiopia
9GA-9GZ	Ghana
9HA-9HZ	Malta
9IA-9JZ	Zambia (Republic of)
9KA-9KZ	Kuwait (State of)
9LA-9LZ	Sierra Leone
9MA-9MZ	Malaysia
9NA-9NZ	Nepal

Call Sign Series	Allocated to
9OA-9TZ	Zaire (Republic of)
9UA-9UZ	Burundi (Republic of)
9VA-9VZ	Singapore (Republic of)
9WA-9WZ	Malaysia
9XA-9XZ	Rwandese Republic
9YA-9ZZ	Trinidad and Tobago

* Series allocated to an international organization.

DRAFT RESOLUTION COM4-2

SIMPLIFICATION OF ARTICLE 17 OF THE RADIO REGULATIONS

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that the World Administrative Radio Conference, Geneva 1979 (WARC-79) allocated new HF bands to the broadcasting service and that the use of this additional spectrum was subject to provisions to be established by a future WARC for the planning of HF bands allocated to the broadcasting service;

b) that the World Administrative Radio Conference (Malaga-Torremolinos, 1992) (WARC-92), allocated further additional HF bands to the broadcasting service and that the use of this additional spectrum was subject to the planning to be drawn up by a competent WARC;

c) that the efforts to develop a HFBC planning system have not been successful;

d) that the Voluntary Group of Experts (VGE) have made proposals to WRC-95 to simplify the existing Article **17** procedure;

e) that the agenda for WRC-95 invites administrations when preparing and submitting their proposals for WRC-95 to base them as far as practicable on the recommended texts in the final report of the VGE;

recognizing

a) that the preliminary agenda for WRC-97 includes examination of, and taking necessary decisions on, the question of the HF bands allocated to the broadcasting service in the light of developments to date and the results of the studies carried out by the Radiocommunication Sector;

b) that in response to Resolution **523 (WARC-92)** and ITU-R Question 212/10, ITU-R is studying alternative planning procedures and the associated technical parameters for HF broadcasting;

c) that ITU-R TG 10/5 submitted an interim report to CPM-95 and will submit a final report to CPM-97 for consideration at WRC-97;

resolves

that consideration of the simplification of Article **17** as proposed in Article **S12** of the VGE Report and annexed to this Resolution, be deferred to WRC-97 and hence Article 17 shall continue to be applied as at present;

instructs the Director of the Radiocommunication Bureau

[to make the necessary arrangements for the Conference Preparatory Meeting to include in its report to WRC-97 the conclusions of the work of ITU-R TG 10/5 and any consequential amendments to the proposed Article **S12** of the VGE Report.]

ANNEX TO RESOLUTION COM4-2

PROPOSED ARTICLE S12 OF VGE

Planning and Procedure for the Bands Allocated Exclusively to the Broadcasting Service Between 5 950 kHz and 26 100 kHz

Section I. Introduction

S12.1 When applying the procedure of this Article administrations are urged to comply to the maximum possible extent with the principles contained in Section II of this Article.[VGE Note 12]

Section II. Planning Principles

S12.2 (1) The planning of the high frequency bands allocated to the broadcasting service shall be based on the principle of equal rights of all

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VGE Note 12 The VGE has noted Resolution 9 of the APP-92 requesting the Radiocommunication Assembly (WRC-93), inter alia, "to establish the work programme and the Study Groups of the Radiocommunication Sector, including any future work on HF Broadcasting, taking account of any IFRB report on the application of Resolution 523 of the WARC-92." Upon the assumption that this will lead to longer term action by the Union, the scope for action by the VGE to simplify the present Article 17 of the Radio Regulations relating to HFBC is necessarily limited.

The VGE has therefore limited its action to the "Consultation Procedure" in Sections IV to VIII of Article 17, leaving it to the WRC-95 to decide upon Sections I to III, which contain principles and other material relating to the planning of HFBC. Within these limitations the VGE proposes only that the number of seasons each year be reduced from four to two; that the prior coordination of schedules be encouraged but without disadvantage to uncoordinated schedules; that as a result of the reduced number of incompatibilities the technical work of the Bureau can be reduced; and that as an economy measure the publication of the "Final Schedule" can be abandoned, using the Weekly Circular to update the "Tentative Schedule". The results of this work are condensed in the draft of Article S12.

countries, large or small, to equitable access to these bands. In planning, an attempt shall also be made to achieve efficient use of these frequency bands, account being taken of the technical and economic constraints that may exist in certain cases. On the basis of the foregoing, the following planning principles shall be applied.

S12.3 (2) All the broadcasting requirements, current or future, formulated by the administrations, shall be taken into account and be treated on an equitable basis, so as to guarantee the equality of rights referred to in No. **S12.2**, and to enable each administration to provide a satisfactory service.

S12.4 (3) All broadcasting requirements, national[1] and international, shall be treated on an equal basis, with due consideration of the differences between these two kinds of broadcasting requirements.

S12.4.1 [1] An HF broadcasting use is considered as being for the purposes of national coverage when the transmitting station and its associated required service area are both located within the territory of the same country.

S12.5 (4) In the planning procedure, an attempt shall be made to ensure, as far as practicable, continuity of use of a frequency or of a frequency band. However, such continuity should not prevent equal and technically optimum treatment of all broadcasting requirements.

S12.6 (5) The periodical planning procedure shall be based solely on the broadcasting requirements expected to become operational during the planning period. It shall furthermore be flexible in order to take into account new broadcasting requirements and modifications to the existing broadcasting requirements.

S12.7 (6) The planning procedure shall be based on double-sideband emissions. Single-sideband emissions which administrations might wish to make may, however, be permitted in place of planned double-sideband emissions, provided that the level of interference caused to double-sideband emissions is not increased.

S12.8 (7) For efficient spectrum use, only one frequency should be used, whenever possible, to meet a given broadcasting requirement in a given required service area; in any case the number of frequencies used will be the minimum necessary to provide a specified quality of reception.

S12.9 (8) Those broadcasting requirements for which the agreed minimum usable field strength is not ensured at any point of the required service area, through lack of the requisite technical facilities, can obtain proportionally reduced protection against interference.

S12.10 (9) In the first stage of the equitable application of a new planning procedure, an attempt will be made to include the maximum number of submitted requirements achieving the desired quality level. The remaining requirements will be processed on the understanding that lower quality levels would be acceptable.

S12.11 (10) The planning method shall satisfy, on an equal basis, a minimum of the broadcasting requirements submitted by administrations with the desired performance. Special consideration shall be given to the requirements of administrations which, in the first instance, are unable to achieve this performance.

Section III. Planning System

S12.12 The Planning System developed in accordance with the principles set out in Section **II** of this Article and the decisions of the World Administrative Radio Conference for the Planning of the HF Bands Allocated to the Broadcasting Service (Geneva, 1987), shall be improved and tested in accordance with the instructions contained in Resolution **511 (HFBC-87)** for adoption, if acceptable to a competent world administrative radio conference.

Section IV. Consultation Procedure

S12.13 Twice yearly administrations shall submit their projected seasonal broadcasting schedules in the relevant frequency bands to the Bureau. Those schedules shall cover the following seasons and shall be implemented at 0100 UTC on the first Sunday of each period concerned:

S12.14 a) March schedule - March to August inclusive;

S12.15 b) September schedule - September to February inclusive.

S12.16 Administrations may, if they wish, maintain four periods for their annual patterns of broadcasting, but are urged to do so within the periods indicated below, provided that this is made clear in their projected schedules at the time of their submission to the Bureau. These schedules shall be implemented at 0001 UTC on the first Sunday of each period concerned:

S12.17 a) March Schedule - March and April

S12.18 b) May Schedule - May, June, July and August

S12.19 c) September Schedule - September and October

S12.20 d) November Schedule - November, December, January and February.

S12.21 Administrations may include in their schedules assignments up to one year in advance of their use provided that the characteristics are not expected to change during that period.

S12.22 The frequencies in the schedules should be those that will be used during the season concerned, and they should be the minimum number required to provide satisfactory reception of the programmes in each of the areas and for each of the periods intended. To the maximum possible extent in each schedule the frequencies to be used in each reception area should be repeated from season to season.

S12.23 Administrations are encouraged to coordinate their schedules with other administrations as far as possible prior to submission. An administration may submit on behalf of a group of administrations their coordinated schedules the frequencies of which shall however have no priority for use over those submitted by other administrations.

S12.24 The closing dates for receipt by the Bureau of the schedules relating to the two seasons mentioned in No. **S12.13** and the four seasons mentioned in No. **S12.16** shall be established and published by the Bureau.

S12.25 The schedules shall be submitted with the relevant data contained in Appendix **S4** in accordance with the practices recommended in the Rules of Procedure.

S12.26 Upon receipt of the schedules the Bureau shall, in accordance with the Rules of Procedure, consolidate them, validate the data where necessary, identify such incompatibilities as it may be able, and prepare the High Frequency Broadcasting Schedule (the Schedule). This Schedule shall include all assignments where administrations gave no alternatives, the selections made by the Bureau from any alternatives given, and the frequencies selected by the Bureau in cases where the need for its assistance was indicated by their intentional omission from the individual schedules.

S12.27 The Schedule shall be published at least two months before the start of each of the two seasons in No. **S12.13**.

S12.28 Administrations should consider the Schedule and, before or during the season, they should, as quickly as possible, inform the Bureau of any changes they intend to make from their original submissions and the reasons for those changes. The Bureau shall publish this information regularly and up-date the Schedule as appropriate.

S12.29 After each season the Bureau shall consult the administrations concerned, the actual frequencies used and shall periodically publish its results to administrations.

S12.30 In a case of harmful interference, involving the application of the provisions of Article **S15**, administrations are urged to exercise the utmost goodwill and mutual cooperating taking into account all the relevant technical and operational factors of the case.

DRAFT RECOMMENDATION COM4-B

PROCEDURES FOR MODIFICATION OF A FREQUENCY ALLOTMENT OR ASSIGNMENT PLAN

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that preceding conferences have developed plans;

b) that these plans may relate to assignments or to allotments;

c) that assignment and allotment plans fundamentally differ as to the complexity of their maintenance;

d) that, in addition to worldwide plans, regional plans exist catering for specialized needs in particular parts of the world;

considering in particular

a) that the Voluntary Group of Experts (VGE) is to be commended for undertaking the development of a procedure (Article **S10**) with a view to applying it in the case of a modification to any type of plan;

b) the difficulties presently faced by the administrations which have to be involved in a large number of different procedures, and the need to reduce the number and complexity of such procedures;

c) that the question of universal applicability of one procedure requires greater consideration than most;

noting

a) that VGE Recommendation 2/5 foresaw the possible treatment of that Recommendation at WRC-97 with respect to its possible applicability to the world plans of Appendices **30** and **30A**;

b) that the VGE foresaw the need to decide upon Recommendation 2/5 before treating the applicability of Article **S10**;

c) that in the case of Appendices **30/30A**, Article **S10** contained provisions that do not currently exist in these Appendices;

d) that, associated with Article **S10** in the VGE Report is Appendix **S6**, which would have to be developed further if Article **S10** was to apply to Appendices **25**, **30** and **30A**;

e) that the current modification procedures for Appendices **30** and **30A** have been applied, generally without problems, and that Article **S10**, if kept unchanged, would create unnecessary delays and complexities;

f) that this Conference has developed a modified version of Article **S10**, aimed at resolving the difficulties mentioned above, as included in Annex 1;

g) that the modification procedure for Appendix **25**, as contained in Article **16** of the Radio Regulations, has been satisfactorily applied for several years;

h) that this Conference, in reviewing VGE Recommendation 2/4, has decided to incorporate the existing modification procedure for Appendix **25** within that Appendix, thereby rendering it self-contained for simplification of use;

i) that this Conference, in reviewing Recommendation 2/5, has decided to defer to a future world radiocommunication conference the question of whether Article **S10** should be applied to the world plans of Appendices **30** and **30A**;

j) that, consequential to the above and with regard to VGE Recommendation 2/6, no further action is required on Appendix **S6**, and the provisions of Appendices **30** and **30A** shall continue in force;

k) that this Conference, in reviewing VGE Recommendation 2/7, has decided not to modify Appendices **26**, **27** and **30B**;

l) that the matter of one universal modification procedure for all plans, or all subsequent plans, has not matured for a decision at this Conference;

further noting

that WRC-97 is to review Appendices **30** and **30A**;

recommends

that the plan modification procedure as contained in the Annex to this Recommendation, possibly modified as a result of the *further requests*, be considered by future regional radio conferences or world radio conferences for possible application for the modification of the plans;

further requests

the ITU-R to continue studying the application of this Annex to Appendices **30/30A** and Appendix **S6**.

ANNEX

(to draft Recommendation COM4-B: Article T10)

ARTICLE T10

Procedure for Modification of a Frequency Allotment or Assignment Plan

T10.1

For the frequency allotment or assignment Plans contained in Appendices to these Regulations, the Bureau shall maintain the master copies of the Plans, incorporating any agreed modifications, and shall provide such copies in an appropriate form for publication by the Secretary-General when justified by circumstances.

T10.2

Before notifying any assignment which is subject to a plan the administration shall ensure that it is in conformity with the Plan.[1] If the assignment is not in conformity the administration shall apply the procedure[2] to effect an appropriate modification to the Plan by seeking the agreement of the administrations, which are identified in accordance with Appendix **S6**, as having planned allotments or assignments which may be affected by the proposed modification.

T10.2.1

1 An assignment is subject to a plan when it is for a station in a radiocommunication service and in a frequency band and in a geographical area covered by a plan. An assignment is in conformity with the Plan, if it appears in the Plan, or corresponds to an allotment in the Plan, or if the procedure for modification of the Plan has been successfully applied.

T10.2.2

2 Where an existing Plan contains a supplementary or alternative procedure that procedure shall continue to be applied.

T10.3

A proposed modification to a plan may consist of:

T10.4

a) a change in the characteristics of an entry in the Plan; or

T10.5

b) the inclusion of a new entry in the Plan; or

T10.6

c) the cancellation of an entry in the Plan.

T10.7 Before an administration proposes to include in the Plan under the provisions of T10.5, a new frequency assignment to a space station or to include in the Plan new frequency assignments to a space station whose orbital position is not designated in the Plan for this administration, all the assignments to the service area involved should normally have been brought into service or have been notified to the Bureau in accordance with the relevant provisions of the Plan. Should this not be the case, the administration concerned shall inform the Bureau of the reasons therefor.

T 10.8 For the purpose of effecting a modification to a plan, the administration concerned shall, having regard to the relevant provisions associated with the Plan, send to the Bureau the relevant information listed in Appendix **S4**. This action shall be taken within the time limits specified in the relevant appendix.

T 10.9 The Bureau, upon receiving the information under No. **T10.8:**

T 10.10

a) determine in accordance with Appendix **S6** the administrations whose allotments or assignments are considered to be affected;

T 10.11

b) include their names in the information received under No. **T10.8;**

T 10.12

c) publish the complete information in its Weekly Circular;

T10.13

d) promptly inform all administrations affected of its actions and the results of its calculations, drawing their attention to the relevant Weekly Circular.

T 10.14 Following receipt of the Weekly Circular, an administration believing that it should have been included in the list of administrations whose services are considered to be affected may, giving the technical reasons for so doing, request the Bureau to include its name. The Bureau shall study this request on the basis of Appendix **S6** and the relevant rules of Procedure. In the event that the request to be included in the list of affected administrations is accepted by the Bureau, an addendum to the publication mentioned in **T10.12** shall be published by the Bureau. Should the Bureau reach a negative conclusion, it shall inform the administrations concerned.

T 10.15 The administration seeking agreement and those with which it is sought, or the Bureau, may request any additional information they consider necessary. The Bureau shall be sent copies of any such requests and the replies.

T 10.16 Comments from administrations on the information published pursuant to **T10.12** should be sent either directly to the administration proposing the modification or through the Bureau. In any event the Bureau shall be informed that comments have been made. The Bureau shall inform the administration proposing the modification of the comments that have been made.

T 10.17 An administration which has not notified its comments either to the administration seeking agreement or to the Bureau within a period of four months following the date of the weekly circular referred to in **T 10.12** shall be understood to have agreed to the proposed modification. This time-limit may be extended by up to three months for an administration that has requested additional information under **T10.15** or for an administration that has requested the assistance of the Bureau under **T10.18.** In the latter case the Bureau shall inform the administrations concerned of this request.

T10.18 Any administration involved in this procedure may request the assistance of the Bureau in seeking agreement:

T10.19

a) in applying any step of this procedure;

T10.20

b) in carrying out any technical study necessary for the application of this procedure.

T10.21 If, following action by the Bureau in response to a request for assistance under No. **T10.18** the Bureau receives no reply or decision within three months of its request for a decision in the matter from an administration whose agreement has been sought, the administration which requested the agreement shall be deemed to have fulfilled its obligations under this procedure. It shall also be deemed that the administration which did not give its decision has undertaken:

T10.22

That no complaint will be made in respect of harmful interference affecting the services rendered by its stations which may be caused by the use of the assignment in conformity with the proposed modificationZ to the Plan, and

T 10.23 If no comments have been received on the expiry of the periods specified in **T 10.17,** or if agreement has been reached with the administrations which have made comments and with which agreement is necessary, or if the provisions of **T 10.21** have been applied, the administration proposing the modification shall inform the Bureau, indicating the final characteristics of the frequency assignment, together with the names of the administrations with which agreement has been reached.
T10.24 The Bureau shall publish in a special section of its weekly circular the information received under **T 10.23** together with the names of any administrations with which the provisions of this Article have been successfully applied. The Bureau shall then up-date the master copy of the Plan. The new or modified entry in the Plan shall then have the same status as others appearing in the Plan and shall be considered as being in conformity with the Plan.
T10.25 The relevant provisions of the Plan shall be applied when frequency assignments are notified to the Bureau.
T10.26 If no agreement is reached between the administrations concerned the Bureau shall carry out any study that may be requested by those administrations. The Bureau shall inform them of the results and of any recommendations it may be able to offer for a solution of the problem.
T10.27 When a proposed modification to a plan involves developing countries, administrations shall seek all practicable solutions conducive to the economic development of the radiocommunications systems of those countries.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 179-E
7 November 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4

Viet Nam (Socialist Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

The Socialist Republic of Viet Nam proposes the inclusion of its name in the following footnote.

VTN/179/1

MOD 608C
S5.221 Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from stations of the fixed or mobile services in the following countries: Algeria, the Federal Republic of Germany, Saudi Arabia, Australia, Austria, Bangladesh, Belarus, Belgium, Brunei Darussalam, Bulgaria, Cameroon, Canada, Cyprus, Colombia, Congo, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Spain, Ethiopia, the Russian Federation, Finland, France, Ghana, Greece, Honduras, Hungary, Iran, Ireland, Iceland, Israel, Italy, Japan, Jordan, Kenya, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Mozambique, Namibia, Norway, New Zealand, Oman, Pakistan, Panama, Papua New Guinea, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Romania, the United Kingdom, Singapore, Sri Lanka, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, the Czech and Slovak Federal Republic, Thailand, Tunisia, Turkey, Ukraine, Viet Nam, Yemen and Yugoslavia that operate in accordance with the Table of Frequency Allocations.

BLUE PAGES

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 180-E
7 November 1995

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

B.1 **PLENARY MEETING**

FIRST SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for **first reading**:

Source	**Document**	**Title**
COM 4	155	Preamble Articles S1 to S3 Article 6 Articles S15 to S18 Resolution COM4-1 Recommendation COM4-A

A.-M. NEBES
Chairman of Committee 6

Annex: 28 pages

NOTE BY COMMITTEE 6

At its third meeting on Thursday, 2 November 1995, Committee 1 considered the matter of publication of the Final Acts of WRC-95 and transmitted a number of guidelines to Committee 6 in this regard:

1) The Final Acts will be prepared on the basis of the existing Radio Regulations (RR).

2) To facilitate the referencing of the changes introduced in turn by the VGE and by this Conference with respect to the RR, a comparative table is published in the **blue** documents (texts submitted to the Plenary Meeting for **first reading**).

3) For each Article[1], this table shows the correspondence between the RR provisions and the VGE Report Part C provisions. The following are examples of the different possible cases and the way in which they are presented:

- Where the VGE Report makes no change of substance to an RR provision and the VGE Report provision has been adopted unchanged by a Committee, the text of the relevant RR provision **is not reproduced**.

Example:

RR	VGE proposal	VGE Report	WRC-95 decision
78		S1.83	

NOTE – A blank box in the table corresponds to a "NOC".

- Texts to which an editorial change or numbering change has been made **are not reproduced**, but are identified in the table by the symbol "(MOD)"

Example:

RR	VGE proposal	VGE Report	WRC-95 decision
4	(MOD)	S1.3	

NOTE – A blank box in the table corresponds to a "NOC".

- If any change of substance to an RR provision has been made by the VGE or if the VGE Report provision has been changed by a Committee, the table is presented as follows and the text is published together with the usual marginal notation (NOC, MOD, etc.).

Example:

RR	VGE proposal	VGE Report	WRC-95 decision
305	MOD	S3.7	MOD
379	MOD	S6.6	
2023		S18.4	MOD

NOTE – A blank box in the table corresponds to a "NOC".

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[1] Does not apply to provisions relating to procedures, which are reproduced **in extenso**.

- Where the VGE has proposed deleting an RR provision and that deletion has been confirmed by this Conference, the texts are not reproduced and the table is presented as follows:

Example:

RR	VGE proposal	VGE Report	WRC-95 decision
23	SUP	- -	

NOTE – A blank box in the table corresponds to a "NOC".

4) Summary of symbols used

MOD Substantial change

(MOD) Editorial change

SUP Deletion of a provision

SUP* Transfer elsewhere of an RR provision (appears at the point from which the provision has been transferred)

(ADD) Transfer of a provision from elsewhere (appears at the point to which the provision has been transferred)

ADD Addition of a new provision

NOC No change

5) **Pink** documents (texts submitted to the Plenary Meeting for **second reading**) will contain only those texts which have been modified by the Plenary on first reading.

ARTICLE S0 - PREAMBLE

RR	VGE proposal	VGE Report	WRC-95 decision
	ADD	S0.1	
	ADD	S0.2	(MOD)
	ADD	S0.3	(MOD)
	ADD	S0.4	(MOD)
	ADD	S0.5	(MOD)
	ADD	S0.6	(MOD)
	ADD	S0.7	
	ADD	S0.8	(MOD)
	ADD	S0.9	
	ADD	S0.10	(MOD)
1	MOD	S0.11	

RADIO REGULATIONS

PREAMBLE

NOC S0.1 These Regulations are founded on the following principles:

(MOD) S0.2 Administrations shall endeavour to limit the number of frequencies and the spectrum used to the minimum essential to provide in a satisfactory manner the necessary services. To that end, they shall endeavour to apply the latest technical advances as soon as possible. (No. **195** of the Constitution of the International Telecommunication Union (Geneva, 1992))

(MOD) S0.3 In using frequency bands for radio services, administrations shall bear in mind that radio frequencies and the geostationary-satellite orbit are limited natural resources and that they must be used rationally, efficiently and economically, in conformity with the provisions of these Radio Regulations, so that countries or groups of countries may have equitable access to both, taking into account the special needs of the developing countries and the geographical situation of particular countries. (No. **196** of the Constitution)

(MOD) S0.4 All stations, whatever their purpose, must be established and operated in such a manner as not to cause harmful interference to the radio services or communications of other administrations or of recognized operating agencies, or of other duly authorized operating agencies which carry on a radio service, and which operate in accordance with the provisions of these Regulations. (No. **197** of the Constitution)

(MOD) S0.5 With a view to fulfilling the purposes of the International Telecommunication Union set out in Article 1 of the Constitution, these Regulations have the following objectives:

(MOD) S0.6 to facilitate equitable access to and the rational use of the natural resources of the radio-frequency spectrum and the geostationary-satellite orbit;

NOC S0.7 to ensure the availability and protection from harmful interference of the frequencies provided for distress and safety purposes;

(MOD) S0.8 to assist in the prevention and resolution of cases of harmful interference between the radio services of different administrations;

(MOD) S0.9 to facilitate the efficient and effective operation of all radiocommunication services;

(MOD) S0.10 to provide for and, where necessary, regulate new applications of radiocommunication technology.

NOC S0.11 The application of the provisions of these Regulations by the International Telecommunication Union does not imply the expression of any opinion whatsoever on the part of the Union concerning the sovereignty or the legal status of any country, territory or geographical area.

ARTICLE S1 - Terms and Definitions

RR	VGE proposal	VGE Report	WRC-95 decision
2	MOD	S1.1	
3	MOD	S1.2	(MOD)
4	(MOD)	S1.3	
5	(MOD)	S1.4	
6		S1.5	
7	(MOD)	S1.6	
8		S1.7	
9		S1.8	
10		S1.9	
11		S1.10	
12		S1.11	
13		S1.12	
14		S1.13	
15	MOD	S1.14	(MOD)
16		S1.15	
17		S1.16	
18		S1.17	
19		S1.18	
20		S1.19	
21		S1.20	
22		S1.21	
23	SUP	--	
24		S1.22	
25		S1.23	
26	(MOD)	S1.24	
27		S1.25	
28		S1.26	
29		S1.27	
30		S1.28	
31		S1.29	
32		S1.30	
33		S1.31	
34		S1.32	
34A		S1.33	
34B		S1.34	
35		S1.35	
35A		S1.36	
35B		S1.37	
36	(MOD)	S1.38	
37		S1.39	
38		S1.40	

RR	VGE proposal	VGE Report	WRC-95 decision
39		S1.41	
40		S1.42	
41		S1.43	
42		S1.44	
43		S1.45	
44		S1.46	
45		S1.47	
46		S1.48	
46A		S1.49	
47		S1.50	
48		S1.51	
49		S1.52	
50		S1.53	
51		S1.54	
52		S1.55	
53		S1.56	
54		S1.57	
55		S1.58	
56	(MOD)	S1.59	
57		S1.60	
58		S1.61	
59		S1.62	
60		S1.63	
61		S1.64	
62		S1.65	
63		S1.66	
64	SUP	--	
65		S1.67	
66		S1.68	
67		S1.69	
67A		S1.70	
68		S1.71	
68A		S1.72	
69		S1.73	
69A		S1.74	
70		S1.75	
71		S1.76	
72		S1.77	
73		S1.78	
74		S1.79	
75		S1.80	
76		S1.81	
77		S1.82	

RR	VGE proposal	VGE Report	WRC-95 decision
78		S1.83	
79		S1.84	
80		S1.85	
81		S1.86	
82		S1.87	
83		S1.88	
84		S1.89	
85		S1.90	
86		S1.91	
87		S1.92	
88		S1.93	
88A		S1.94	
89		S1.95	
90		S1.96	
91		S1.97	
92		S1.98	
93		S1.99	
94		S1.100	
95		S1.101	
96		S1.102	
97		S1.103	
98		S1.104	
99		S1.105	
100		S1.106	
101		S1.107	
102		S1.108	
103		S1.109	
104		S1.110	
105		S1.111	
106		S1.112	
107		S1.113	
108		S1.114	
109		S1.115	
110	(MOD)	S1.116	
111	(MOD)	S1.117	MOD
112	(MOD)	S1.118	
113		S1.119	
114		S1.120	
115		S1.121	
116	MOD	S1.122	
117	MOD	S1.123	(MOD)
118		S1.124	
119		S1.125	

RR	VGE proposal	VGE Report	WRC-95 decision
120		S1.126	
121		S1.127	
122		S1.128	
123		S1.129	
124		S1.130	
125		S1.131	
126		S1.132	
127		S1.133	
128		S1.134	
129		S1.135	
130		S1.136	
131		S1.137	
132		S1.138	
133		S1.139	
134		S1.140	
135		S1.141	
136		S1.142	
137		S1.143	
138		S1.144	
139		S1.145	
140		S1.146	
141		S1.147	
142		S1.148	
143		S1.149	
144		S1.150	
145		S1.151	
146		S1.152	
147	(MOD)	S1.153	
148		S1.154	
149		S1.155	
150	(MOD)	S1.156	
151		S1.157	
152		S1.158	
153		S1.159	
154		S1.160	
155		S1.161	
156		S1.162	
157		S1.163	
158		S1.164	
159		S1.165	
160		S1.166	
161	(MOD)	S1.167	
162		S1.168	

RR	VGE proposal	VGE Report	WRC-95 decision
163	(MOD)	S1.169	
164		S1.170	
165		S1.171	
166		S1.172	
167		S1.173	
168		S1.174	
168A		S1.175	
168B		S1.176	
169		S1.177	
170		S1.178	
171		S1.179	
172		S1.180	
173		S1.181	
174		S1.182	
175		S1.183	
176		S1.184	
177		S1.185	
178		S1.186	
179		S1.187	
180		S1.188	
181		S1.189	
182		S1.190	
183		S1.191	
184 - 207 not allocated			
FOOTNOTES			
15.1	SUP		
		S1.117.1	MOD
119.1		S1.125.1	
120.1		S1.126.1	
121.1		S1.127.1	
161.1		S1.167.1	
162.1		S1.168.1	

CHAPTER SI

Terminology and Technical Characteristics

ARTICLE S1

Terms and Definitions

Introduction

NOC S1.1 For the purposes of these Regulations, the following terms shall have the meanings defined below. These terms and definitions do not, however, necessarily apply for other purposes. Definitions identical to those contained in the Annex to the Constitution or the Annex to the Convention of the International Telecommunication Union (Geneva, 1992) are marked "(CS)" or "(CV)" respectively.

Note: If, in the text of a definition below, a term is printed in italics, this means that the term itself is defined in this Article.

Section I. General Terms

(MOD) S1.2 *Administration:* Any governmental department or service responsible for discharging the obligations undertaken in the Constitution of the International Telecommunication Union, in the Convention of the International Telecommunication Union and in the Administrative Regulations **(CS 1002)**.

NOC S1.3 to S1.13

(MOD) S1.14 *Coordinated Universal Time (UTC):* Time scale, based on the second (SI), as defined in the most recent version of ITU-R Recommendation ITU-R TF.460.

For most practical purposes associated with the Radio Regulations, UTC is equivalent to mean solar time at the prime meridian (0° longitude), formerly expressed in GMT.

NOC S1.15 to S1.116

MOD **S1.117** *Telegraphy*[1]*:* A form of telecommunication in which the transmitted information is intended to be recorded on arrival as a graphic document; the transmitted information may sometimes be presented in an alternative form or may be stored for subsequent use **(CS 1016)**.

MOD **S1.117.1** [1] *Note*: In this definition, a graphic document records information in a permanent form and is capable of being filed and consulted; it may take the form of written or printed matter or of a fixed image.

NOC **S1.118 to S1.121**

NOC **S1.122** *Facsimile:* A form of *telegraphy* for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form.

(MOD) **S1.123** *Telephony:* A form of *telecommunication* primarily intended for the exchange of information in the form of speech **(CS 1017)**.

NOC **S1.124 to S1.191**

ARTICLE S2 - Nomenclature

RR	VGE proposal	VGE Report	WRC-95 decision
208	MOD	S2.1	(MOD)
209		S2.2	
210 - 234 not allocated			
235		S2.3	
236		S2.4	
237		S2.5	
238		S2.6	
239 - 263 not allocated			
264	MOD	S2.7	
265 - 273	SUP*	Ap. S1	
274 - 298 not allocated			
FOOTNOTES			
267.1	SUP*	Ap. S1	
271.1	SUP*	Ap. S1	
272.1	SUP*	Ap. S1	
273.1	SUP*	Ap. S1	

ARTICLE S2

Nomenclature

Section I. Frequency and Wavelength Bands

(MOD) S2.1 The radio spectrum shall be subdivided into nine frequency bands, which shall be designated by progressive whole numbers in accordance with the following table. As the unit of frequency is the hertz (Hz), frequencies shall be expressed:

- in kilohertz (kHz), up to and including 3 000 kHz;
- in megahertz (MHz), above 3 MHz, up to and including 3 000 MHz;
- in gigahertz (GHz), above 3 GHz, up to and including 3 000 GHz.

However, where adherence to these provisions would introduce serious difficulties, for example in connection with the notification and registration of frequencies, the lists of frequencies and related matters, reasonable departures may be made.

Band Number	Symbols	Frequency Range (lower limit exclusive, upper limit inclusive)	Corresponding Metric Subdivision	Metric Abbreviations for the Bands
4	VLF	3 to 30 kHz	Myriametric waves	B.Mam
5	LF	30 to 300 kHz	Kilometric waves	B.km
6	MF	300 to 3 000 kHz	Hectometric waves	B.hm
7	HF	3 to 30 MHz	Decametric waves	B.dam
8	VHF	30 to 300 MHz	Metric waves	B.m
9	UHF	300 to 3 000 MHz	Decimetric waves	B.dm
10	SHF	3 to 30 GHz	Centimetric waves	B.cm
11	EHF	30 to 300 GHz	Millimetric waves	B.mm
12		300 to 3 000 GHz	Decimillimetric waves	

Note 1: "Band N" (N = band number) extends from 0.3×10^N Hz to 3×10^N Hz.

Note 2: Prefix: k = kilo (10^3), M = mega (10^6), G = giga (10^9).

NOC S2.2

Section II. Dates and Times

NOC **S2.3 to S2.6**

Section III. Designation of Emissions

NOC **S2.7** Emissions shall be designated according to their necessary bandwidth and their classification in accordance with the method described in Appendix **S1**.

ARTICLE S3 - Technical Characteristics of Stations

RR	VGE proposal	VGE Report	WRC-95 decision
299		S3.1	
300	(MOD)	S3.2	
301		S3.3	
302	(MOD)	S3.4	
303	MOD	S3.5	
304	MOD	S3.6	
305	MOD	S3.7	MOD
306		S3.8	
307	(MOD)	S3.9	
308		S3.10	
309		S3.11	
310		S3.12	
311		S3.13	
312	(MOD)	S3.14	
313		S3.15	
314 - 338 not allocated			

ARTICLE S3

Technical Characteristics of Stations

NOC **S3.1 to S3.4**

NOC **S3.5** [Transmitting stations shall conform to the frequency tolerances specified in Recommendation ITU-R ... (see [Annex **AP 7**]).]

NOC **S3.6** [Transmitting stations shall conform to the maximum permitted spurious emission power levels specified in Recommendation ITU-R ... (see [Annex **AP 8**]).]

MOD **S3.7** Transmitting stations shall conform to the maximum permitted power levels for out-of-band emissions specified for certain services and classes of emission in the present Regulations. In the absence of such specified maximum permitted power levels transmitting stations shall, to the maximum extent possible, satisfy the requirements relating to the limitation of the out-of-band emissions specified in the most recent ITU-R Recommendations.

NOC **S3.8 to S3.15**

ARTICLE S6 - Special Agreements

RR	VGE proposal	VGE Report	WRC-95 decision
374	(MOD)	S6.1	
375	(MOD)	S6.2	
376	(MOD)	S6.3	
377		S6.4	
378		S6.5	
379	MOD	S6.6	
380	(MOD)	S6.7	
381 - 390 not allocated			

N.B.: In view of the proposed deletion of the present Article 10		
990 - 1016	SUP	--
1017 - 1040 not allocated		

ARTICLE S6

Special Agreements

NOC **S6.1 to S6.5**

NOC **S6.6** § 6. The Director of the Radiocommunication Bureau and the Chairman of the Radio Regulations Board may be invited to send representatives to participate in an advisory capacity in the preparation of these agreements and in the proceedings of the conferences, it being recognized that in the majority of cases such participation is desirable.

NOC **S6.7**

ARTICLE S15 - Interference

RR	VGE proposal	VGE Report	WRC-95 decision
1798	SUP*	S15.25	
1799	MOD	S15.1	
1800	SUP	--	
1801	SUP	--	
1802	SUP	--	
1803	SUP	--	
1804	MOD	S15.2	
1805	MOD	S15.3	
1806		S15.4	
1807	(MOD)	S15.5	
1808		S15.6	
1809		S15.7	
1810		S15.8	
1811		S15.9	
1812	(MOD)	S15.10	
1813		S15.11	
1814		S15.12	
1815		S15.13	
1816	SUP	--	
1817 - 1841 not allocated			
1842		S15.14	
1843		S15.15	
1844		S15.16	
1845		S15.17	
1846		S15.18	MOD
1847 - 1871 not allocated			
1915	(MOD)	S15.19	
1916		S15.20	
1917		S15.21	
1918 - 1942 not allocated			
1943	(MOD)	S15.22	
1944	(MOD)	S15.23	
1947	(MOD)	S15.24	
1798	(MOD)	S15.25	
1946	(MOD)	S15.26	

RR	VGE proposal	VGE Report	WRC-95 decision
1958	(MOD)	S15.27	
1957	(MOD)	S15.28	
1956	(MOD)	S15.29	
1945	(MOD)	S15.30	
1948	(MOD)	S15.31	
1949	(MOD)	S15.32	
1955	(MOD)	S15.33	
1950	(MOD)	S15.34	
1954	(MOD)	S15.35	
1951	(MOD)	S15.36	
1952	(MOD)	S15.37	
1953	(MOD)	S15.38	
1959	(MOD)	S15.39	
1960	(MOD)	S15.40	
1961	(MOD)	S15.41	
1962	(MOD)	S15.42	
1963	(MOD)	S15.43	
1964	(MOD)	S15.44	
1965	(MOD)	S15.45	
1966	(MOD)	S15.46	
1967 - 1991 not allocated			
FOOTNOTES			
1814.1	(MOD)	S15.12.1	
1815.1	(MOD)	S15.13.1	

CHAPTER SIV

Interference

ARTICLE S15

Interference

Section I. Interference from Radio Stations

NOC **S15.1** § 1. All stations are forbidden to carry out unnecessary transmissions, or the transmission of superfluous signals, or the transmission of false or misleading signals, or the transmission of signals without identification (except as provided for in Article **S19**).

NOC **S15.2** § 2. Transmitting stations shall radiate only as much power as is necessary to ensure a satisfactory service.

NOC **S15.3** § 3. In order to avoid interference (see also Article **S3** and No. **S22.1**):

NOC **S15.4 to S15.17**

MOD **S15.18** (5) For testing stations in the [maritime] mobile service see No. **S57.9**.

NOC **S15.19 to S15.46**

ARTICLE S16 - International Monitoring

RR	VGE proposal	VGE Report	WRC-95 decision
1872	MOD	S16.1	
1873		S16.2	MOD
1875		S16.3	
1876	SUP*	[An. 20]	
1877		S16.4	
1874	MOD	S16.5	(MOD)
1874bis	ADD	S16.6	
1878	SUP*	[An. 20]	
1879	SUP*	[An. 20]	
1880	SUP*	[An. 20]	
1881	SUP*	[An. 20]	
1882	SUP	--	
1883	SUP*	[An. 20]	
1884	SUP	--	
1885	(MOD)	S16.7	
1886	(MOD)	S16.8	
FOOTNOTE			
1872.1	ADD	S16.1.1	
1887 - 1914 not allocated			

ARTICLE S16

International Monitoring

NOC **S16.1** To assist to the extent practicable in the implementation of these Regulations, in particular to help ensure efficient and economical use of the radio-frequency spectrum and to help in the prompt elimination of harmful interference, administrations agree to continue the development of monitoring facilities and, to the extent practicable, to cooperate in the continued development of the international monitoring system, taking into account the relevant ITU-R Recommendations.[1]

NOC **S16.1.1** [1] Information on this subject is also provided in the ITU-R Handbook on Monitoring Stations.

MOD **S16.2** The international monitoring system comprises only those monitoring stations which have been so nominated by administrations in the information sent to the Secretary-General in accordance with [Annex **20**]. These stations may be operated by an administration or, in accordance with an authorization granted by the appropriate administration, by a public or private enterprise, by a common monitoring service established by two or more countries, or by an international organization.

NOC **S16.3 and S16.4**

(MOD) **S16.5** Administrations shall, as far as they consider practicable, conduct such monitoring as may be requested of them by other administrations or by the Bureau.

NOC **S16.6** Administrative and procedural requirements for use and operation of the international monitoring system shall be in accordance with the provisions of Recommendation ITU-R ... (see [Annex **20**]).

NOC **S16.7 and S16.8**

ARTICLE S17 - Secrecy

RR	VGE proposal	VGE Report	WRC-95 decision
1992		S17.1	MOD
1993		S17.2	
1994		S17.3	
1995 - 2019 not allocated			

ARTICLE S18 - Licences

RR	VGE proposal	VGE Report	WRC-95 decision
2020		S18.1	MOD
2021		S18.2	
2022		S18.3	
2023		S18.4	MOD
2024		S18.5	
2025		S18.6	
2026		S18.7	
2027		S18.8	
2028		S18.9	
2029		S18.10	
2030		S18.11	
2031 - 2054 not allocated			

ARTICLE S17

Secrecy

MOD **S17.1** In the application of the appropriate provisions of the Constitution and the Convention, administrations bind themselves to take the necessary measures to prohibit and prevent:

NOC **S17.2 and S17.3**

ARTICLE S18

Licences

MOD **[S18.1** § 1. (1) No transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations by the government of the country to which the station in question is subject [, or by any entity approved by that government]. (However, see Nos. **S18.2**, **S18.8** and **S18.11**.)]

NOC **S18.2 and S18.3**

MOD **S18.4** § 2. The holder of a licence is required to preserve the secrecy of telecommunications, as provided in the relevant provisions of the Constitution and the Convention. Moreover, the licence shall mention, specifically or by reference, that if the station includes a receiver, the interception of radiocommunication correspondence, other than that which the station is authorized to receive, is forbidden, and that in cases where such correspondence is involuntarily received, it shall not be reproduced, nor communicated to third parties, nor used for any purpose, and even its existence shall not be disclosed.

NOC **S18.5 to S18.11**

RESOLUTION COM4-1

Footnotes to the Table of Frequency Allocations

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that footnotes to the Table of Frequency Allocations should be clear, concise and easy to understand;

b) that footnotes should relate directly to matters of frequency allocation;

c) that there is a need to review footnotes regularly in order to ensure that any which are no longer required are deleted;

d) that, in order to ensure that footnotes allow modification of the Table of Frequency Allocations without introducing unnecessary complications, principles relating to the use of footnotes are needed,

resolves

1 that, wherever possible, footnotes to the Table of Frequency Allocations should be confined to altering, limiting, or otherwise changing the relevant allocations rather than dealing with the operation of stations, assignment of frequencies or other matters;

2 that the Table of Frequency Allocations should include only those footnotes which have international implications for the use of the radio-frequency spectrum;

3 that new footnotes to the Table of Frequency Allocations should only be adopted in order to:

a) achieve flexibility in the Table of Frequency Allocations;

b) protect existing usage when the relevant allocations are changed;

c) introduce either transitional or permanent restrictions on a new service to achieve compatibility; or

d) meet the specific requirements of a country or area when it is impracticable to satisfy such needs otherwise within the Table of Frequency Allocations;

4 that footnotes serving a common purpose should be in a common format, and, where possible, be grouped into a single footnote with appropriate references to the relevant frequency bands;

5 that recommended agendas for future world radiocommunication conferences should include an agenda item which would enable country footnotes, or country names in footnotes, to be deleted, if no longer required,

urges administrations

that, in making proposals to world radiocommunication conferences, account should be taken of *resolves* 1 to 5,

instructs the Director of the Radiocommunication Bureau

to review footnotes periodically, in consultation with concerned administrations, and communicate the results to future world radiocommunication conferences, in order to enable administrations to propose the deletion of their country footnotes, or their own country names from footnotes, as appropriate.

RECOMMENDATION COM4-A

Principles for the Allocation of Frequency Bands

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that ITU should maintain an international Table of Frequency Allocations covering the usable radio-frequency spectrum;

b) that it may be desirable, in certain cases, to allocate frequency bands to the most broadly defined services in order to improve flexibility of use but without detriment to other services;

c) that the development of common worldwide allocations is desirable in order to improve and harmonize utilization of the radio-frequency spectrum;

d) that adherence to these principles for the allocation of spectrum will allow the Table of Frequency Allocations to focus on matters of regulatory significance while enabling greater flexibility in national spectrum use,

recommends that future world radiocommunication conferences

1 should, wherever possible, allocate frequency bands to the most broadly defined services with a view to providing the maximum flexibility to administrations in spectrum use, taking into account safety, technical, operational, economic and other relevant factors;

2 should, wherever possible, allocate frequency bands on a worldwide basis (aligned services, categories of service and frequency band limits) taking into account safety, technical, operational, economic and other relevant factors;

3 should take into account relevant studies by the Radiocommunication Sector and the reports of the relevant Conference Preparatory Meetings,

recommends administrations

in making proposals to world radiocommunication conferences, to take account of *recommends* 1 to 3,

requests the Director of the Radiocommunication Bureau and the ITU-R study groups, as appropriate,

1 when carrying out technical studies relating to a frequency band, to examine the compatibility of a broad definition of services with the existing utilizations and the possibility of aligning allocations on a worldwide basis, having regard to *considerings* a), b), c) and d) and *recommends* 1, 2 and 3 above;

2 to conduct these studies, where appropriate in cooperation with the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO);

3 to submit a report to future world radiocommunication conferences containing the results of these studies,

invites

the relevant Conference Preparatory Meetings and ITU-R study groups to identify areas for study and to undertake the studies necessary to determine the impact on existing services of those agenda items of future world radiocommunication conferences which involve broadening the scope of existing service allocations,

instructs the Secretary-General

to communicate this Recommendation to ICAO and IMO.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 181-E
7 November 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

WORKING GROUP OF THE PLENARY

NOTE BY THE CHAIRMAN

DRAFT RECOMMENDATION [GTPLEN-XY]

TECHNICAL PARAMETERS FOR USE IN THE REVISION OF APPENDICES 30 AND 30A IN RESPONSE TO RESOLUTION 524 (WARC-92)

The World Radiocommunication Conference (Geneva, 1995),

considering

that WRC-97 will take action, as appropriate, on the revision of Appendices **30** and **30A** for Regions 1 and 3 in response to Resolution **524 (WARC-92)**;

noting

a) the requirements of Resolution **524 (WARC-92)**;

b) the work carried out by the Study Groups and the Conference Preparatory Meeting of the Radiocommunication Sector;

recognizing

that it will be necessary to have improved technical parameters for both Appendices **30** and **30A** if the Plans resulting from the decisions of WRC-95 and WRC-97 are to be best able to satisfy the requirements of Resolution **524 (WARC-92)**;

recommends

1 that the following technical parameters should be used in preparation for WRC-97 actions on the revision of Appendices **30/30A**:

1.1 e.i.r.p. planning values - a general reduction of 5 dB from the levels listed in Appendix 30;

1.2 use of an improved receive earth station reference antenna pattern based on Recommendation [Document 10-11/1009];

1.3 simultaneous planning of feeder links and downlinks with calculation of overall equivalent protection margins (OEPM);

1.4 aggregate C/I ratio values of:

– co-channel 23 dB with no single C/I entry lower than 28 dB;

– adjacent channel 15 dB;

2 that these updated parameters will be applied to possible revisions to assignments not operating nor notified. Operating or notified systems to the extent they are in accordance with Appendix **30** will only be adjusted if the administrations concerned with such systems agree;

3 that the general e.i.r.p. reduction in *recommends* 1.1 above will apply, but for countries in high rainfall climatic zones adequate e.i.r.p. levels will be maintained.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 182-E
7 November 1995
Original: English

COMMITTEE 4

State of Bahrain

PROPOSALS FOR THE WORK OF THE CONFERENCE

The State of Bahrain proposes the inclusion of its name in the following footnote.

BHR/182/1

MOD 608C
S5.221 Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from stations of the fixed or mobile services in the following countries: Algeria, the Federal Republic of Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Belarus, Belgium, Brunei Darussalam, Bulgaria, Cameroon, Canada, Cyprus, Colombia, Congo, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Spain, Ethiopia, the Russian Federation, Finland, France, Ghana, Greece, Honduras, Hungary, Iran, Ireland, Iceland, Israel, Italy, Japan, Jordan, Kenya, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Mozambique, Namibia, Norway, New Zealand, Oman, Pakistan, Panama, Papua New Guinea, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Romania, the United Kingdom, Singapore, Sri Lanka, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, the Czech and Slovak Federal Republic, Thailand, Tunisia, Turkey, Ukraine, Yemen and Yugoslavia that operate in accordance with the Table of Frequency Allocations.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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8 November 1995
Original: French

COMMITTEE 5

SUMMARY RECORD

OF THE

SIXTH MEETING OF COMMITTEE 5

(MSS AND OTHER MATTERS)

Monday, 6 November 1995, at 0935 hours

Chairman: Mr. G.F. JENKINSON (Australia)

Subject discussed		**Documents**
1	Non-GSO FSS systems (continued)	9 (Add.15 + Corr.1), 56, 84, 115; DT/38(Rev.2)

1 Non-GSO FSS systems (continued) (Addendum 15 (and Corrigendum 1) to Document 9, Documents 56, 85, 115; DT/38(Rev.2))

1.1 The **Chairman** invited the Committee to continue its consideration of the proposals put forward by the United States, Indonesia and Japan.

1.2 The **delegate of Japan** said that, although his delegation was proposing (J/115/1) that the allocation of frequency bands to non-GSO FSS systems be considered in the ranges 20.7 - 21.2 GHz and 30.5 - 31 GHz, it was not certain that that bandwidth would actually be necessary.

1.3 The **delegate of Belgium** said that the system proposed by the United States provided for the use of antennas with a minimum diameter of 16 cm. In that case, however, there was a risk that the e.i.r.p. transmitted towards the horizon would disrupt fixed or mobile terrestrial systems. Therefore, if the frequency bands proposed by the United States were to be allocated to the non-geostationary fixed-satellite service, the maximum authorized e.i.r.p. level would have to be indicated, since the maximum e.i.r.p. levels specified in Nos. 2541 and 2542 of the Radio Regulations applied solely to earth stations operating with geostationary satellites. That question could be considered at a future conference. The delegation of the United States might also wish to clarify what type of modulation would be used and whether it would be possible to reduce the bandwidth necessary for transmission.

1.4 The **delegate of the United States** said that the non-GSO FSS system needed a minimum bandwidth of 500 MHz to ensure broadband transmissions to any point of the globe, at low cost and with a very low error ratio. Not only did the system perform as well as other systems offering similar services, in particular fibre-optic systems, but it was also much cheaper. In order to be able to operate non-GSO FSS systems in the 20/30 GHz band, the United States delegation was proposing that RR 2613 be deleted and priority be given to non-GSO FSS systems in certain parts of the 20 and 30 GHz bands. Those sub-bands would represent only one-seventh of the frequency range concerned, so geostationary systems would remain in the majority and could continue to operate on a non-priority basis in the above-mentioned sub-bands.

1.5 The **Chairman** said, with respect to the proportion of one-seventh referred to by the United States delegate, that the Conference would also have to consider allocations to non-geostationary MSS feeder links in the 20 and 30 GHz bands. He also wondered whether a bandwidth of 500 MHz was necessary in regions of the world where demand for services was low. The **delegate of the United States** said that such a bandwidth was indeed necessary if rural and remote regions were to have access to the services offered by the non-GSO FSS system.

1.6 The **delegate of Indonesia** said that non-GSO FSS systems would make for improved accessibility of national telecommunication networks at more attractive rates, including for remote rural areas. They would also boost the commercial, industrial and social potential of regions which were hitherto not served, particularly in developing countries. For Indonesia, the system was simply a means of achieving those objectives.

1.7 The **delegate of Argentina** was in favour of allocating to non-GSO FSS systems the band 18.8 - 19.3 GHz in the space-to-Earth direction and the band 28.6 - 29.1 GHz in the Earth-to-space direction, giving a bandwidth of 500 MHz. He thought that RR 2613 should not apply to non-GSO FSS systems operating in the bands stated. However, implementation of those systems should not cause harmful interference to the stations and services already operating in those bands. That view was supported by the **delegate of Mexico**.

1.8 The **delegate of Belgium** emphasized that RR 2613 applied to all frequency bands.

1.9 The **Chairman** pointed out that, if RR 2613 was maintained, GSO systems would take precedence over non-GSO FSS systems.

1.10 The **delegate of the United Kingdom** thought that further discussion was required in order to determine the bandwidth required for that service and identify the steps to be taken to protect existing services. That view was shared by the **delegate of Turkey**.

1.11 The **delegate of Japan** doubted whether it was necessary, having regard to technological progress, for a bandwidth of 500 MHz to be allocated to non-GSO FSS systems at that stage, as the arguments put forward so far by the United States delegation were unconvincing in technical terms. He therefore shared the United Kingdom delegate's view that the issue should be discussed in greater detail. He was supported by the **delegate of Spain** and the **delegate of France,** who also requested clarification regarding the gradual introduction of that bandwidth.

1.12 The **delegate of Belgium** understood that there was a channelling plan covering two-way links in the band 27.5 - 29.5 GHz. If some MHz were lost in one direction of the link, they would also be lost in the other because the links were bidirectional. Perhaps a more rational use of the spectrum should be contemplated by allocating another frequency band to non-GSO FSS systems.

1.13 The **delegate of the United States** said that non-GSO FSS networks offered worldwide coverage, thus enabling developing countries to gain access to state-of-the-art network capacity. The technology used for non-GSO systems actually constituted a form of cross subsidization by developed countries in favour of the networks of developing markets. In order to be economically and technically viable, the proposed system, which had been the subject of advance publication, had to have sufficient capacity to provide a competitive service in terms of cost, while taking account of user population density, and therefore have sufficient bandwidth. The cost of the system to the user had to be as low as possible. In order to provide a service of adequate quality in rural areas, the only band available was 20/30 GHz. Although the number of satellites required in the system was large since the area served by each satellite beam was small, the potential for frequency reuse was extremely great. Network access also had to be taken into consideration: traffic would vary accordingly to the type of area (metropolitan, suburban, village and rural areas) since the users would be different. According to the type and duration of service requested, the transmission rate used could vary from 16 kbit/s to 2 Mbit/s. To sum up, to allow for the likelihood of blockage, a bandwidth of 500 MHz was necessary to ensure the required quality of service for all areas without involving long access delays.

1.14 The **delegate of Belgium** acknowledged that it might be possible for different services to co-exist. However, he wondered whether the maximum power authorized in the direction of the horizon had been calculated in such a way as to allow sharing between services.

1.15 The **delegate of Australia** was in favour of allocating a bandwidth of 500 MHz to non-GSO FSS systems in the band 18.8 - 19.3 GHz and 28.6 - 29.1 GHz and deleting RR 2613 as proposed by the United States. However, it would be preferable for non-GSO and GSO systems to enjoy equal rights, and the fixed and other services already operating in those bands had to be protected.

1.16 The **delegate of France** wished to know the number of erlangs anticipated per km^2 in order to have an idea of the expected volume of traffic and thus of the necessary bandwidth. The **delegate of the United States** explained that the system allowed different transmission rates and each rate involved two parameters: the number of users and the duration of use.

1.17 Replying to the **delegate of the Netherlands** concerning the schedule for putting the system into service, the **delegate of the United States** said that the system should be fully operational towards the end of the year 2001. The bandwidth had to be allocated for the whole of the system's lifetime since it was very difficult to modify the orbit once a system had been launched.

1.18 The **delegate of Denmark** felt that the Committee could not rule on the frequency range to be allocated to non-GSO FSS systems before having more precise technical justification of the requirements of such a service. He also wondered whether the two passbands of 500 MHz were requested for one or more than one system.

1.19 The **Chairman** reminded the Committee that it had to decide on the resources needed, not just for one system, but for all non-GSO FSS systems, present and future. He accordingly asked the United States delegation to state whether other systems would be able to operate in the 500 MHz passband it was requesting or whether it would be for the exclusive use of the proposed system.

1.20 The **delegate of the United States** said that the system would use all the 500 MHz. Other systems that might be proposed in the future would probably be obliged, for the same reasons of economy and efficiency, to choose just as wide a passband. The possibilities for sharing with other systems had not been studied in depth, but it was reasonable to expect that they might be covered by regulatory arrangements.

1.21 The **delegate of Luxembourg** said he took it that the proposed system was not supposed to use small antennas to serve urban areas. He would therefore like to know if the service capacity required for metropolitan areas was part of the 500 MHz, and if so, how much of it. The **delegate of the United States** pointed out that if the service was to be of use to people living in rural areas, it would also have to permit communication between those areas and urban areas, hence the need for links with the latter if there was to be a continuous chain of communication.

1.22 The **Chairman** noted that the United States and Indonesia, supported by Argentina and Australia, were proposing the two frequency bands 18.8 - 19.3 and 28.6 - 29.1 GHz, whereas Japan was proposing the bands 20.7 - 21.2 and 30.5 - 31 GHz. The 500 MHz proposed as the bandwidth for non-GSO FSS systems did not as yet seem to be backed up by solid technical arguments and, in view of the fact that other services, with different characteristics and requirements, were operating on the same channels, he proposed that the figure of 500 MHz should be put in square brackets and that delegations should explain the difficulties they had with the different frequency bands proposed, irrespective of the bandwidth adopted.

1.23 The **delegate of New Zealand** observed that the amount of spectrum involved was very large for a system which was apparently still at the advance publication stage. The possibilities for sharing had not been investigated, in relation either to other systems that might be proposed in the future, or to existing terrestrial services. He therefore advocated exercising the utmost caution until all the difficulties raised had been resolved, particularly since it was customary not to allocate a portion of the spectrum to such services without attaching restrictions as to the timetable for their introduction which were more binding than the United States delegation's simple affirmation that the system it was proposing would start operating around 2000-2001.

1.24 The **delegate of Belgium** pointed out that there was no reference to the question of the bit rate, although that was the parameter which, together with the number of phase states, would make it possible to determine the passband necessary, and possibly to reduce it, so as to enable others to operate non-GSO FSS systems in the future.

1.25 The **delegate of Syria** noted that the United States was asking for an 0.5 GHz passband for a non-GSO FSS system, whereas Document 126, submitted by Luxembourg, stated that GSO FSS systems would need a bandwidth of 1 GHz in both directions and that they were more efficient and ought to be more profitable than non-GSO systems. He would like to see all those aspects gone into, so that administrations such as his own could know just how things stood in what was rather a contradictory situation.

1.26 The **delegate of France**, supporting the delegate of New Zealand, observed that, in principle, spectrum was allocated to a service, not to a system or an operator. Furthermore, the intersatellite links planned in the system proposed by the United States involved three frequency ranges, totalling nearly 27 GHz. The first of those ranges, 54.25 - 58.20 GHz, was also used for passive space research and the passive earth exploration-satellite service, but nothing had been said about how those two services were to be protected.

1.27 The **Chairman** observed that the Committee was supposed to confine itself to the 20/30 GHz band.

1.28 The **delegate of Germany** endorsed the New Zealand delegate's appeal for caution. Given that the proposed system would not necessarily start transmitting immediately over the whole of the portion of the spectrum in question, it might be advisable to decide on a smaller portion, with a view to identifying the actual problems with sharing and other matters.

1.29 The **delegate of Papua New Guinea**, also supporting the delegate of New Zealand, said that his country's administration was just discovering the technical issues involved in the subject under consideration. It therefore seemed to him that it would be premature to force a decision at the WRC-95.

1.30 The **Chairman** pointed out that the instructions given by the Plenary in Document DT/38(Rev.2) did not allow Committee 5 the option of referring consideration of the question of the bandwidth and the portion of the spectrum required to the WRC-97.

1.31 The **delegate of Italy**, fully supporting the views of the delegations of New Zealand, Germany and France, requested further clarification of the technical reasoning behind the bandwidth requested by the United States and of the sharing problems entailed.

1.32 The **delegate of the United States** said that the problems of sharing with terrestrial services were dealt with succinctly in Corrigendum 1 to Addendum 15 to Document 9 and more fully in Section II of Document 84. With regard to the question of capacity, for a given area covered, the system used TDMA for downlinks, which implied that the bandwidth required could not be reduced because traffic was low at any particular time. Use of the full bandwidth capacity would make it possible to operate up to 1 800 channels at 16 kbit/s or 14 channels at 2 048 Mbit/s (E1), and, of course, any combinations in between. As far as the portion of spectrum requested was concerned, the figure of 500 MHz was not excessive, considering that that generally constituted a minimum for satellite communications in the C and Ku bands. At all events, it represented the amount necessary for the system to operate effectively, efficiently and economically.

1.33 The **Chairman** noted that the subject obviously called for more detailed consideration, preferably in a smaller group. He proposed that he should hold informal discussions with a representative of each delegation that had spoken to decide on the best way of proceeding with the matter.

1.34 It was so **agreed**.

The meeting rose at 1050 hours.

The Secretary:
G. KOVACS

The Chairman:
G.F. JENKINSON

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 184-E
8 November 1995
Original: French

COMMITTEE 5

SUMMARY RECORD

OF THE

SEVENTH MEETING OF COMMITTEE 5

(MSS AND OTHER MATTERS)

Monday, 6 November 1995, at 1605 hours

Chairman: Mr. G.F. JENKINSON (Australia)

Subjects discussed	**Documents**
1 Non-GSO FSS systems (continued)	-

1 Non-GSO FSS systems (continued)

1.1 The **Chairman** said that following the debate on the non-GSO FSS at the Committee's previous meeting, several delegations had participated in an informal discussion from which it had emerged that the best way of expediting work on the non-GSO FSS would be to set up an ad hoc working group reporting to the Committee. He therefore proposed that such a group be set up, under the chairmanship of Mr. B. Gracie (Canada).

1.2 It was **agreed** to set up ad hoc Group 2 of Committee 5 under the chairmanship of Mr. Gracie (Canada) to consider the non-GSO FSS.

1.3 The **Chairman** drew attention to Document DL/11 containing a list of geostationary and non-geostationary satellite networks with frequency assignments in the bands 18.8 - 19.7 and 28.5 - 29.5 GHz. The details provided corresponded to the information received by the Radiocommunication Bureau up to 1 November 1995.

The meeting rose at 1620 hours.

The Secretary:
G. KOVACS

The Chairman:
G.F. JENKINSON

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 185-E
7 November 1995
Original: English

COMMITTEE 4

FOURTH REPORT OF WORKING GROUP 4A

The attached texts of Articles S5, S23, S24, S26, S27, S28 and S29, and of Appendix S12, which were approved by Working Group 4A, are submitted to Committee 4 for consideration and approval.

I. HUTCHINGS
Chairman, Working Group 4A

Attachment

ATTACHMENT

RADIO REGULATIONS

ARTICLE S5

Frequency Allocations

Introduction

NOC **S5.1 to S5.2.1**

MOD **S5.3** *Region 1:*

Region 1 includes the area limited on the east by line A (lines A, B and C are defined below) and on the west by line B, excluding any of the territory of Iran which lies between these limits. It also includes ~~that part~~the whole of the territory of Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyztan, Mongolia, Russia, Tajikistan, Turkmenistan, Turkey, ~~and the Union of Soviet Socialist Republics lying outside of these limits, the territory of the Mongolian People's Republic,~~Ukraine and Uzbekistan and the area to the north of ~~the U.S.S.R.~~Russia which lies between lines A and C.

NOC **S5.4**

MOD **S5.5** *Region 3:*

Region 3 includes the area limited on the east by line C and on the west by line A, except any of the territories of ~~the Mongolian People's Republic~~Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyztan, Mongolia, Russia, Tajikistan, Turkmenistan, Turkey, ~~the territory of the U.S.S.R.~~Ukraine and Uzbekistan and the area to the north of ~~the U.S.S.R~~Russia. It also includes that part of the territory of Iran lying outside of those limits.

NOC **S5.6 to S5.13**

MOD **S5.14** The "European Broadcasting Area" is bounded on the west by the western boundary of Region 1, on the east by the meridian 40° East of Greenwich and on the south by the parallel 30° North so as to include ~~the western part of the U.S.S.R.,~~ the northern part of Saudi Arabia and that part of those countries bordering the Mediterranean within these limits. In addition, Iraq, Jordan and that part of the territory of Turkey and Ukraine lying outside the above limits are included in the European Broadcasting Area.

NOC **S5.15**
to
S5.44

SUP **S5.45**

NOC **S5.46**
to
S5.52

ARTICLE S23

Broadcasting Services

NOC **S23.1**
to
S23.13

ARTICLE S24

Fixed Service

NOC **S24.1**
to
S24.6

ARTICLE S26

Standard Frequency and Time Signal Service

NOC **S26.1**
to
S26.3

[S26.4 § 2. Administrations shall cooperate in reducing interference in the standard frequency bands in accordance with ITU-R Recommendations.]

NOC **S26.5**
to
S26.6

ARTICLE S27

Experimental Stations

NOC S27.1 to S27.7

ARTICLE S28

Radiodetermination Services

NOC S28.1 to S28.14

[S28.15 § 9. The procedure to be followed by radio direction-finding stations is given in [Annex **AP 41**].]

NOC S28.16 to S28.24

ARTICLE S29

Radio Astronomy Service

NOC S29.1 to S29.13

APPENDIX S12

Special Rules Applicable to Radiobeacons

(see Article **S28**)

NOC

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Corrigendum 2 to Document 186-E
11 November 1995
Original: English

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4

Third report from the Chairman of Working Group 4B to Committee 4

Replace pages 15-33 by the attached pages.

P. ABOUDARHAM
Chairman of Working Group 4B

MOD

RESOLUTION 46 (~~WARC-92~~Rev.WRC-95)

INTERIM PROCEDURES FOR THE COORDINATION AND NOTIFICATION OF FREQUENCY ASSIGNMENTS OF ~~NON-GEOSTATIONARY-~~SATELLITE NETWORKS IN CERTAIN SPACE SERVICES AND THE OTHER SERVICES TO WHICH ~~THE~~CERTAIN BANDS ARE ALLOCATED[1]

MOD The World ~~Administrative~~ Radiocommunication Conference ~~for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992~~(Geneva, 1995),

NOC *considering*

NOC *a)* that in several different space radiocommunication services there is increasing interest in the use of space systems using non-geostationary-satellite networks;

NOC *b)* that, in order to ensure the satisfactory operation of such networks, other networks and other radio services sharing the same frequency bands, taking into account the relevant allocations, there is a need for procedures to regulate the frequency assignments of non-geostationary-satellite networks;

MOD *c)* that the coordination methods for non-geostationary-satellite networks require specific criteria and calculation methods which are not yet generally available;

MOD *d)* that, consequently, there is a need for interim procedures to be applied until such time as ~~a future conference, with the benefit of further studies by the CCIR and taking account of the experience gained in practice, is able to adopt~~ a the coming into force of a suitable permanent procedure ~~such as that set forth in Chapter SIII of the simplified draft of the Radio Regulations~~;

ADD *e)* that there is a need as well for these interim procedures to be applied in certain bands made available by the present Conference for the purpose of providing feeder links to space stations in the non-geostationary-satellite networks of the mobile-satellite service;

---

[1] This Resolution shall be applied only to the frequency bands for which specific reference is made to this Resolution in the footnotes to the Table of Frequency Allocations. For the purpose of applying the interim procedures annexed to this Resolution, an administration, when providing information in the form of Appendices **3** or **4**, shall state whether it relates to a geostationary satellite or to a non-geostationary satellite and shall provide the appropriate orbital information.

NOC *considering also*

SUP ~~*e)* that the Plenipotentiary Conference (Nice, 1989), initiated the formation of a Voluntary Group of Experts, one of whose tasks is to simplify the procedures of the Radio Regulations;~~

SUP ~~*f)* that any new procedures adopted by this Conference must therefore be as simple as possible and should, where appropriate, make use of the existing procedures of the Radio Regulations;~~

MOD ~~*g*~~*f)* that any interim procedures must take full account of the status of the allocations to services, both terrestrial and space, in frequency bands which may be used by non-geostationary-satellite networks;

MOD ~~*h*~~*g)* that any interim procedures must also take full account of the interests of all countries, including the state of development of their terrestrial and space radiocommunication services;

SUP ~~*considering further*~~

~~*i)* that the provisions of No. **2613** of the Radio Regulations, while necessary to safeguard geostationary-satellite networks in the fixed-satellite service from interference which might be caused by non-geostationary-satellite networks, would, if more widely applied, prejudice the development of such systems in other space radiocommunication services;~~

NOC *recognizing*

MOD that the operation of telecommunication systems in ~~the MSS~~those bands ~~allocated to the mobile-satellite service as well as bands allocated to the fixed-satellite service and used for feeder links of non-geostationary satellite networks of the mobile-satellite service~~subject to this Resolution must be in conformity with the International Telecommunication Constitution and Convention and the Administrative Regulations in force, in particular their respective preambles and, in this respect:

NOC *a)* the right of each Member to decide how or whether to participate in the above systems, and to determine the terms and conditions of access to such systems from its territory;

NOC *b)* the obligation for entities and organizations providing international or national telecommunication services by non-geostationary-satellite networks to operate at the point of delivery under the legal, financial and regulatory requirements of the Member of the Union in whose territory these services are authorized;

NOC *resolves*

MOD 1. that, pending the ~~adoption~~entry into force of a permanent procedure ~~such as that set forth in Chapter SIII of the simplified draft of the Radio Regulations by a future competent conference~~, the use of frequency assignments by:

MOD *a)* non-geostationary-satellite systems in the space services in relation to other non-geostationary-satellite systems, geostationary-satellite systems and terrestrial ~~systems~~stations;

NOC *b~~e~~)* geostationary-satellite systems in relation to non-geostationary-satellite systems and,

MOD *c~~d~~)* terrestrial ~~systems~~stations in relation to the earth stations ~~and space stations~~ of non-geostationary-satellite networks;

NOC to which this Resolution applies shall be regulated in accordance with the interim procedures and the associated provisions ~~in the annex hereto~~and criteria contained in Annex 1 and Annex 2 respectively;

MOD 2. that the interim procedures annexed to this Resolution apply in addition to those of Articles **11** and **13** for geostationary-satellite networks and shall replace those of Articles **11** and **13** for non-geostationary-satellite networks ~~for the mobile-satellite service and the fixed-satellite service~~in those frequency bands specifically identified by footnote to Article **8**, the Table of Frequency Allocations;

MOD 3. that the interim procedures annexed to this Resolution shall be applied from ~~4 March 1992~~[17] November 1995;

NOC *invites*

NOC 1. all administrations concerned in or by the introduction and operation of non-geostationary-satellite systems in the relevant space services to cooperate in the application of these interim procedures;

MOD 2. all those administrations which acquire experience in the application of the annexed interim procedures to contribute to the studies of the ~~CCIR~~ITU-R;

MOD *instructs the ~~IFRB~~Bureau*

NOC to apply these procedures and to provide the necessary assistance to administrations;

MOD *invites the ~~CCIR~~ITU-R Study Groups*

NOC to study and develop Recommendations on the coordination methods, the necessary orbital data relating to non-geostationary-satellite systems, and the sharing criteria;

SUP ~~*instructs the Secretary-General*~~

ANNEX 1 TO RESOLUTION No. 46 ~~(WARC-92)~~(Rev.WRC-95)

MOD

Interim Procedures for the Coordination and Notification of Frequency Assignments of ~~Non-Geostationary~~ Satellite Networks in Certain Space Services and the Other Services to Which ~~the~~certain Bands are Allocated~~1~~

SUP

~~1 Sections I, II and III apply to terrestrial services only in the case where a power flux-density limit at the surface of the Earth (for a space station) or at the border of the territory of another administration (for an earth station) specified in a provision of the Radio Regulations is exceeded.~~

Section A. General Information

MOD

A.1 The assistance of the ~~IFRB~~ BRBureau can be requested in the application of the provisions of this annex.

MOD

A.2 In the absence of specific provisions relating to the evaluation of the interference, the calculation methods and the criteria should be based on relevant ~~CCIR~~ITU-R Recommendations agreed by the administrations concerned either as a result of Resolution **703 (Rev.WARC-92)** or otherwise. In the event of disagreement on a ~~CCIR~~ ITU-R Recommendation or in the absence of such Recommendations, the methods and criteria shall be agreed between the administrations concerned. Such agreements shall be concluded without prejudice to other administrations.

MOD

A.3 When applying the provisions of this Resolution for non-geostationary-satellite networks, administrations ~~should~~ [shall] provide the following information in addition to that of Appendix **3** or Appendix **4**:

SUP ~~*i) right ascension of the ascending node;*~~

SUP ~~*ii) argument of perigee;*~~

SUP ~~*iii) active service arc.*~~

ADD i) Orientation of the satellite transmitting and receiving antenna beams and their radiation pattern.

ADD ii) Type of modulation and multiple access and spectrum mask.

ADD iii) Appropriate information required to calculate the affected region due to the MSS space stations [as defined in ~~Annex 7~~].8/1034 Recommendation ITU-R M/1187]

ADD [iv) Maximum and average ~~beam~~ peak e.i.r.p./4 kHz and e.i.r.p./1 MHz for each beam.]

ADD

v) The satellite antenna gain $G(\Theta_e)$ as a function of elevation angle at a fixed point on the Earth. (To be provided either as part of Appendix 3 or as a formula to convert existing Appendix 3 data.)

ADD

vi) The spreading loss (for a non-GSO satellite) as a function of elevation angle. (To be determined by equations or provided in graphical form.)

MOD

vii) New data elements required to properly characterize non-GSO satellites:

N_p = Number of orbital planes

N_s = Number of satellites in each orbital plane

Ω_j = Right ascension of the ascending node for the j-th orbital plane, measured counter clockwise in the equatorial plane from the direction of the vernal equinox to the point where the satellite makes its south-to-north crossing of the equator ($0° \leq \Omega_j < 360°$).

i_j = Inclination angle for the j-th orbital plane with respect to the reference plane, which is taken to be the Earth's equatorial plane ($0° \leq i_j < 180°$).

ω_i = Initial phase angle of the i-th satellite in its orbital plane at reference time t=0, measured from the point of ascending node ($0^{\circ} \leq \omega_i < 360^{\circ}$).

a = Semi-major axis.

e = eccentricity $0 \leq e < 1$

ω_p = argument of perigee, measured in the orbital plane, in the direction of motion, from the ascending node to perigee ($0° \leq \omega_p < 360°$)

ADD

In the following, references to Appendix 3 or Appendix 4 information shall be considered to include this additional information, where appropriate.

NOC

Section I. Procedures for the Advance Publication of Information on Planned Satellite Networks

NOC

Publication of Information

MOD

1.1 An administration (or one acting on behalf of a group of named administrations) which intends to bring into use a satellite network within a satellite system shall, prior to the coordination procedure described in paragraphs 2.1 and 2.2, send to the ~~International Frequency Registration~~ Bureau~~Board~~, not earlier than six years[1] and preferably not later than two years before the date of bringing into service of each satellite network, the information listed in Appendix **4**.

MOD

1 ~~See also No. 1550.~~See also paragraph 5.1.6.

MOD

1.2 Amendments to the information sent in accordance with the provisions of paragraph 1.1 shall also be sent to the Bureau~~Board~~ as soon as they become available. ~~Modifications which are of such a nature as to change significantly the character of the network may require recommencing the advance publication procedure.~~The use of an additional frequency band will require advance publication for this band.

MOD

1.3 On receipt of the complete information sent under paragraphs 1.1 and 1.2, the Bureau~~Board~~ shall publish it in a special section of its weekly circular within three months and shall also, when the weekly circular contains such information, so advise all administrations by circular telegram. The circular telegram shall indicate the frequency bands to be used and, in the case of a geostationary satellite, the orbital location of the space station. When the ~~Board~~ Bureau is not in a position to comply with the time limit referred to above, it shall periodically so inform the administrations, giving the reasons therefor.

NOC

Comments on Published Information

MOD

1.4 If, after studying the information published under paragraph 1.3, any administration is of the opinion that interference which may be unacceptable may be caused to assignments of its existing or planned satellite networks or to assignments to its existing or planned terrestrial ~~radiocommunication~~ stations, it shall, within four months after the date of the weekly circular ~~containing the complete information listed in Appendix 4~~referred to in paragraph 1.3 above, send the administration concerned its comments on the particulars of the interference to its existing or planned satellite ~~systems~~ networks or to its existing or planned terrestrial stations. A copy of these comments shall also be sent to the Bureau~~Board~~. If no such comments are received from an administration within the period mentioned above, it may be assumed that the administration has no basic objections to the planned satellite network(s) of the system on which details have been published.

NOC

1.4A An administration sending information under paragraphs 1.1 and 1.2 shall, if requested by an administration receiving information published under paragraph 1.3, provide the technical methods and criteria it proposes to use for the evaluation of the interference.

NOC

1.4B An administration receiving information published under paragraph 1.3, may provide to the administration sending information under paragraphs 1.1 and 1.2 the technical methods and criteria it proposes to use for the evaluation of the interference.

NOC	*Resolution of Difficulties*
NOC	1.5 An administration receiving comments sent in accordance with paragraph 1.4 and administrations sending such comments shall endeavour to resolve any difficulties that may arise and shall provide any additional information that may be available.
NOC	1.5A In case of difficulties arising, the administration responsible for the planned network shall first explore all possible means of meeting its requirements without considering the possibility of adjustment to stations or networks of other administrations. If no such means can be found, the administration concerned may then request other administrations, either bilaterally or multilaterally, to mutually help resolve these difficulties.
NOC	1.5B An administration receiving a request under paragraph 1.5A shall, in consultation with the requesting administration, explore all possible means of meeting the latter's requirements.
NOC	1.5C If, after following the procedure described in paragraphs 1.5A and 1.5B, there are unresolved difficulties, the administrations concerned shall jointly make every possible effort to resolve these difficulties by means of mutually acceptable adjustments.
NOC	*Results of Advance Publication*
MOD	1.6 An administration on behalf of which details of planned satellite networks have been published in accordance with the provisions of paragraphs 1.1 to 1.3 shall, after the period of four months specified in paragraph 1.4, inform the Bureau~~Board~~ whether or not comments provided for in paragraph 1.4 have been received and of the progress made in resolving any difficulties. Additional information on the progress made in resolving any remaining difficulties shall be sent to the Bureau~~Board~~ at intervals not exceeding six months prior to the commencement of coordination or ~~the sending of the notices~~ notification to the Bureau~~Board~~, as the case may be. The Bureau~~Board~~ shall publish this information in the special section of its weekly circular.

MOD	1.7 When, upon expiry of a period of six years plus the extension provided for in ~~No. 1550~~ paragraph 5.1.6 after the date of the publication of the special section referred to in paragraph 1.3, the administration responsible for the network has not submitted the Appendix **3** information, for coordination under paragraph 2.1 or paragraph 2.2 or notification under No. **1488** or Section V of this Annex, as appropriate, the information published under paragraph 1.3 shall be cancelled after the administration concerned has been informed.
NOC	*Commencement of Coordination or Notification Procedures*
MOD	1.8 When communicating to the Bureau~~Board~~ the information referred to in paragraph 1.1, an administration may, at the same time or at a later time, communicate:
NOC	1.8A the information required for the network coordination of a frequency assignment to a station of a satellite network in accordance with the provisions of paragraph 2.6, or
NOC	1.8B the information required for notification of a frequency assignment to a station of a satellite network when coordination for that assignment is not required.
MOD	1.9~~8C~~ The ~~Such~~ coordination or notification information, as the case may be, shall be considered as having been received by the Bureau~~Board~~ not earlier than six months after the date of receipt of the complete information ~~referred to in paragraph 1.1.~~as indicated under paragraph 1.3.

NOC

Section II. Coordination of Frequency Assignments to a Station of a Satellite Network

NOC

Requirement for Coordination

MOD

2.1 Before an administration (or one acting on behalf of one or more named administrations)1 notifies to the Bureau~~Board~~ or brings into use any frequency assignment to a space station or to an earth station of a non geostationary satellite network, it shall effect coordination of the assignment with any other administration:

MOD

– whose assignment to a station in a geostationary-satellite network might affect or be affected by the proposed assignment, or

MOD

– whose assignment to a station of a non-geostationary-satellite network might affect or be affected by the proposed assignment, or

MOD

– whose assignment to a terrestrial station might affect or be affected by the proposed space station assignment.

MOD

2.2 Before an administration (or one acting on behalf of one or more named administrations)1 notifies to the Bureau~~Board~~ or brings into use any frequency assignment to a station of a geostationary-satellite network, it shall effect coordination of the assignment with any other administration :

MOD

– whose assignment to a station of a non-geostationary-satellite network might affect or be affected by the proposed assignment, or

MOD

– whose assignment to a terrestrial station might affect or be affected by the proposed space station assignment.

NOC

2.3 Coordination under paragraphs 2.1 and 2.2 may be effected for a satellite network using the information relating to the space station, including its service area, and the parameters of one or more typical earth stations which may be located in all or part of the space station service area.

MOD

2.4 If a frequency assignment is brought into use before the commencement of the coordination procedure of paragraphs 2.1 and 2.2, when this coordination is required, the operation in advance of the receipt by the Bureau~~Board~~ of the Appendix **3** information shall in no way afford any priority of the date.

1 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 networks or systems.

2.5

MOD 2.5.1 Frequency assignments to be taken into account in the application of paragraphs 2.1 and 2.2 are those with a frequency overlap with the planned assignment, pertaining to the same service or to another service to which the band is allocated with equal rights, or a higher category of allocation (see Nos. **420** to **425** and **435**), and which:

for space services, are:

MOD 2.5.~~1~~2 in conformity with No. **1503**, and

MOD 2.5.~~2~~3 either recorded in the Master Register, notified under Article 13 or under Section V of this Annex, or coordinated under the provisions of this Section or of Section II of Article **11**, or

MOD 2.5.~~3~~4 included in the coordination procedure with effect from the date of receipt by the Bureau~~Board~~, in accordance with paragraph 2.6 or No. **1074** or **1074A** of Article **11**, of the complete~~relevant~~ information as specified in Appendix **3**;

or, for terrestrial services, are:

MOD 2.5.~~4~~5 recorded in the Master Register with a favourable finding with respect to No. **1240**, or

MOD 2.5.~~5~~6 not notified but in use or planned to be brought into use within the ~~next~~ three years following the date of the publication referred to in paragraph 2.7.2.

ADD 2.5.7 Coordination of space services (space-to-Earth) with the terrestrial services of an administration is required only if the threshold levels appearing in Annex 2 of this Resolution are exceeded over any part of the territory of this administration.

ADD 2.5.~~8~~9 No coordination under 2.1or 2.2 is required:

ADD *a)* when the characteristics of a new or a modified frequency assignment or a new earth station are within the limits of those of a frequency assignment which has previously been coordinated;

ADD *b)* when, for a new frequency assignment to a receiving station, the notifying administration states that it accepts the interference resulting from the frequency assignments referred to in 2.5.1 to 2.5.~~3~~4.

ADD *c)* between earth stations using frequency assignments in the same direction (either Earth-to-space or space-to-Earth).

NOC

Coordination Data

MOD

2.6 The administration seeking coordination shall send to the Bureau~~Board~~ the information listed in Appendix **3**.

MOD

2.7 On receipt of the complete information referred to in paragraph 2.6, the Bureau~~Board~~ shall:

MOD

2.7.1 examine this information with respect to its conformity with No. 1503; the date of its receipt shall be considered as the date from which the assignment will be taken into account for coordination, and~~;~~

MOD

2.7.2 publish in the special section of its weekly circular, within three months, the information received under paragraph 2.6 and the result of the examination under paragraph 2.7.1~~1~~. When the Bureau~~Board~~ is not in a position to comply with the time limit referred to above, it shall periodically so inform the administrations giving the reasons therefor, and.

ADD

2.7.3 to assist administrations in identifying services that might be affected, include in the special section mentioned in paragraph 2.7.2 the names of the administrations having frequency assignments complying with the provisions of paragraphs 2.5.1, 2.5.2, 2.5.3, 2.5.4 for space services and 2.5.1 and 2.5.5 for terrestrial services.

SUP

~~1 To help administrations identify services that may be affected, the Bureau~~Board ~~shall also publish a list of administrations whose assignments comply with paragraphs 2.5 and 2.5.1 to 2.5.3 or paragraphs 2.5, [and] 2.5.4.~~

NOC

Examination of Coordination Data and Agreement Between Administrations

MOD

2.8 On receipt of the special section referred to in paragraph 2.7.2, an administration shall promptly examine the matter with regard to interference which would be caused :

MOD

2.8.1 to the frequency assignments of its satellite networks or

2.8.2 to the frequency assignments of its terrestrial stations, or

MOD

2.8.3 by ~~these~~ the frequency assignments of its satellite networks to the satellite network for which coordination is sought, or

ADD

2.8.4 by the frequency assignments of its terrestrial stations to the space station for which coordination is sought.

MOD

2.9 In so doing, it shall have regard to the proposed date of bringing into use of the assignment for which coordination is sought. It shall then, within ~~six~~ [four] months from the date of the relevant weekly circular, notify the administration seeking coordination of its agreement.

ADD

2.10 On receipt of the special section referred to in paragraph 2.7.2, and within the same [four] month period, an administration in need of assistance may inform the Bureau that it has recorded, existing or planned terrestrial stations that might be affected by the planned satellite network and may request the Bureau to determine the need for coordination by applying the Annex 2 criteria. The Bureau shall inform the administration seeking coordination of this request, indicating the date by which it may be able to provide the results of its analysis. When these results are available, the Bureau shall inform both administrations.

ADD

A request under 2.10 shall be considered as a disagreement, pending the results of the determination by the Bureau of the need for coordination.

MOD

2.11 If, ~~however,~~ an ~~the~~ administration ~~with which coordination is sought~~ does not agree under paragraph 2.9 or has requested assistance from the Bureau under paragraph 2.10, it shall, within the same period, send to the administration seeking coordination the technical details of the networks or information on the terrestrial stations concerned upon which its disagreement is based, including:

MOD

2.11.1 in case of a disagreement under paragraphs 2.8.1 or 2.8.3, the characteristics contained in Appendix **3**, or

MOD

2.11.2 in case of a disagreement under paragraphs 2.8.2 or 2.8.4, the characteristics contained in Section C of Appendix **1** which have not previously been notified to the Bureau~~Board~~,

and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem. A copy of these comments shall also be sent to the Bureau~~Board~~.

ADD

2.12 If the administration concerned has notified its disagreement within the same period, but the information on the fixed service stations upon which its disagreement is based cannot be provided, it shall be assumed that typical parameters, as contained in relevant ITU-R recommendations, can be used to determine the need for coordination with this administration.

MOD

2.~~8A~~13 ~~Affected~~ Aadministrations with which coordination is sought, as well as the administration seeking coordination, shall make all possible mutual efforts to overcome the difficulties in a manner acceptable to the parties concerned.

ADD

2.14 Forty-five days prior to the expiry of the [four] month period mentioned in paragraph 2.9, the Bureau shall dispatch a circular telegram to all administrations, bringing the matter to their attention.

ADD

2.15

Upon receipt of the circular telegram mentioned in paragraph 2.14, an administration shall acknowledge receipt immediately by telegram. If no acknowledgement is received within thirty days, the Bureau shall dispatch a telegram requesting acknowledgement, to which the receiving administration shall reply within a further period of fifteen days.

2.16 When an administration has not responded either to the notifying administration or to the Bureau within the period of ~~six~~ [four] months referred to in paragraph 2.9, it shall be deemed that this administration has undertaken :

ADD

a) that no complaint will be made in respect of any harmful interference affecting the services rendered by its satellite networks referred to in paragraphs 2.5.1 to 2.5.4 which may be caused by the use of the assignment to a station of the satellite network for which coordination was requested;

ADD

b) that no complaint will be made in respect of any harmful interference affecting the services rendered by its ~~or~~ terrestrial stations referred to in paragraph 2.5.1, 2.5.5 and 2.5.6 which may be caused by the use of the assignment to a station of the satellite network for which coordination was requested;

ADD

c) that its assignments to a station in a satellite network referred to in paragraphs 2.5.1 to 2.5.4 will not cause harmful interference to the satellite network assignment for which coordination was requested.

ADD

d) that assignments to terrestrial stations referred to in paragraphs 2.5.1, 2.5.5 and 2.5.6.will not cause harmful interference to the satellite network assignment for which coordination was requested.

NOC

Results of Coordination

MOD

2.9~~1~~7 An administration which has initiated a coordination procedure under the provisions of paragraphs 2.1 to 2.6 shall communicate to the Bureau~~Board~~ the names of the administrations with which agreement has been reached. The Bureau~~Board~~ shall publish this information in the special section of its weekly circular.

MOD

2.1~~0~~8 An administration which has sought coordination, as well as any administration which has complied with the provisions of paragraphs 2.8 to 2.16, shall communicate to the Bureau~~Board~~ any modifications to the published characteristics of their respective networks or stations that were required to reach agreement on the coordination. The Bureau~~Board~~ shall publish this information in accordance with paragraph 2.7.2, indicating that these modifications resulted from the joint efforts of the administrations concerned to reach agreement on the coordination.

ADD

S9.60 to S9.65.1

Requests to the Bureau for Assistance in Effecting Coordination

2.18.1

If an administration with which coordination is sought has disagreed under paragraph 2.11, but fails to give a decision on the matter or to provide information concerning its own assignments upon which the disagreement is based, within the same [four]-months period specified in paragraph 2.9, the requesting administration may seek the assistance of the Bureau.

2.18.2

The Bureau, acting on a request under paragraph **2.18.1**, shall forthwith send a telegram to the administration concerned requesting to give an early decision on the matter or to provide the relevant information.

2.18.3

If the administration concerned still does not respond to this request within thirty days of the Bureau's action under 2.18.2, the conclusions under paragraph 2.16 shall apply.

2.18.4

If there is continuing disagreement, or if any administration involved in the matter has requested the assistance of the Bureau, the Bureau shall seek any necessary information to enable it to assess the interference. It shall communicate its conclusions to the administrations involved.

NOC	*Notification of Frequency Assignments in the Event of Continuing Disagreement*
MOD	2.1~~1~~9 In the event of continuing disagreement between an administration seeking to effect coordination and any administration with which coordination has been sought, the administration seeking coordination shall, except in the cases where the assistance of the Bureau~~Board~~ has been requested, defer the submission of its notice concerning the proposed assignment by ~~eight~~[six] months from the date of publication of the special section referred to in paragraph 2.7.2, taking into account the provisions of No. **1496**. When the assistance of the Bureau~~Board~~ has been requested, the submission of the notice shall be deferred for a further three months.
MOD	**Section III. Coordination of Frequency Assignments to Earth Stations of a Non-Geostationnary Satellite Network in Relation to Terrestrial Stations and of a Satellite Network in Relation to other earth stations in the opposite direction of transmission**
NOC	*Requirement for Coordination*
MOD	3.1 Before an administration notifies to the Bureau~~Board~~ or brings into use any frequency assignment to a fixed earth station or to typical earth stations in a particular band allocated with equal rights to space and terrestrial radiocommunication services, it shall effect coordination of the assignment with each administration whose territory lies wholly or partly within the coordination area~~1~~ as specified in Annex 2 to this Resolution. The request for coordination may specify all or some of the frequency assignments to the associated space station, but thereafter each assignment shall be dealt with individually.
SUP	~~1 The coordination area is defined as the service area in which it is intended to operate the typical earth stations, extended in all directions by a coordination distance of 500 km, or as a circular zone with a radius of 500 km centred on the coordinates of the fixed earth station. For a service area in which aircraft earth stations operate, the coordination area is the service area extended in all directions by a coordination distance of 1 000 km.~~

	3.1.1 No coordination under paragraph 3.1 is required when an administration proposes:
ADD	**3.1.2** *a)* to bring into use an earth station the coordination area of which does not include any of the territory of any other country;
ADD	**3.1.3** *b)* to bring into use an assignment to an earth station operating in the opposite direction of transmission, which is located in relation to an earth station outside the coordination area of that earth station.
ADD	**3.1.4** *c)* when the characteristics of a new or modified assignment are within the limits of those of a frequency assignment which has previously been coordinated.
ADD	**3.1.5** *d)* to bring into use a new frequency assignment to a receiving earth station and the notifying administration states that it accepts the interference resulting from existing and future terrestrial station assignments or earth station assignments operating in the opposite direction of transmission. In such case, administrations responsible for the terrestrial stations or the earth stations, are not required to apply the provisions of Section IV or Section III respectively, of this Article.
NOC	*Coordination Data*
MOD	3.2 For the purpose of effecting coordination, the administration requesting coordination shall send to each administration concerned under paragraph 3.1 all ~~pertinent~~ basic characteristics ~~information~~ concerning the proposed frequency assignment as listed in Appendix **3**, and an indication of the planned date of bringing into use~~approximate date on which it is planned to begin operations. A copy of this information with the date of dispatch of the request for coordination shall also be sent to the Board for information.~~
NOC	*Acknowledgement of Receipt of Coordination Data*
NOC	3.3 An administration with which coordination is sought under paragraph 3.1 shall immediately acknowledge receipt of the coordination data.

NOC

Examination of Coordination Data and Agreement Between Administrations

NOC

3.4 On receipt of the coordination data, an administration shall, having regard to the proposed date of bringing into use of the assignment for which coordination was requested, promptly examine the matter with regard to both:

MOD

3.4.1 a) interference which would affect the service rendered by its terrestrial ~~radiocommunication~~ stations ~~or by its earth stations in the opposite direction of transmission,~~ operating in accordance with the Constitution, the Convention and these Regulations, or to be so operated prior to the planned date of bringing into service of the earth station assignment, or within the next three years, whichever is the longer, and

ADD

3.4.1 b) interference which would affect the services rendered by its earth stations which are operating, or are planned to be operated in the opposite direction of transmission, prior to the planned date of bringing into service of the earth station assignment, or within the next three years, whichever is the longer. The assignments to be taken into account in this examination are those:

3.4.1.b1 for which the associated space network characteristics have been communicated to the Bureau under paragraph 1.3, and

3.4.1. b2 which are in conformity with No 1503, and

3.4.1.b3 either coordinated under No 1107 or paragraph 3.1 above, or

3.4.1. b4 to be taken into account for coordination with effect from the date of communication of the information referred to in No 1113 or paragraph 3.2 above; or

3.4.1.b5 recorded in the Master Register with a favorable finding with respect to No 1505 or paragraph 5.1.2 below; or

3.4.1.b6 recorded in the Master register with an unfavorable finding with respect to No 1505 or paragraph 5.1.2 below, and a favorable finding with respect to No 1509 or paragraph 5.1.4 below; or

3.4.1.b7 recorded in the Master Register in application of No1544, if that frequency assignment has not in fact caused harmful interference to any other previously recorded frequency assignment which is in conformity with No. 1503.

MOD

3.4.2 a) interference which would be caused to reception at an earth station by the service rendered by its terrestrial ~~radiocommunication~~ stations ~~or by its earth stations in the opposite direction of transmission,~~ operating in accordance with the Constitution, the Convention and these Regulations, or to be so operated prior to the planned date of bringing into service of the earth station assignment, or within the next three years, whichever is the longer

ADD

3.4.2 b) interference which would be caused to reception at an earth station by the service rendered by its earth stations in the opposite direction of transmission, covered under paragraphs 3.4.1.b1 to 3.4.1.b7, which are operating, or are to be operated prior to the planned date of bringing into service of the earth station assignment, or within the next three years, whichever is the longer.

NOC

3.5 The administration with which coordination is sought shall, within four months from dispatch of the coordination data:

MOD

3.5.1 notify the administration requesting coordination of its agreement with a copy to the Bureau~~Board~~, indicating, where appropriate, the part of the allocated frequency band containing the coordinated frequency assignments; or

ADD

3.5.2. Send to that administration a request for inclusion in coordination of the terrestrial ~~radiocommunication~~ stations or the earth stations in the opposite direction of transmission mentioned in 3.4.1a), 3.4.1.b) ~~and~~ 3.4.2 a) and 3.4.2. b) ; *or*

MOD

3.5.~~2~~3 notify that administration of its disagreement.

MOD

3.6 In the cases mentioned in paragraphs 3.5.2 and 3.5.3, the administration with which coordination is sought shall send to the administration requesting coordination a diagram drawn to an appropriate scale indicating the location of those terrestrial ~~radiocommunication~~ stations or earth stations in the opposite direction of transmission which are or will be within the coordination area, together with all other relevant basic characteristics using Appendix **1** or Appendix **3**, as appropriate, and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem.

MOD

3.7 When the administration with which coordination is sought sends to the administration seeking coordination the information required in the case of paragraph 3.5.~~2~~3, a copy thereof shall also be sent to the Bureau~~Board~~.

ADD	a) The Bureau shall consider as notifications in accordance with Section I of Article **12** ~~or Section I of Article 13, as appropriate,~~ only that information relating to existing ~~radiocommunication~~ terrestrial stations, or to those to be brought into use within the next three ~~[~~months~~][years]~~.
ADD	b) The Bureau shall consider as notifications in accordance with Section I of Article 13 only that information relating to existing earth stations, or to those to be brought into use within the next three years.
ADD	3.7.1 When an agreement on coordination is reached, as a consequence of paragraphs 3.5 to 3.7, the administration responsible for the terrestrial stations or the earth stations in the opposite direction of transmission, may send to the Bureau the information concerning those stations covered by the agreement which are intended to be notified in accordance with Section I of Article **12** or Section I of Article **13**, as appropriate. The Bureau shall consider as notifications in accordance with those Sections only that information relating to existing ~~radiocommunication~~ stations or to those to be brought into use within the next three years.
	3.7.2
ADD	The periods refered to in paragraphs 3.4.1 and 3.4.2 m~~l~~ay be extended by agreement between the administrations concerned in order to take planned terrestrial and space networks into account. The earth station to earth station coordination may commence five and a half years before bringing into use these stations.
ADD *RR 1130 to 1144]*	*Requests to the Bureau for Assistance in Effecting Coordination*
ADD	**3.7.3**
ADD	An administration seeking coordination may request the Bureau to endeavour to effect coordination in those cases where:

ADD	**3.7.4**
ADD	a) an administration with which coordination is sought under paragraph 3.1 fails to acknowledge receipt, under paragraph 3.3, within forty-five days of dispatch of the coordination data referred to in paragraph 3.2; *or*
ADD	**3.7.5**
ADD	b) an administration has acknowledged receipt under paragraph 3.3, but fails to give a decision within four months from dispatch of the coordination data under paragraph 3.2; *or*
ADD	**3.7.6**
ADD	c) there is disagreement between the administration seeking coordination and an administration with which coordination is sought as to the acceptable interference; *or*
ADD	**3.7.7**
ADD	d) coordination between administrations is not possible for any other reason.
ADD	**3.7.8**
ADD	In so doing, the administration shall furnish the necessary information to enable the Bureau to endeavour to effect such coordination.
ADD	*Action to Be Taken by the Bureau*
ADD	**3.7.9**
ADD	Where the Bureau receives a request under 3.7.4, it shall forthwith send a telegram to the administration concerned requesting immediate acknowledgement.

ADD	3.7.10
ADD	Where the Bureau receives an acknowledgement following its action under paragraph 3.7.9, or where the Bureau receives a request under 3.7.5, it shall forthwith send a telegram to the administration concerned requesting an early decision in the matter.
ADD	3.7.11
ADD	Where the Bureau receives a request under paragraph 3.7.7, it shall endeavour to effect coordination in accordance with the provisions of paragraph 3.1. Where the Bureau receives no acknowledgement to its request for coordination within a period of thirty days, it shall act in accordance with paragraph 3.7.9.
ADD	3.7.12
ADD	Where necessary, as part of the procedure under paragraphs 3.7.3 to 3.7.8, the Bureau shall assess the interference. In any case, the Bureau shall inform the administrations concerned of the results obtained.
ADD	3.7.13
ADD	The Bureau may request additional information which it may require to assess the interference to the services concerned.
ADD	3.7.14
ADD	Where an administration fails to reply within thirty days of dispatch of the Bureau's telegram requesting an acknowledgement sent under paragraph 3.7.9, or fails to give a decision in the matter within thirty days of dispatch of the Bureau's telegram of request under paragraph 3.7.10, it shall be deemed that the administration with which coordination was sought has undertaken:

ADD	3.7.15
ADD	a) that no complaint will be made in respect of any harmful interference affecting the services rendered by its terrestrial stations or its earth stations with regard to operation in the opposite direction of transmission which may be caused by the use of the assignment for which coordination was requested;
ADD	3.7.16
ADD	b) that its terrestrial stations or its earth stations with regard to operation in the opposite direction of transmission will not cause harmful interference to the frequency assignment for which coordination was requested.
NOC	*Notification of Frequency Assignments in the Event of Continuing Disagreement*
MOD	3.8 In the event of continuing disagreement between an administration seeking to effect coordination and an administration with which coordination has been sought, the administration seeking coordination shall, except in the cases where the assistance of the ~~Bureau~~Board has been requested, defer the submission of its notice concerning the proposed assignment by six months from the date of the request for coordination, taking into account the provisions of No. **1496**. When the assistance of the Bureau~~Board~~ has been requested, the submission of the notice shall be deferred for a further three months.

NOC

Section IV. Coordination of Frequency Assignments to Terrestrial Stations for Transmission in Relation to Earth Stations of a Non-Geostationary Satellite Network

NOC

Requirement for Coordination

MOD

4.1 Before an administration notifies to the Bureau~~Board~~, or brings into use any frequency assignment to a terrestrial station for transmission within the coordination area[1] as specified in Annex 2 to this Resolution of an earth station of a non-geostationary satellite network, in a band allocated with equal rights to terrestrial radiocommunication services and space radiocommunication services (space-to-Earth), it shall effect coordination of the proposed assignment with the administration responsible for the earth stations with respect to the frequency assignments:

SUP

~~[1] The coordination area is defined as the service area in which it is intended to operate the typical earth stations, extended in all directions by a coordination distance of [500 km], or as a circular zone with a radius of [500 km] centred on the coordinates of the fixed earth station. For a service area in which aircraft earth stations operate, the coordination area is the service area extended in all directions by a coordination distance of [1 000 km].~~

ADD

4.1.1 for which the associated space network characteristics have been communicated to the Bureau under paragraph 1.3, and

MOD

4.1.~~1~~2 which are in conformity with No. **1503**; and

SUP

~~4.1.2 for which coordination has been agreed under paragraph 3.5.1, or~~

ADD

4.1.3 either coordinated under No1107 or paragraph 3.1 above, or

4.1.4 to be taken into account for coordination with effect from the date of communication of the information referred to in No 1113 or paragraph 3.2 above; or

4.1.5 recorded in the Master Register with a favorable finding with respect to 1505 or paragraph 5.1.2 below; or

4.1.6 recorded in the Master register with an unfavorable finding with respect to No 1505 or paragraph 5.1.2 below, and a favorable finding with respect to No 1509 or paragraph 5.1.4 below; or

4.1.7 recorded in the Master Register with an unfavorable finding with respect to No 1505 or paragraph 5.1.2 below and No 1509 or paragraph 5.1.4 below, the notifying administration having stated that it accepts the interference resulting from the existing terrestrial stations located within the coordination area of the earth station on the date of its recording.

ADD	**4.1.8** (2) No coordination under paragraph 4.1 is required when an administration proposes: **4.1.9** *a)* to bring into use a terrestrial station which is located, in relation to an earth station, outside the coordination area; **4.1.10** *b)* to change the characteristics of an existing assignment in such a way as ~~not~~ to remain within the envelope of the characteristics of this assignment. **4.1.11** *c)* to bring into use a terrestrial station within the coordination area of an earth station, provided that the proposed terrestrial station assignment is outside any part of a frequency band coordinated under 3.5.1 for reception by that earth station.
NOC	*Coordination Data*
NOC	4.2 For the purpose of effecting coordination, the administration requesting coordination shall send to each administration concerned under paragraph 4.1 all pertinent information. The request for coordination may specify all or some of the frequency assignments expected to be used within the next three years by stations of a terrestrial network wholly or partly within the coordination area of the earth stations. Thereafter each assignment shall be dealt with individually.
NOC	*Acknowledgement of Receipt of Coordination Data*
NOC	4.3 An administration with which coordination is sought under paragraph 4.1 shall immediately acknowledge receipt of the coordination data.
NOC	*Examination of Coordination Data and Agreement Between Administrations*

MOD	4.4 On receipt of the coordination data, the administration with which coordination is sought shall promptly examine the matter with regard to interference which would affect the services rendered by its earth stations covered by paragraphs 4.1 to 4.1.7, which are operating or are to be operated within the next three years.
NOC	4.5 The administration with which coordination is sought shall, within an overall period of four months from dispatch of the coordination data, either notify the administration requesting coordination of its agreement to the proposed assignment or, if this is not possible, indicate the reasons for its objection and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem.
ADD *[RR 1168 to 1181]*	**4.6** *Requests to the Bureau for Assistance in Effecting Coordination*
ADD	**4.6.1** An administration seeking coordination may request the Bureau to endeavour to effect coordination in those cases where:
ADD	**4.6.2** a) an administration with which coordination is sought under paragraph 4.1 fails to acknowledge receipt under paragraph 4.3 within thirty days of dispatch of the coordination data referred to in paragraph 4.2; *or*
ADD	**4.6.3** b) an administration has acknowledged receipt under paragraph 4.3, but fails to give a decision within four months of dispatch of the coordination data; *or*
ADD	**4.6.4** c) there is disagreement between the administration seeking coordination and an administration with which coordination is sought as to the acceptable interference; *or*
ADD	**4.6.5** d) coordination between administrations is not possible for any other reason.
ADD	**4.6.6** In so doing, the administration shall furnish the necessary information to enable the Bureau to endeavour to effect such coordination.

ADD 4.7

Action to Be Taken by the Bureau

ADD 4.7.1

Where the Bureau receives a request under paragraph 4.6.2, it shall forthwith send a telegram to the administration concerned requesting immediate acknowledgement.

ADD 4.7.2

Where the Bureau receives an acknowledgement following its action under paragraph 4.7.1, or where the Bureau receives a request under paragraph 4.6.3, it shall forthwith send a telegram to the administration concerned requesting an early decision in the matter.

ADD 4.7.3

Where the Bureau receives a request under paragraph 4.6.5, it shall endeavour to effect coordination in accordance with the provisions of paragraph 4.1. Where the Bureau receives no acknowledgement of its request for coordination within three months, it shall act in accordance with paragraph 4.6.7.

ADD 4.7.4

Where necessary, as part of the procedure under paragraph 4.6.1 to 4.6.5, the Bureau shall assess the interference. In any case, the Bureau shall inform the administrations concerned of the results obtained.

ADD 4.7.5

The Bureau may request additional information which it may require to assess the interference to the services concerned.

ADD

4.7.6

Where an administration fails to reply within thirty days of dispatch of the Bureau's telegram sent under paragraph 4.7.1 requesting an acknowledgement, or fails to give a decision in the matter within thirty days of dispatch of the Bureau's telegram of request sent under 4.7.2, it shall be deemed that the administration with which coordination was sought has undertaken that no complaint will be made in respect of any harmful interference which may be caused by the terrestrial station being coordinated to the service rendered by its earth station.

NOC

Notification of Frequency Assignments in the Event of Continuing Disagreement

MOD

~~4.6~~4.8 In the event of continuing disagreement between an administration seeking to effect coordination and an administration with which coordination has been sought, the administration seeking coordination shall, except in the cases where the assistance of the Bureau~~Board~~ has been requested, defer the submission of its notice concerning the proposed assignment by six months from the date of the request for coordination, taking into account the provisions of Nos. **1230** and **1496**. When the assistance of the Bureau~~Board~~ has been requested, the submission of the notice shall be deferred for a further three months.

NOC

Section V. Notification of Frequency Assignments

NOC

Notification of Assignments to Space Stations and Earth Stations

MOD

5.1 An administration shall, for the purpose of notifying an assignment to the Bureau~~Board~~, apply the provisions of Article **13.** When applying the provisions of Article **13** to frequency assignment notices relating to space stations and earth stations covered by this Resolution, the Bureau~~Board~~ shall:

MOD

5.1.1 in applying No. **1504**, also examine the notice with respect to its conformity with the provisions of paragraphs 2.1, 2.2 and 2.5.8 relating to coordination of the use of the frequency assignment with the other administrations concerned;

MOD

5.1.2 in applying No. **1505**, also examine the notice with respect to its conformity with the provisions of paragraphs 3.1 and 3.1.1 to 3.1.3 relating to coordination of the use of the frequency assignment with the other administrations concerned;

NOC

5.1.3 in applying No. **1506**, also examine the notice with respect to the probability of harmful interference when the coordination under paragraph 2.1 or 2.2 has not been successfully effected;

NOC

5.1.4 in applying No. **1509**, also examine the notice with respect to the probability of harmful interference when the coordination under paragraph 3.1 has not been successfully effected;

NOC

5.1.5 not apply Nos. **1515** and **1516.**

ADD

5.1.6 apply No. **1550** with respect to the date of publication of the special section of the weekly circular referred to in paragraph 1.3.

NOC

5.2 The examination under paragraph 5.1.3 or 5.1.4 shall take into account the frequency assignments for transmission or reception already recorded in the Master Register.

NOC

Notification of Assignments to Terrestrial Stations

MOD

5.3 An administration shall, for the purpose of notifying an assignment to the Bureau~~Board~~, apply the provisions of Article **12.** When applying the provisions of Article **12** the Bureau~~Board~~ shall, in application of No. **1353**, examine frequency assignment notices relating to terrestrial stations covered by this Resolution with respect to their conformity with the provisions of paragraph 4.1 relating to coordination of the use of the frequency assignment with the other administrations concerned

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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COMMITTEE 4

Third report from the Chairman of Working Group 4B to Committee 4

Replace pages 1-14 by the following pages.

P. ABOUDARHAM
Chairman of Working Group 4B

NOC ANNEX 1A

NOC (to Appendix S4)

NOC **List of characteristics of stations in the terrestrial services**[1]

NOC **ITEM B - Notifying administration**

Country symbol of the notifying administration.

NOC **ITEM SYNC - Synchronized network**

Symbol followed by the identification number of the network, if the station concerned by the assignment pertains to a synchronized network.

NOC **ITEM 1A - Assigned frequency**

The assigned frequency as defined in Article **S1**.

NOC **ITEM 1B - Reference frequency**

The reference frequency as defined in Article **S1**.

NOC **ITEM 1C - Preferred band (MHz)**

For notifications under Nos. **S13.5** and **S7.6** and for HF broadcasting stations in their exclusive bands.

ADD **ITEM 1D - Vision Carrier Frequency**

The vision carrier frequency of a broadcasting television assignment.

MOD **ITEM 1E - Frequency offset**

The carrier frequency offset ~~as a fraction~~ expressed as a multiple of 1/12 of the line frequency of the television system concerned, expressed by a number and a symbol (P or N).

NOC **ITEM 1G - Alternative frequency**

For HF broadcasting stations in their exclusive bands.

MOD [1] *Note: The Bureau shall develop and keep up-to-date forms of notice to meet fully the statutory provisions of this Appendix and related decisions of future conferences.* ~~*A detailed description*~~*Additional information of items listed in this annex together with an explanation of the symbols is to be found in the Preface to the International Frequency List.*

NOC **ITEM 1H - Other frequencies used**

For HF broadcasting stations in their exclusive bands.

MOD **ITEM 1X - Channel number proposed or allotted channel**

For HF coast radiotelephone stations ~~(see Article S10)~~.

MOD **ITEM 1Y - Channel number of the alternative proposed channel**

For HF coast radiotelephone stations ~~(see Article S10)~~.

MOD **ITEM 1Z - Channel number of channel to be replaced**

For HF coast radiotelephone stations ~~(see Article S10)~~.

NOC **ITEM 2C - Date of bringing into use**

The date (actual or foreseen, as appropriate) of bringing the frequency assignment (new or modified) into use.

NOC **ITEM 3A - Call sign (identification)**

The call sign or other identification used in accordance with Article **S19**.

NOC **ITEM 4A - Name of the transmitting station**

The name of the locality by which the transmitting station is known or in which it is situated.

NOC **ITEM 4B - Country or geographical area**

The country or geographical area in which the station is located.

NOC **ITEM 4C - Geographical coordinates**

The geographical coordinates (longitude and latitude in degrees and minutes) of the transmitter site. In some cases, seconds are also indicated.

NOC **ITEM 4D - Radius of the circular area**

The nominal radius (km) of the circular area in which the mobile transmitting stations are operating.

NOC **ITEM 4E - Country symbol or Standard defined area**

A country symbol or a standard defined area described by the symbols contained in standard references.

NOC **ITEM 4F - B1 character transmitter coverage area identifier**

For a coast station assignment in the international NAVTEX system.

NOC **ITEM 4G - Ground Conductivity**

For assignments to stations of the broadcasting service covered by the LF/MF Broadcasting Agreement (Regions 1 and 3), Geneva, 1975.

NOC **ITEM 5A - Name of the receiving station**

The name of the locality by which the receiving station is known or in which it is situated.

NOC **ITEM 5B - Country or geographical area**

The country or geographical area in which the receiving station is located.

NOC **ITEM 5C - Geographical coordinates**

The geographical coordinates (longitude and latitude in degrees and minutes) of the site of the receiving station.

NOC **ITEM 5D - Area of the receiving station(s)**

The standard defined area of reception of the transmitting station.

NOC **ITEM 5E - Longitude and latitude of the centre of the circular receiving area**

The geographical coordinates (in degrees and minutes).

NOC **ITEM 5F - Nominal radius of the circular receiving area**

The radius (km) of the circular receiving area.

ADD **ITEM 5G - Maximum length of circuit**

The maximum length of the circuit (in km) for receiving areas other than circular receiving area.

NOC **ITEM 6A - Class of station**

The class of station described by a symbol.

NOC **ITEM 6B - Nature of service**

The nature of service described by a symbol.

NOC **ITEM 6C - Experimental station**

Symbol EX in this item for experimental station only.

NOC **ITEM 7A - Class of emission, necessary bandwidth and description of transmission**

The class of emission, necessary bandwidth and description of transmission, in accordance with Article **S2** and Appendix **S1**.

NOC **ITEM 7B - Class of operation of the assignment**

The class of operation of an assignment.

NOC **ITEM 7C1 - Television system**

A symbol corresponding to the television system.

NOC **ITEM 7C2 - Colour system**

A symbol corresponding to the colour system.

NOC **ITEM 7D - Transmission system**

A symbol corresponding to the transmission system for an assignment to a broadcasting station.

ADD **ITEM 7E - Frequency deviation**

For any type of modulation, as applicable: the peak-to-peak frequency deviation (MHz).

ADD **ITEM 7F - Energy dispersal**

For any type of modulation, as applicable: the sweep frequency (kHz) of the energy dispersal waveform.

NOC **ITEM 8 - Power (dBW)**

Symbol X, Y or Z describes as appropriate the type of power corresponding to the class of emission.

NOC **ITEM 8A - Power delivered to the antenna (dBW)**

The power delivered to the antenna transmission line expressed in dBW.

ADD **ITEM 8AB - Maximum power density (dB(W/Hz))**

The maximum power density (dB(W/Hz)) for each carrier type averaged over the worst 4 kHz band for carriers below 15 GHz, or averaged over the worst 1 MHz band for carriers above 15 GHz supplied to the antenna transmission line.

NOC **ITEM 8B - Radiated power (dBW)**

Indicate the radiated power expressed in dBW in one of the forms described in Nos. **S1.161 - S1.163**.

MOD **ITEM 8BH - Effective radiated power ~~of the horizontal component in different azimuths~~ (dBW) - horizontal**

The effective radiated power of the horizontally polarized component ~~in different azimuths (in dBW) for an assignment to a broadcasting station~~(for VHF BC and VHF/UHF BT assignments).

MOD **ITEM 8BV - Effective radiated power ~~of the vertical component in different azimuths~~(dBW) - vertical**

The effective radiated power of the vertically polarized component ~~in different azimuths (in dBW) for an assignment to a broadcasting station~~(for VHF BC and VHF/UHF BT assignments).

MOD **ITEM 8D - Vision/Sound Power Ratio**

Vision/sound carrier power ratio for VHF/UHF ~~television broadcasting station~~BT assignments.

ADD **ITEM 9 - Directivity of the antenna**

Indicate if the antenna is directional (D) or non-directional (ND).

NOC **ITEM 9A - Azimuth of maximum radiation**

For a directive transmitting antenna, the azimuth of maximum radiation of the transmitting antenna in degrees (clockwise) from True North, or the symbol "ND" meaning non-directional.

NOC **ITEM 9AA - Central azimuth of augmentation**

The central azimuth of the augmentation (centre of the span) in degrees for an assignment to a broadcasting station.

ADD **ITEM 9AB - Azimuthal sector for rotating antenna**

Two azimuths in degrees (clockwise from True North) defining the sector in which the antenna rotates.

NOC **ITEM 9B - Elevation angle of maximum directivity**

The angle of maximum directivity in degrees with one decimal position.

NOC **ITEM 9C - Angular width of radiation main lobe (Beamwidth)**

The total angle measured horizontally in a plane containing the direction of maximum radiation, in degrees, within which the power radiated in any direction does not fall more than 3 dB below the power radiated in the direction of maximum radiation.

NOC **ITEM 9CA - Total span of augmentation**

The total span of the augmentation in degrees for an assignment to a broadcasting station.

NOC **ITEM 9D - Polarization**

Information on polarization.

NOC **ITEM 9E - Height of antenna**

Information on height in metres.

ADD **ITEM 9EA - Altitude of site above sea level**

Information on the altitude of the site above mean sea level, in metres (for VHF BC and VHF/UHF BT assignments).

ADD **ITEM 9EB - Maximum effective antenna height**

The maximum effective height of the antenna, in metres (for VHF BC and VHF/UHF BT assignments).

ADD **ITEM 9EC - Effective antenna height at different azimuths**

The effective height of the antenna at different azimuths, in metres, for every 10 degrees interval (for VHF BC and VHF/UHF BT assignments).

MOD **ITEM 9F - Electrical height or maximum ~~effective~~ height of the antenna**

The antenna height in electrical degrees or metres.

NOC **ITEM 9G - Maximum antenna gain (isotropic, relative to a short vertical antenna or relative to a half-wave dipole, as appropriate)**

The maximum gain of the antenna in the direction of maximum radiation (see No. **S1.160**).

NOC **ITEM 9GH - Antenna gain for different azimuths in the horizontal plane**

The antenna gain in the horizontal plane for different azimuths (in dB).

NOC **ITEM 9GV - Antenna gain for different azimuths in the vertical plane**

The antenna gain in the vertical plane for different azimuths (in dB).

NOC **ITEM 9H - Azimuths defining the sectors of limited radiation in degrees (clockwise) from True North**

The azimuth or azimuthal sectors of limited radiation in degrees (clockwise) from True North.

NOC **ITEM 9I - Maximum agreed radiation in the sectors**

The maximum agreed radiation in the sector, in dB relative to a cymomotive force (c.m.f.) of 300 V or an effective monopole radiated power (e.m.r.p.) of 1 kW, determined from the nominal power of the transmitter and the theoretical gain of the antenna without allowing for miscellaneous losses.

NOC **ITEM 9IA - Radiation at central azimuth of augmentation**

The value of the radiation at the central azimuth of the augmentation, expressed in mV/m at 1 km.

MOD **ITEM 9J - Reference antenna**

~~A type of antenna described~~The measured radiation diagram of the antenna, the reference radiation diagram or by the symbols in standard references to be used for coordination.

ADD **ITEM 9K - Receiving system noise temperature**

The lowest total receiving system noise temperature in kelvin.

NOC **ITEM 9N - Attenuation in a sector (dB)**

The value in dB of the attenuation in a defined sector.

NOC **ITEM 9NA - Augmentation number**

The serial numbers of the augmentations as described in items 9IA, 9AA and 9CA.

NOC **ITEM 9NH - Attenuation (dB) in the horizontal plane at different azimuths**

The value of attenuation with respect to maximum ERP in the horizontal plane at different azimuths in dB.

NOC **ITEM 9NV - Attenuation (dB) in the vertical plane at different azimuths**

The value of the attenuation with respect to maximum ERP in the vertical plane at different azimuths in dB.

NOC **ITEM 9O - Type of pattern**

The type of antenna radiation pattern, represented by a symbol.

NOC **ITEM 9P - Special quadrature factor**

The value of the special quadrature factor, in mV/m at 1 km (to replace the normal expanded quadrature factor when special precautions are taken to ensure pattern stability).

NOC **ITEM 9Q - Type of antenna**

Simple vertical antenna or directional antenna.

NOC **ITEM 9T1 - Tower number**

The serial number of each of the towers whose characteristics are described in items 9T2 to 9T8.

NOC **ITEM 9T2 - Tower field ratio**

The ratio of the tower field to the field of the reference tower.

NOC **ITEM 9T3 - Phase difference of the field**

The positive or negative difference in the field from the tower with respect to the field from the reference tower in degrees.

NOC **ITEM 9T4 - Electrical tower spacing**

The electrical spacing of the tower from the reference point in degrees.

NOC **ITEM 9T5 - Angular tower orientation**

From True North, the angular orientation of the tower from the reference point in degrees.

NOC **ITEM 9T6 - Reference point indicator**

The reference point.

NOC **ITEM 9T7 - Electrical height of tower**

The electrical height of the tower under consideration in degrees.

NOC **ITEM 9T8 - Tower structure**

A symbol corresponding to the tower structure.

NOC **ITEMS 9T9A to 9T9D - Description of top-loaded or sectionalized tower**

The description of top-loaded or sectionalized towers, in degrees.

NOC **ITEM 10A - Maximum hours (UTC) of operation of the circuit to each locality or area**

The maximum hours of operation in hours and minutes (UTC) or by symbols.

MOD **ITEM 10B - Regular hours (UTC) of operation of the frequency assignment**

The regular hours of operation (in hours and minutes from ... to ...) of the frequency assignment in UTC.

NOC **ITEM 10C - Seasons and solar activity**

The season or month of the year and the degree of solar activity by appropriate symbols.

MOD **ITEM 10D - Estimated peak hours of traffic**

For HF coast radiotelephone stations ~~(see Article S10)~~.

MOD **ITEM 10E - Estimated daily volume of traffic**

For HF coast radiotelephone stations ~~(see Article S10)~~.

NOC **ITEM 10F - Duration of transmissions**

For coast stations in the International NAVTEX system, the duration of transmission in hours and minutes.

NOC **ITEM 11 - Coordination with other administrations**

Country or geographical area with which coordination is to be effected and the provision (No. of the Radio Regulations, regional agreement, or other arrangement) requiring such coordination.

MOD **ITEM 12A - Operating administration or ~~company~~agency**

The symbol for the operating agency.

NOC **ITEM 12B - Postal and telegraphic addresses of the administration responsible for the station**

Symbol for the address of the administration responsible for the station and to which communication should be sent on urgent matters regarding interference, quality of emissions and questions referring to the technical operation of the circuit (see Article **S15**).

ANNEX 1B
(to Appendix S4)

Table of characteristics to be submitted for stations in the terrestrial services

NOTICE TYPE	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	NOTICE TYPE
ITEM NO.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX, [AX]	SM	AM, ML MA, MO	MS, OD SA	all, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. S11)	ITEM NO.
B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	B
SYNC									X					X				SYNC
1A	X	X	X	X	X	X	X	X	X	X	X[5]	X	X[5]	X	X		X	1A
1B	+	+	+	+	+	+	+	+			X[5]				+			1B
1C				+											X	+		1C
1D											X		X					1D
1E											X		X					1E
1G															O			1G
1H															X			1H
1X																X		1X
1Y																O		1Y
1Z																+		1Z
2C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	+	X	X	2C
3A	X	X	X	X	X				X	0	0	0	0		X		X	3A
4A	X	X	X	X	X				X	X	X	X	X	X	X	+	X	4A
4B	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	4B
4C	X	X	X	X	X	*1)	*1)	*1)	X	X	X	X	X	X	X	+	X	4C
4D						*1)	*1)	*1)										4D
4E						*	*	*										4E

X - Mandatory * - Either one or the other item(s) + - required in specific cases O - optional

1) Either ~~(4D and 4E) or 4F~~ (4C and 4D) or (4E); 5) May not be required in the new TerRaSys.

NOTICE TYPE	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	NOTICE TYPE
ITEM NO.	AL, NL LR, OE	FC, FP FA, FB BC	FD, FG	FX, [AX]	SM	AM, ML MA, MO	MS, OD, SA	all except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. S11)	ITEM NO.
4F																	X	4F
4G									X									4G
5A				X		X	X											5A
5B				X		X	X											5B
5C				X		X	X										*	5C
5D		*2)	*2)												X	*3)	*	5D
5E	X	*	*		X											*		5E
5F	X	*	*		X											*		5F
5G	±	±	±	±	±											±	±	5G
6A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6A
6B	+	+	X	X		X	X	+								X		6B
6C	+	+	+	+	+													6C
7A	X	X	X	X	X	X	X	X	X	X5)	X5)	X5)	X5)	X	X	X	X	7A
7B				X					X					X				7B
7C1									X4)		X		X					7C1
7C2											X		X					7C2
7D												X						7D
7E				+7)														7E
7F				+7)														7F
8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	8

X - Mandatory * - Either one or the other item(s) + - required in specific cases O - optional

2)Either (5D) or (5E and 5F)~~;~~ 3) Either (5D and 5F) or (5E and 5F)~~;~~ 4) For low power channels; 5) May not be required in the new TerRaSys

7) This information need only to be furnished when such information has been used as a basis to effect coordination with another administration. This information may be optinally provided in a request for coordination under [S9.16, S9.18 and S9.19].

NOTICE TYPE	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	NOTICE TYPE
ITEM NO.	AL, NL LR OE	FC, FP FA BC, FB	FD, FG	FX,[AX]	SM	AM, ML MA MO	MS, OD, SA	all, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. S11)	ITEM NO.
8A	*	*	X	*	X	*	*	*	X					X	X	X	*	8A
8AB				+7)														8AB
8B	*	*		*		*	*	*		X	X	X	X				*	8B
8BH										X	X	X	X					8BH
8BV										X	X	X	X					8BV
8D											X		X					8D
9	X	X	X	X	X				X	X	X	X	X		X	X	X	9
9A	X	X	X	X	X				X	X	X	X	X		X	X	X	9A
9AA														X				9AA
9AB	±	±	±	±	±				±						±	±	±	9AB
9B				+											X			9B
9C	+	+	+	+	+											+		9C
9CA														X				9CA
9D				+						X	X	X	X					9D
9E				+					X	X	X	X	X					9E
9EA										X	X	X	X					9EA
9EB										X	X	X	X					9EB
9EC										X	X	X	X					9EC
9F														X				9F
9G	+	+	+	+	+			+							+	+		9G
9GH									X									9GH

X - Mandatory * - Either one or the other item(s) + - required in specific cases O - optional

7) This information need only to be furnished when such information has been used as a basis to effect coordination with another administration. This information may be optinally provided in a request for coordination under [S9.16, S9.18 and S9.19].

NOTICE TYPE	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	NOTICE TYPE
ITEM NO.	AL, NL LR OE	FC, FP FA BC, FB	FD, FG	FX,[AX]	SM	AM, ML MA MO	MS, OD, SA	all, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. S11)	ITEM NO.
9GV									X									9GV
9H									X	X[5]	X[5]	X[5]		+		+		9H
9I									X					X				9I
9IA														X				9IA
9J				+, +[7]											X	+		9J
9K				+[7]														9K
9N												X[5]						9N
9NA														X				9NA
9NH										X[6]	X[6]	X[6]	X					9NH
9NV										X[6]	X[6]	X[6]	X					9NV
9O														X	X	X		9O
9P														X				9P
9Q									X					X				9Q
9T1														X				9T1
9T2														X				9T2
9T3														X				9T3

X - Mandatory * - Either one or the other item(s) + - required in specific cases O - optional

5) May not be required in the new TerRaSys; 6) To be used in the future TerRaSys.

7) This information need only to be furnished when such information has been used as a basis to effect coordination with another administration. This information may be optinally provided in a request for coordination under [S9.16, S9.18 and S9.19].

NOTICE TYPE	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	NOTICE TYPE
ITEM NO.	AL, NL LR OE	FC, FP FA BC, FB	FD, FG	FX,[AX]	SM	AM, ML MA MO	MS, OD, SA	all, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. S11)	ITEM NO.
9T4														X				9T4
9T5														X				9T5
9T6														X				9T6
9T7														X				9T7
9T8														X				9T8
9T9A														±				9T9A
9T9B														X				9T9B
9T9C														±				9T9C
9T9D														±				9T9D
10A				+														10A
10B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	10B
10C		+		+											X			10C
10D																X		10D
10E																X		10E
10F																	X	10F
11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	11
12A	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	12A
12B	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	12B

X - Mandatory * - Either one or the other item(s) + - required in specific cases O - optional

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 186-E
7 November 1995
Original: English

COMMITTEE 4

Third report from the Chairman of Working Group 4B to Committee 4

Attached are Resolution 46 (Rev.WRC-95) and Annexes 1A and 1B to Appendix S4 for the consideration of Committee 4.

P. ABOUDARHAM
Chairman of Working Group 4B

NOC

ANNEX 1A

NOC

(to Appendix S4)

NOC

List of characteristics of stations in the terrestrial services[1]

NOC

ITEM B - Notifying administration

Country symbol of the notifying administration.

NOC

ITEM SYNC - Synchronized network

Symbol followed by the identification number of the network, if the station concerned by the assignment pertains to a synchronized network.

NOC

ITEM 1A - Assigned frequency

The assigned frequency as defined in Article **S1**.

NOC

ITEM 1B - Reference frequency

The reference frequency as defined in Article **S1**.

NOC

ITEM 1C - Preferred band (MHz)

For notifications under Nos. **S13.5** and **S7.6** and for HF broadcasting stations in their exclusive bands.

ADD

ITEM 1D - Vision Carrier Frequency

The vision carrier frequency of a broadcasting television assignment.

MOD

[1] *Note: The Bureau shall develop and keep up-to-date forms of notice to meet fully the statutory provisions of this Appendix and related decisions of future conferences. ~~A detailed description~~Additional information of items listed in this annex together with an explanation of the symbols is to be found in the Preface to the International Frequency List.*

NOC **ITEM 1E - Frequency offset**

The carrier frequency offset as a fraction of the line frequency of the television system concerned, expressed by a symbol.

NOC **ITEM 1G - Alternative frequency**

For HF broadcasting stations in their exclusive bands.

NOC **ITEM 1H - Other frequencies used**

For HF broadcasting stations in their exclusive bands.

MOD **ITEM 1X - Channel number proposed or allotted channel**

For HF coast radiotelephone stations ~~(see Article S10)~~.

MOD **ITEM 1Y - Channel number of the alternative proposed channel**

For HF coast radiotelephone stations ~~(see Article S10)~~.

MOD **ITEM 1Z - Channel number of channel to be replaced**

For HF coast radiotelephone stations ~~(see Article S10)~~.

NOC **ITEM 2C - Date of bringing into use**

The date (actual or foreseen, as appropriate) of bringing the frequency assignment (new or modified) into use.

NOC **ITEM 3A - Call sign (identification)**

The call sign or other identification used in accordance with Article **S19**.

NOC **ITEM 4A - Name of the transmitting station**

The name of the locality by which the transmitting station is known or in which it is situated.

NOC **ITEM 4B - Country or geographical area**

The country or geographical area in which the station is located.

NOC

ITEM 4C - Geographical coordinates

The geographical coordinates (longitude and latitude in degrees and minutes) of the transmitter site. In some cases, seconds are also indicated.

NOC

ITEM 4D - Radius of the circular area

The nominal radius (km) of the circular area in which the mobile transmitting stations are operating.

NOC

ITEM 4E - Country symbol or Standard defined area

A country symbol or a standard defined area described by the symbols contained in standard references.

NOC

ITEM 4F - B1 character transmitter coverage area identifier

For a coast station assignment in the international NAVTEX system.

NOC

ITEM 4G - Ground Conductivity

For assignments to stations of the broadcasting service covered by the LF/MF Broadcasting Agreement (Regions 1 and 3), Geneva, 1975.

NOC

ITEM 5A - Name of the receiving station

The name of the locality by which the receiving station is known or in which it is situated.

NOC

ITEM 5B - Country or geographical area

The country or geographical area in which the receiving station is located.

NOC

ITEM 5C - Geographical coordinates

The geographical coordinates (longitude and latitude in degrees and minutes) of the site of the receiving station.

NOC

ITEM 5D - Area of the receiving station(s)

The standard defined area of reception of the transmitting station.

NOC **ITEM 5E - Longitude and latitude of the centre of the circular receiving area**

The geographical coordinates (in degrees and minutes).

NOC **ITEM 5F - Nominal radius of the circular receiving area**

The radius (km) of the circular receiving area.

ADD **ITEM 5G - Maximum length of circuit**

The maximum length of the circuit (in km) for receiving areas other than circular receiving area.

NOC **ITEM 6A - Class of station**

The class of station described by a symbol.

NOC **ITEM 6B - Nature of service**

The nature of service described by a symbol.

NOC **ITEM 6C - Experimental station**

Symbol EX in this item for experimental station only.

NOC **ITEM 7A - Class of emission, necessary bandwidth and description of transmission**

The class of emission, necessary bandwidth and description of transmission, in accordance with Article **S2** and Appendix **S1**.

NOC **ITEM 7B - Class of operation of the assignment**

The class of operation of an assignment.

NOC **ITEM 7C1 - Television system**

A symbol corresponding to the television system.

NOC **ITEM 7C2 - Colour system**

A symbol corresponding to the colour system.

NOC **ITEM 7D - Transmission system**

A symbol corresponding to the transmission system for an assignment to a broadcasting station.

NOC **ITEM 8 - Power (dBW)**

Symbol X, Y or Z describes as appropriate the type of power corresponding to the class of emission.

NOC **ITEM 8A - Power delivered to the antenna (dBW)**

The power delivered to the antenna transmission line expressed in dBW.

NOC **ITEM 8B - Radiated power (dBW)**

Indicate the radiated power expressed in dBW in one of the forms described in Nos. **S1.161 - S1.163**.

MOD **ITEM 8BH - Effective radiated power ~~of the horizontal component in different azimuths~~ (dBW) - horizontal**

The effective radiated power of the horizontally polarized component ~~in different azimuths (in dBW) for an assignment to a broadcasting station~~(for VHF BC and VHF/UHF BT assignments).

MOD **ITEM 8BV - Effective radiated power ~~of the vertical component in different azimuths~~(dBW) - vertical**

The effective radiated power of the vertically polarized component ~~in different azimuths (in dBW) for an assignment to a broadcasting station~~(for VHF BC and VHF/UHF BT assignments).

MOD **ITEM 8D - Vision/Sound Power Ratio**

Vision/sound carrier power ratio for VHF/UHF ~~television broadcasting station~~BT assignments.

ADD **ITEM 9 - Directivity of the antenna**

Indicate if the antenna is directional (D) or non-directional (ND).

NOC **ITEM 9A - Azimuth of maximum radiation**

For a directive transmitting antenna, the azimuth of maximum radiation of the transmitting antenna in degrees (clockwise) from True North, or the symbol "ND" meaning non-directional.

NOC **ITEM 9AA - Central azimuth of augmentation**

The central azimuth of the augmentation (centre of the span) in degrees for an assignment to a broadcasting station.

ADD **ITEM 9AB - Azimuthal sector for rotating antennas**

Information on azimuthal sector (in degrees) in which the antenna rotates (from East to North).

NOC **ITEM 9B - Elevation angle of maximum directivity**

The angle of maximum directivity in degrees with one decimal position.

NOC **ITEM 9C - Angular width of radiation main lobe (Beamwidth)**

The total angle measured horizontally in a plane containing the direction of maximum radiation, in degrees, within which the power radiated in any direction does not fall more than 3 dB below the power radiated in the direction of maximum radiation.

NOC **ITEM 9CA - Total span of augmentation**

The total span of the augmentation in degrees for an assignment to a broadcasting station.

NOC **ITEM 9D - Polarization**

Information on polarization.

NOC **ITEM 9E - Height of antenna**

Information on height in metres.

ADD **ITEM 9EA - Altitude of site above sea level**

Information on the altitude of the site above mean sea level, in metres (for VHF BC and VHF/UHF BT assignments).

ADD

ITEM 9EB - Maximum effective antenna height

The maximum effective height of the antenna, in metres (for VHF BC and VHF/UHF BT assignments).

ADD

ITEM 9EC - Effective antenna height at different azimuths

The effective height of the antenna at different azimuths, in metres, for every 10 degrees interval (for VHF BC and VHF/UHF BT assignments).

NOC

ITEM 9F - Electrical height or maximum effective height of the antenna

The antenna (electrical) height in degrees or metres.

NOC

ITEM 9G - Maximum antenna gain (isotropic, relative to a short vertical antenna or relative to a half-wave dipole, as appropriate)

The maximum gain of the antenna in the direction of maximum radiation (see No. **S1.160**).

NOC

ITEM 9GH - Antenna gain for different azimuths in the horizontal plane

The antenna gain in the horizontal plane for different azimuths (in dB).

NOC

ITEM 9GV - Antenna gain for different azimuths in the vertical plane

The antenna gain in the vertical plane for different azimuths (in dB).

NOC

ITEM 9H - Azimuths defining the sectors of limited radiation in degrees (clockwise) from True North

The azimuth or azimuthal sectors of limited radiation in degrees (clockwise) from True North.

NOC

ITEM 9I - Maximum agreed radiation in the sectors

The maximum agreed radiation in the sector, in dB relative to a cymomotive force (c.m.f.) of 300 V or an effective monopole radiated power (e.m.r.p.) of 1 kW, determined from the nominal power of the transmitter and the theoretical gain of the antenna without allowing for miscellaneous losses.

NOC **ITEM 9IA - Radiation at central azimuth of augmentation**

The value of the radiation at the central azimuth of the augmentation, expressed in mV/m at 1 km.

NOC **ITEM 9J - Reference antenna**

A type of antenna described by symbols in standard references.

NOC **ITEM 9N - Attenuation in a sector (dB)**

The value in dB of the attenuation in a defined sector.

NOC **ITEM 9NA - Augmentation number**

The serial numbers of the augmentations as described in items 9IA, 9AA and 9CA.

NOC **ITEM 9NH - Attenuation (dB) in the horizontal plane at different azimuths**

The value of attenuation with respect to maximum ERP in the horizontal plane at different azimuths in dB.

NOC **ITEM 9NV - Attenuation (dB) in the vertical plane at different azimuths**

The value of the attenuation with respect to maximum ERP in the vertical plane at different azimuths in dB.

NOC **ITEM 9O - Type of pattern**

The type of antenna radiation pattern, represented by a symbol.

NOC **ITEM 9P - Special quadrature factor**

The value of the special quadrature factor, in mV/m at 1 km (to replace the normal expanded quadrature factor when special precautions are taken to ensure pattern stability).

NOC **ITEM 9Q - Type of antenna**

Simple vertical antenna or directional antenna.

NOC **ITEM 9T1 - Tower number**

The serial number of each of the towers whose characteristics are described in items 9T2 to 9T8.

NOC **ITEM 9T2 - Tower field ratio**

The ratio of the tower field to the field of the reference tower.

NOC **ITEM 9T3 - Phase difference of the field**

The positive or negative difference in the field from the tower with respect to the field from the reference tower in degrees.

NOC **ITEM 9T4 - Electrical tower spacing**

The electrical spacing of the tower from the reference point in degrees.

NOC **ITEM 9T5 - Angular tower orientation**

From True North, the angular orientation of the tower from the reference point in degrees.

NOC **ITEM 9T6 - Reference point indicator**

The reference point.

NOC **ITEM 9T7 - Electrical height of tower**

The electrical height of the tower under consideration in degrees.

NOC **ITEM 9T8 - Tower structure**

A symbol corresponding to the tower structure.

NOC **ITEMS 9T9A to 9T9D - Description of top-loaded or sectionalized tower**

The description of top-loaded or sectionalized towers, in degrees.

NOC **ITEM 10A - Maximum hours (UTC) of operation of the circuit to each locality or area**

The maximum hours of operation in hours and minutes (UTC) or by symbols.

MOD **ITEM 10B - Regular hours (UTC) of operation of the frequency assignment**

The regular hours of operation (in hours and minutes from ... to ...) of the frequency assignment in UTC.

NOC **ITEM 10C - Seasons and solar activity**

The season or month of the year and the degree of solar activity by appropriate symbols.

MOD **ITEM 10D - Estimated peak hours of traffic**

For HF coast radiotelephone stations ~~(see Article S10)~~.

MOD **ITEM 10E - Estimated daily volume of traffic**

For HF coast radiotelephone stations ~~(see Article S10)~~.

NOC **ITEM 10F - Duration of transmissions**

For coast stations in the International NAVTEX system, the duration of transmission in hours and minutes.

NOC **ITEM 11 - Coordination with other administrations**

Country or geographical area with which coordination is to be effected and the provision (No. of the Radio Regulations, regional agreement, or other arrangement) requiring such coordination.

NOC **ITEM 12A - Operating administration or company**

Symbol for the operating agency.

NOC **ITEM 12B - Postal and telegraphic addresses of the administration responsible for the station**

Symbol for the address of the administration responsible for the station and to which communication should be sent on urgent matters regarding interference, quality of emissions and questions referring to the technical operation of the circuit (see Article **S15**).

ANNEX 1B

(to Appendix S4)

Table of characteristics to be submitted for stations in the terrestrial services

NOTICE TYPE	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	NOTICE TYPE
ITEM NO.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX, AX	SM	AM, ML MA, MO	MS, OD SA	all, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. S11)	ITEM NO.
B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	B
SYNC									X					X				SYNC
1A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	1A
1B	+	+	+	+	+	+	+	+			X				+			1B
1C				+											X	+		1C
1E											X		X					1E
1G															O			1G
1H															X			1H
1X																X		1X
1Y																O		1Y
1Z																+		1Z
2C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	+	X	X	2C
3A	X	X	X	X	X				X						X		X	3A
4A	X	X	X	X	X				X	X	X	X	X	X	X	+	X	4A
4B	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	4B
4C	X	X	X	X	X	*1)	*1)	*1)	X	X	X	X	X	X	X	+	X	4C
4D						*1)	*1)	*1)										4D
4E						*	*	*										4E
4F																	X	4F
4G									X									4G
5A				X		X	X											5A
5B				X		X	X											5B
5C				X		X	X										*	5C
5D		*2)	*2)												X	*3)	*	5D
5E	X	*	*		X											*		5E
5F	X	*	*		X											*		5F

X - Mandatory * Either one or the other item(s) + - required in specific cases O - optional

1) Either ~~(4D and 4E) or 4F~~(4C and 4D or 4E).
2) Either (5D) or (5E and 5F).
3) Either (5D and 5F) or (5E and 5F).

NOTICE TYPE	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	NOTICE TYPE
ITEM NO.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX, AX	SM	AM, ML MA, MO	MS, OD SA	all, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. S11)	ITEM NO.
6A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6A
6B	+	+	X	X		X	X	+								X		6B
6C	+	+	+	+	+													6C
7A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	7A
7B				X					X					X				7B
7C1									X[4)]		X		X					7C1
7C2											X		X					7C2
7D												X						7D
8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	8
8A	*	*	X	*	X	*	*	*	X					X	X	X	*	8A
8B	*	*		*		*	*	*		X	X	X	X				*	8B
8BH												X						8BH
8BV												X						8BV
8D													X					8D
9A	X	X	X	X	X				X	X	X	X	X		X	X	X	9A
9AA														X				9AA
9B				+											X			9B
9C	+	+	+	+	+											+		9C
9CA														X				9CA
9D				+						X	X	X	X					9D
9E				+					X	X	X	X	X					9E
9F														X				9F
9G	+	+	+	+	+			+							+	+		9G
9GH									X									9GH
9GV									X									9GV
9H									X	X	X	X		+		+		9H

X - Mandatory * - Either one or the other item(s) + - required in specific cases O - optional

4) For low - power channels.

NOTICE TYPE	AP1/A1					AP1/B		AP1/C	AP1/A2	AP1/A4		AP1/A5	AP1/A6	AP1/A7	AP2	AP5	AP1/A1	NOTICE TYPE
ITEM NO.	AL, NL LR, OE	FC, FP FA, BC FB	FD, FG	FX, AX	SM	AM, ML MA, MO	MS, OD SA	all, except BC	BC	BC	BT	BC	BT	BC	BC	FC	FC (Art. S11)	ITEM NO.
9I									X					X				9I
9IA														X				9IA
9J				+											X	+		9J
9N												X						9N
9NA														X				9NA
9NH													X					9NH
9NV													X					9NV
9O														X	X	X		9O
9P														X				9P
9Q									X					X				9Q
9T1														X				9T1
9T2														X				9T2
9T3														X				9T3
9T4														X				9T4
9T5														X				9T5
9T6														X				9T6
9T7														X				9T7
9T8														X				9T8
9T9A																		9T9A
9T9B														X				9T9B
9T9C																		9T9C
9T9D																		9T9D
10A				+														10A
10B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	10B
10C		+		+											X			10C
10D																X		10D
10E																X		10E
10F																	X	10F
11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	11
12A	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	12A
12B	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	12B

X - Mandatory * - Either one or the other item(s) + - required in specific cases O - optional

MOD RESOLUTION 46 (~~WARC-92~~Rev.WRC-95)

INTERIM PROCEDURES FOR THE COORDINATION AND NOTIFICATION OF FREQUENCY ASSIGNMENTS OF [NON-GEOSTATIONARY-]SATELLITE NETWORKS IN CERTAIN SPACE SERVICES AND THE OTHER SERVICES TO WHICH ~~THE~~CERTAIN BANDS ARE ALLOCATED[1]

MOD The World ~~Administrative~~ Radiocommunication Conference ~~for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992~~(Geneva, 1995),

NOC *considering*

NOC *a)* that in several different space radiocommunication services there is increasing interest in the use of space systems using non-geostationary-satellite networks;

NOC *b)* that, in order to ensure the satisfactory operation of such networks, other networks and other radio services sharing the same frequency bands, taking into account the relevant allocations, there is a need for procedures to regulate the frequency assignments of non-geostationary-satellite networks;

MOD *c)* that the coordination methods for non-geostationary-satellite networks require specific criteria and calculation methods which are not yet generally available;

MOD *d)* that, consequently, there is a need for interim procedures to be applied until such time as ~~a future conference, with the benefit of further studies by the CCIR and taking account of the experience gained in practice, is able to adopt a~~the coming into force of a suitable permanent procedure ~~such as that set forth in Chapter SIII of the simplified draft of the Radio Regulations~~;

ADD *e)* that there is a need as well for these interim procedures to be applied in certain bands made available by the present Conference for the purpose of providing feeder links to space stations in the non-geostationary-satellite networks of the mobile-satellite service;

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[1] This Resolution shall be applied only to the frequency bands for which specific reference is made to this Resolution in the footnotes to the Table of Frequency Allocations. For the purpose of applying the interim procedures annexed to this Resolution, an administration, when providing information in the form of Appendices **3** or **4**, shall state whether it relates to a geostationary satellite or to a non-geostationary satellite and shall provide the appropriate orbital information.

NOC *considering also*

SUP ~~*e)* that the Plenipotentiary Conference (Nice, 1989), initiated the formation of a Voluntary Group of Experts, one of whose tasks is to simplify the procedures of the Radio Regulations;~~

SUP ~~*f)* that any new procedures adopted by this Conference must therefore be as simple as possible and should, where appropriate, make use of the existing procedures of the Radio Regulations;~~

MOD *gf)* that any interim procedures must take full account of the status of the allocations to services, both terrestrial and space, in frequency bands which may be used by non-geostationary-satellite networks;

MOD ~~*hg)*~~ that any interim procedures must also take full account of the interests of all countries, including the state of development of their terrestrial and space radiocommunication services;

[SUP] ~~*considering further*~~

[~~*i)* that the provisions of No. **2613** of the Radio Regulations, while necessary to safeguard geostationary-satellite networks in the fixed-satellite service from interference which might be caused by non-geostationary-satellite networks, would, if more widely applied, prejudice the development of such systems in other space radiocommunication services;~~]

NOC *recognizing*

MOD that the operation of telecommunication systems in ~~the MSS~~those bands ~~allocated to the mobile-satellite service as well as bands allocated to the fixed-satellite service and used for feeder links of non-geostationary-satellite networks of the mobile-satellite service~~subject to this Resolution must be in conformity with the International Telecommunication Constitution and Convention and the Administrative Regulations in force, in particular their respective preambles and, in this respect:

NOC *a)* the right of each Member to decide how or whether to participate in the above systems, and to determine the terms and conditions of access to such systems from its territory;

NOC *b)* the obligation for entities and organizations providing international or national telecommunication services by non-geostationary-satellite networks to operate at the point of delivery under the legal, financial and regulatory requirements of the Member of the Union in whose territory these services are authorized;

NOC *resolves*

MOD 1. that, pending the ~~adoption~~entry into force of a permanent procedure ~~such as that set forth in Chapter SIII of the simplified draft of the Radio Regulations by a future competent conference~~, the use of frequency assignments by:

MOD *a)* non-geostationary-satellite systems in the space services in relation to other non-geostationary-satellite systems, geostationary-satellite systems and terrestrial ~~systems~~stations;

[SUP] [~~*b)* feeder links supporting non-geostationary-satellite systems in the mobile-satellite service in relation to other non-geostationary-satellite systems, geostationary-satellite systems and terrestrial systems;~~]

MOD *b~~c~~)* geostationary-satellite systems in relation to non-geostationary-satellite systems-[~~including feeder links supporting non-geostationary-satellite systems~~ in the mobile-satellite service]; and,

MOD *c~~d~~)* terrestrial ~~systems~~stations in relation to the earth stations~~ and space stations~~ of non-geostationary-satellite networks;

NOC to which this Resolution applies shall be regulated in accordance with the interim procedures and the associated provisions in the annex hereto;

MOD 2. that the interim procedures annexed to this Resolution apply in addition to those of Articles **11** and **13** for geostationary-satellite networks and shall replace those of Articles **11** and **13** for non-geostationary-satellite networks ~~for the mobile-satellite service and the fixed-satellite service~~in those frequency bands specifically identified by footnote to Article **8**, the Table of Frequency Allocations;

MOD 3. that the interim procedures annexed to this Resolution shall be applied from ~~4 March 1992~~[ ] November 1995;

NOC *invites*

NOC 1. all administrations concerned in or by the introduction and operation of non-geostationary-satellite systems in the relevant space services to cooperate in the application of these interim procedures;

MOD 2. all those administrations which acquire experience in the application of the annexed interim procedures to contribute to the studies of the ~~CCIR~~ITU-R;

MOD *instructs the ~~IFRB~~Bureau*

NOC to apply these procedures and to provide the necessary assistance to administrations;

MOD *invites the ~~CCIR~~ITU-R Study Groups*

NOC to study and develop Recommendations on the coordination methods, the necessary orbital data relating to non-geostationary-satellite systems, and the sharing criteria;

SUP ~~*instructs the Secretary-General*~~

	PROPOSED NEW DRAFT TO ANNEX TO RESOLUTION No. 46 ~~(WARC-92)~~(Rev.WRC-95)	COMMENTS
MOD	**Interim Procedures for the Coordination and Notification of Frequency Assignments of [Non-Geostationary] Satellite Networks in Certain Space Services and the Other Services to Which ~~the~~certain Bands are Allocated~~1~~**	~~The text of Footnote 1 should be reviewed by WRC-95.~~
SUP	~~1 Sections I, II and III apply to terrestrial services only in the case where a power flux-density limit at the surface of the Earth (for a space station) or at the border of the territory of another administration (for an earth station) specified in a provision of the Radio Regulations is exceeded.~~	Footnote not applicable to earth stations (RR 608A and 608B are the only cases of pfd limits for earth stations and contain absolute limits), relocated in Section 2.5 for space stations.
	Section A. General Information	
MOD	A.1 The assistance of the ~~IFRB~~ BRBureau can be requested in the application of the provisions of this annex.	
	~~**ADD1 :**~~	
ADD	[The following provisions shall apply : RR 1054 to 1054C under Section I, RR 1088 to 1103 under Section II, RR1130 to 1144 under Section III in relation to terrestrial stations and earth stations operated in the opposite direction of transmission, and RR 1168 to 1181 under Section IV.]	Reference to Article 11 sections where assistance to the BR Bureau is described in more specific terms. (Type 2). To be reviewed after adoption of Article S13
MOD	A.2 In the absence of specific provisions relating to the evaluation of the interference, the calculation methods and the criteria should be based on relevant ~~CCIR~~ITU-R Recommendations agreed by the administrations concerned either as a result of Resolution **703 (Rev.WARC-92)** or otherwise. In the event of disagreement on a ~~CCIR~~ ITU-R Recommendation or in the absence of such Recommendations, the methods and criteria shall be agreed between the administrations concerned. Such agreements shall be concluded without prejudice to other administrations.	
MOD	A.3 When applying the provisions of this Resolution for non-geostationary-satellite networks, administrations ~~should~~ [shall] provide the following information in addition to that of Appendix **3** or Appendix **4**:	
	~~**MOD 1 :**~~	
SUP	~~*i)* right ascension of the ascending node;~~	
SUP	~~*ii)* argument of perigee;~~	
SUP	~~*iii)* active service arc.~~	
ADD	i) Orientation of the satellite transmitting and receiving antenna beams and their radiation pattern.	
ADD	ii) Type of modulation and multiple access [and spectrum mask as proposed by IND].	To be provided by Committee 5
ADD	iii) Appropriate information required to calculate the affected region due to the MSS space stations [as defined in ~~Annex 7~~] 8/1034 Recommendation ITU-R M/1187]	To be reviewed by Committee 5
ADD	[iv) Maximum and average ~~beam~~ peak e.i.r.p./4 kHz and e.i.r.p./1 MHz for each beam.]	To be clarified by Committee 5
ADD	v) The satellite antenna gain $G(\Theta_e)$ as a function of elevation angle at a fixed point on the Earth. (To be provided either as part of Appendix 3 or as a formula to convert existing Appendix 3 data.)	
ADD	vi) The spreading loss (for a non-GSO satellite) as a function of elevation angle. (To be determined by equations or provided in graphical form.)	

MOD	vii) New data elements required to properly characterize non-GSO satellites: N_p = Number of orbital planes N_s = Number of satellites in each orbital plane Ω_j = Right ascension of the ascending node for the j-th orbital plane, measured counter clockwise in the equatorial plane from the direction of the vernal equinox to the point where the satellite makes its south-to-north crossing of the equator ($0° \leq \Omega_j < 360°$). i_j = Inclination angle for the j-th orbital plane with respect to the reference plane, which is taken to be the Earth's equatorial plane ($0° \leq i_j \leq 180°$). ω_j = Initial phase angle of the i-th satellite in its orbital plane at reference time t=0, measured from the point of ascending node ($0^{\Omega} \leq \omega_j < 360^{\Omega}$). a = Semi-major axis. e = eccentricity $0 \leq e < 1$ ω_p = argument of perigee, measured in the orbital plane, in the direction of motion, from the ascending node to perigee ($0° \leq \omega_p < 360°$)	(Type 6)
ADD	In the following, references to complete Appendix 3 or Appendix 4 information shall be considered to include this additional information, where appropriate.	
NOC	**Section I. Procedures for the Advance Publication of Information on Planned Satellite Networks**	
NOC	***Publication of Information***	
MOD	1.1 An administration (or one acting on behalf of a group of named administrations) which intends to bring into use a satellite network within a satellite system shall, prior to the coordination procedure described in paragraphs 2.1 and 2.2, send to the ~~International Frequency Registration~~ Bureau~~Board~~, not earlier than six years[1] and preferably not later than two years before the date of bringing into service of each satellite network, the information listed in Appendix **4**.	
MOD	1 ~~See also No. 1550.~~See also paragraph 5.1.6.	
MOD	1.2 Amendments to the information sent in accordance with the provisions of paragraph 1.1 shall also be sent to the Bureau~~Board~~ as soon as they become available. ~~Modifications which are of such a nature as to change significantly the character of the network may require recommencing the advance publication procedure.~~The use of an additional frequency band will require advance publication for this band.	Reference to RR 1550 is inadequate since it refers back to RR 1044 rather than this provision. Modification of and reference to Section V is proposed instead.
MOD	1.3 On receipt of the complete information sent under paragraphs 1.1 and 1.2, the Bureau~~Board~~ shall publish it in a special section of its weekly circular within three months and shall also, when the weekly circular contains such information, so advise all administrations by circular telegram. The circular telegram shall indicate the frequency bands to be used and, in the case of a geostationary satellite, the orbital location of the space station. When the ~~Board~~ Bureau is not in a position to comply with the time limit referred to above, it shall periodically so inform the administrations, giving the reasons therefor.	

NOC	*Comments on Published Information*	
MOD	1.4 If, after studying the information published under paragraph 1.3, any administration is of the opinion that interference which may be unacceptable may be caused to assignments of its existing or planned satellite networks or to assignments to its existing or planned terrestrial ~~radiocommunication~~ stations, it shall, within four months after the date of the weekly circular ~~containing the complete information listed in Appendix 4~~referred to in paragraph 1.3 above, send the administration concerned its comments on the particulars of the interference to its existing or planned satellite ~~systems~~ networks or to its existing or planned terrestrial stations. A copy of these comments shall also be sent to the Bureau~~Board~~. If no such comments are received from an administration within the period mentioned above, it may be assumed that the administration has no basic objections to the planned satellite network(s) of the system on which details have been published.	
NOC	1.4A An administration sending information under paragraphs 1.1 and 1.2 shall, if requested by an administration receiving information published under paragraph 1.3, provide the technical methods and criteria it proposes to use for the evaluation of the interference.	
NOC	1.4B An administration receiving information published under paragraph 1.3, may provide to the administration sending information under paragraphs 1.1 and 1.2 the technical methods and criteria it proposes to use for the evaluation of the interference.	
NOC	*Resolution of Difficulties*	
NOC	1.5 An administration receiving comments sent in accordance with paragraph 1.4 and administrations sending such comments shall endeavour to resolve any difficulties that may arise and shall provide any additional information that may be available.	
NOC	1.5A In case of difficulties arising, the administration responsible for the planned network shall first explore all possible means of meeting its requirements without considering the possibility of adjustment to stations or networks of other administrations. If no such means can be found, the administration concerned may then request other administrations, either bilaterally or multilaterally, to mutually help resolve these difficulties.	
NOC	1.5B An administration receiving a request under paragraph 1.5A shall, in consultation with the requesting administration, explore all possible means of meeting the latter's requirements.	
NOC	1.5C If, after following the procedure described in paragraphs 1.5A and 1.5B, there are unresolved difficulties, the administrations concerned shall jointly make every possible effort to resolve these difficulties by means of mutually acceptable adjustments.	

NOC	*Results of Advance Publication*	
MOD	1.6 An administration on behalf of which details of planned satellite networks have been published in accordance with the provisions of paragraphs 1.1 to 1.3 shall, after the period of four months specified in paragraph 1.4, inform the Bureau~~Board~~ whether or not comments provided for in paragraph 1.4 have been received and of the progress made in resolving any difficulties. Additional information on the progress made in resolving any remaining difficulties shall be sent to the Bureau~~Board~~ at intervals not exceeding six months prior to the commencement of coordination or ~~the sending of the notices~~ notification to the Bureau~~Board~~, as the case may be. The Bureau~~Board~~ shall publish this information in the special section of its weekly circular.	
MOD	1.7 When, upon expiry of a period of six years plus the extension provided for in ~~No. 1550~~ paragraph 5.1.6 after the date of the publication of the special section referred to in paragraph 1.3, the administration responsible for the network has not submitted the Appendix **3** information, for coordination under paragraph 2.1 or paragraph 2.2 or notification under No. **1488** or Section V of this Annex, as appropriate, the information published under paragraph 1.3 shall be cancelled after the administration concerned has been informed.	
NOC	*Commencement of Coordination or Notification Procedures*	
MOD	1.8 When communicating to the Bureau~~Board~~ the information referred to in paragraph 1.1, an administration may, at the same time or at a later time, communicate:	
NOC	1.8A the information required for the network coordination of a frequency assignment to a station of a satellite network in accordance with the provisions of paragraph 2.6, or	
NOC	1.8B the information required for notification of a frequency assignment to a station of a satellite network when coordination for that assignment is not required.	
MOD	1.9~~8C~~ The ~~Such~~ coordination or notification information, as the case may be, shall be considered as having been received by the Bureau~~Board~~ not earlier than six months after the date of receipt of the complete information ~~referred to in paragraph 1.1~~ as indicated under paragraph 1.3.	

NOC	**Section II. Coordination of Frequency Assignments to a Station of a Satellite Network**	
NOC	*Requirement for Coordination*	
MOD	2.1 Before an administration (or one acting on behalf of one or more named administrations)1 notifies to the Bureau~~Board~~ or brings into use any frequency assignment to a space station or to an earth station of a non geostationary satellite network, it shall effect coordination of the assignment with any other administration:	
MOD	– whose assignment to a station in a geostationary-satellite network might be affected, or	Clarification that coordination between earth stations and terrestrial stations is not dealt with in this section.
MOD	– whose assignment to a station of a non-geostationary-satellite network might be affected, or	
MOD	– whose assignment to a terrestrial station might affect or be affected by its space station assignment.	
	~~MOD 2 :~~	
MOD	2.2 Before an administration (or one acting on behalf of one or more named administrations)1 notifies to the Bureau~~Board~~ or brings into use any frequency assignment to a station of a geostationary-satellite network, it shall effect coordination of the assignment with any other administration :	
MOD	– whose assignment to a station of a non-geostationary-satellite network might be affected, or	Clarification that coordination between earth stations and terrestrial stations is not dealt with in this section.
MOD	– whose assignment to a terrestrial station might affect or be affected by its space station assignment	
NOC	2.3 Coordination under paragraphs 2.1 and 2.2 may be effected for a satellite network using the information relating to the space station, including its service area, and the parameters of one or more typical earth stations which may be located in all or part of the space station service area.	
MOD	2.4 If a frequency assignment is brought into use before the commencement of the coordination procedure of paragraphs 2.1 and 2.2, when this coordination is required, the operation in advance of the receipt by the Bureau~~Board~~ of the Appendix **3** information shall in no way afford any priority of the date.	
	1 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 networks or systems.	

	2.5	
MOD	2.5.1 Frequency assignments to be taken into account in the application of paragraphs 2.1 and 2.2 are those with a frequency overlap with the planned assignment, pertaining to the same service or to another service to which the band is allocated with equal rights, or a higher category of allocation (see Nos. **420** to **425** and **435**), and which:	
	for space services, are:	
MOD	2.5.~~1~~2 in conformity with No. **1503**, and	
MOD	2.5.~~2~~3 either recorded in the Master Register, or coordinated under the provisions of this Section or of Section II of Article **11**, or	
MOD	2.5.~~3~~4 included in the coordination procedure with effect from the date of receipt by the Bureau~~Board~~, in accordance with paragraph 2.6 or No. **1074** or **1074A** of Article **11**, of the complete~~relevant~~ information as specified in Appendix **3**;	
	or, for terrestrial services, are:	
MOD	2.5.~~4~~5 recorded in the Master Register with a favourable finding with respect to No. **1240**, or	
MOD	2.5.~~5~~6 not notified but in use or planned to be brought into use within the ~~next~~ three years following the date of the publication referred to in paragraph 2.7.2.	The date from which this three year period is calculated should be clearly indicated.
	~~ADD 2~~:	
ADD	2.5.7 Coordination of space services (space-to-Earth) with the terrestrial services of an administration is required only if the threshold levels appearing in [Section XX of Article 28] are exceeded over any part of the territory of this administration.	Relocation and extension of the scope of the footnote in the Title of the Annex to Resolution 46, and of similar text in the Article 8 footnotes calling for Resolution 46.
	~~[Coordination of space services (Earth-to-space) with the Fixed Service of an administration [in the bands [....]] is not required if :]~~ *	This provision refers to a new section of Article 28 which will contain only threshold levels (and refer to their associated method of calculation) the exceedence of which triggers coordination, as opposed to the current, absolute, limits contained in Section IV of Article 28.
	~~[2.5.6. the frequency assignments referred to in 2.5.4 and 2.5.5 use analogue modulation and the power flux density (pfd) radiated over the territory of this administration into these frequency assignments does not exceed the thresholds specified in [ ]~~	
	~~[2.5.7. the frequency assignments referred to in 2.5.4 and 2.5.5 use digital modulation and the Fractional degradation in Performance (FDP) caused into reference digital Fixed Service assignments located in the territory of this administration does not exceed the thresholds specified in [ ]~~	(type 4).
	~~[2.5.8. the application of the simulation method described in [ ] to Fixed Service frequency assignments located within the territory of this administration, leads to an interference level which does not exceed the thresholds specified [ ]]~~	
	~~* The WRC-95 would need to consider these modifications from the viewpoint of the need for these provisions and, if needed, the way to express the reference either as a provision of the radio Regulations, or as an ITU-R Recommendation.~~	~~The application of 2.5.8 could lead to difficulties for developing countries.~~

	~~ADD 3 :~~	
ADD	2.5.89 No coordination under 2.1or 2.2 is required:	Additions from RR 1066 to 1071
	~~a) when an administration proposes to notify or bring into use, within the service area of a satellite network, a typical earth station or an earth station which would not cause or suffer interference of a level greater than the typical earth station:~~	
ADD	~~a~~b) when the characteristics of a new or a modified frequency assignment or a new earth station are within the limits of those of ~~interference resulting from a modification to~~ a frequency assignment which has previously been coordinated ~~will not exceed that value agreed during coordination:~~	
SUP	~~c) when an administration proposes to notify or bring into use a new earth station which would not cause or suffer interference of a level greater than that which would be caused by an earth station belonging to the same satellite network and whose characteristics have been published in accordance with 2.7.2, or notified to the Bureau without coordination in those cases where coordination was not required:~~	
ADD	~~b~~d) when, for a new frequency assignment to a receiving station, the notifying administration states that it accepts the interference resulting from the frequency assignments referred to in 2.5.1 to 2.5.34.	
ADD	~~c~~e) between earth stations using frequency assignments in the same direction (either Earth-to-space or space-to-Earth).	
NOC	*Coordination Data*	
MOD	2.6 The administration seeking coordination shall send to the Bureau~~Board~~ the information listed in Appendix **3**.	
MOD	2.7 On receipt of the complete information referred to in paragraph 2.6, the Bureau~~Board~~ shall:	
MOD	2.7.1 examine this information with respect to its conformity with No. 1503; the date of its receipt shall be considered as the date from which the assignment will be taken into account for coordination, and~~;~~	
MOD	2.7.2 publish in the special section of its weekly circular, within three months, the information received under paragraph 2.6 and the result of the examination under paragraph 2.7.1~~1~~. When the Bureau~~Board~~ is not in a position to comply with the time limit referred to above, it shall periodically so inform the administrations giving the reasons therefor, and.	
ADD	2.7.3 to assist administrations in identifying services that might be affected, include in the special section mentioned in paragraph 2.7.2 the names of the administrations having frequency assignments complying with the provisions of paragraphs 2.5.1, 2.5.2, 2.5.3, 2.5.4 for space services and 2.5.1 and 2.5.5 for terrestrial services.	Purpose: avoid unnecessary workload for the Bureau by postponing the pfd, FDP [and SCP] calculations to the next phase of the procedure, after the concerned administrations have commented.
	~~MOD 3 :~~	
SUP	~~1 To help administrations identify services that may be affected, the Bureau~~Board ~~shall also publish a list of administrations whose assignments comply with paragraphs 2.5 and 2.5.1 to 2.5.3 or paragraphs 2.5~~1~~ [and]2.5.4.[and yet do not comply with paragraphs 2.5.6, 2.5.7 or 2.5.8.]~~	~~(Type 4).~~

NOC	*Examination of Coordination Data and Agreement Between Administrations*	
MOD	2.8 On receipt of the special section referred to in paragraph 2.7.2, an administration shall promptly examine the matter with regard to interference which would be caused :	
MOD	2.8.1 to the frequency assignments of its satellite networks or	
MOD	2.8.2 to the frequency assignments of its terrestrial stations, or	Clarification on the four types of examination requested.
MOD	2.8.3 by ~~these~~ the frequency assignments of its satellite networks to the satellite network for which coordination is sought, or	
ADD	2.8.4 by the frequency assignments of its terrestrial stations to the space station for which coordination is sought.	
MOD	In so doing, it shall have regard to the proposed date of bringing into use of the assignment for which coordination is sought. It shall then, within ~~six~~ [four] months from the date of the relevant weekly circular, notify the administration seeking coordination of its agreement.	
[ADD]	A.1bis An administration with existing or planned terrestrial service stations liable to be affected by an MSS project in the bands published in a Special Section may ask the Radiocommunication Bureau to apply the appropriate software in order to identify those of its stations which must be taken into consideration for coordination. To that end, it shall provide the Radiocommunication Bureau with the information required to carry out such a study. The Bureau shall inform the administration of the results of its calculations within the time limits laid down in the procedures of this Resolution.	
MOD	If, however, an ~~the~~ administration ~~with which coordination is sought~~ does not agree, it shall, within the same period, send to the administration seeking coordination the technical details of the networks or information on the terrestrial stations concerned upon which its disagreement is based, including:	
MOD	2.8.5 in case of a disagreement under paragraphs 2.8.1 or 2.8.3, the characteristics contained in Appendix 3, or	
MOD	2.8.6 in case of a disagreement under paragraphs 2.8.2 or 2.8.4, the characteristics contained in Section C of Appendix 1 which have not previously been notified to the Bureau~~Board~~,	
MOD	and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem. A copy of these comments shall also be sent to the Bureau~~Board~~.	
ADD	Any administration which considers that its existing or planned terrestrial services might be affected may request the Bureau to identify those of its stations that should be included in the coordination, using the criteria mentioned in 2.5.7, when the corresponding software is available.	
ADD	If the administration concerned has notified its disagreement within the same period, but the information on the fixed service stations upon which its disagreement is based cannot be provided, it shall be assumed that typical parameters, as contained in relevant ITU-R recommendations, can be used to determine the need for coordination with this administration.	Addition aimed at facilitating the application of the appropriate method when developing countries are involved or when the relevant information cannot be provided

MOD	2.8A ~~Affected~~ Aadministrations with which coordination is sought, as well as the administration seeking coordination, shall make all possible mutual efforts to overcome the difficulties in a manner acceptable to the parties concerned.	
ADD	2.8.A1 One month prior to the expiry of the [four] month period mentioned in paragraph 2.8, the Bureau shall dispatch a circular telegramm to all administrations, bringing the matter to their attention. ~~ADD 4 :~~	This provision is intended to attract the administrations attention on the consequences in the case of no reply (see 2.8B).
ADD	2.8 B When an administration has not responded either to the notifying administration or to the Bureau within the period of ~~six~~ [four] months referred to in paragraph 2.8, it shall be deemed that this administration has undertaken :	Alignment of the time limit on Article S9
ADD	a) that no complaint will be made in respect of any harmful interference affecting the services rendered by its ~~space radiocommunication~~ satellite networks referred to in paragraphs 2.5.1 to 2.5.4 which may be caused by the use of the assignment to a station of the satellite network for which coordination was requested;	Addition similar to RR 1142 to 1144, to reflect the RRB Rule of Procedure on Res 46 (Type 3)~~, with the specific difference that the lack of response to the Bureau, rather than to the requesting administration, triggers this situation.~~
ADD	b) that no complaint will be made in respect of any harmful interference affecting the services rendered by its ~~or~~ terrestrial stations referred to in paragraph 2.5.1, 2.5.5 and 2.5.6 which may be caused by the use of the assignment to a station of the satellite network for which coordination was requested;	
ADD	[c) that its assignments to a station in a satellite network referred to in paragraphs 2.5.1 to 2.5.4 will not cause harmful interference to the satellite network assignment for which coordination was requested.]	~~Provision 2.8 B b) could have far reaching consequences and needs to be reviewed.~~
[ADD]	*[db)* that ~~its space radiocommunication or~~ assignments to terrestrial stations referred to in paragraphs 2.5.1, 2.5.5 and 2.5.6 will not cause harmful interference to the satellite network assignment for which coordination was requested.]	Clarification on the assignments on which the lack of response may impact.
NOC	*Results of Coordination*	
MOD	2.9 An administration which has initiated a coordination procedure under the provisions of paragraphs 2.1 to 2.6 shall communicate to the Bureau~~Board~~ the names of the administrations with which agreement has been reached. The Bureau~~Board~~ shall publish this information in the special section of its weekly circular.	
MOD	2.10 An administration which has sought coordination, as well as any administration which has complied with the provisions of paragraph 2.8, shall communicate to the Bureau~~Board~~ any modifications to the published characteristics of their respective networks or stations that were required to reach agreement on the coordination. The Bureau~~Board~~ shall publish this information in accordance with paragraph 2.7.2, indicating that these modifications resulted from the joint efforts of the administrations concerned to reach agreement on the coordination.	
NOC	*Notification of Frequency Assignments in the Event of Continuing Disagreement*	
MOD	2.11 In the event of continuing disagreement between an administration seeking to effect coordination and any administration with which coordination has been sought, the administration seeking coordination shall, except in the cases where the assistance of the Bureau~~Board~~ has been requested, defer the submission of its notice concerning the proposed assignment by ~~eight~~[six] months from the date of publication of the special section referred to in paragraph 2.7.2, taking into account the provisions of No. **1496**. When the assistance of the Bureau~~Board~~ has been requested, the submission of the notice shall be deferred for a further three months.	Alignment on Article S9

	~~MOD 4 :~~	
MOD	**Section III. Coordination of Frequency Assignments to Earth Stations of a Non-Geostationnary Satellite Network in Relation to Terrestrial Stations and of a Satellite Network in Relation to other earth stations in the opposite direction of transmission**	This section also applies to GSO networks (Type 1) and is proposed to be modified to include the case of feeder link earth stations in relation to other earth stations operating in the opposite direction of transmission (Type 5).
NOC	*Requirement for Coordination*	
MOD	3.1 Before an administration notifies to the Bureau~~Board~~ or brings into use any frequency assignment to a fixed earth station or to typical earth stations in a particular band allocated with equal rights to space and terrestrial radiocommunication services, it shall effect coordination of the assignment with each administration whose territory lies wholly or partly within the coordination area~~1~~ as specified in [Section YY of Article 28]. The request for coordination may specify all or some of the frequency assignments to the associated space station, but thereafter each assignment shall be dealt with individually.	
SUP	~~1 The coordination area is defined as the service area in which it is intended to operate the typical earth stations, extended in all directions by a coordination distance of 500 km, or as a circular zone with a radius of 500 km centred on the coordinates of the fixed earth station. For a service area in which aircraft earth stations operate, the coordination area is the service area extended in all directions by a coordination distance of 1 000 km.~~	~~See section....~~ Text to be amended following decisions by Committee 5
	~~ADD 5 :~~	
ADD	3.1.1 No coordination under paragraph 3.1 is required when an administration proposes:	Addition from RR 1108 to 1111A (Type 2)
	3.1.2 *a)* to bring into use an earth station the coordination area of which does not include any of the territory of any other country;	
	3.1.3 *b)* when the ~~to change the~~ characteristics of a new or modified ~~an existing~~ assignment are within the limits of those of a frequency assignment which has previously been coordinated ~~in such a way as not to increase the interference to or from the terrestrial radiocommunication stations of other administrations or the earth station of other administrations operating in the opposite direction of transmission.~~	(Also type 5)
	~~3.1.4~~ *c)* to bring into use a new frequency assignment to a receiving earth station and the notifying administration states that it accepts the interference resulting from existing and future terrestrial station assignments or earth station assignments operating in the opposite direction of transmission. In such case, administrations responsible for the terrestrial stations or the earth stations, are not required to apply the provisions of Section IV or Section III respectively, of this Article.	(Also Type 5)

NOC	*Coordination Data*	
MOD	3.2 For the purpose of effecting coordination, the administration requesting coordination shall send to each administration concerned under paragraph 3.1 all ~~pertinent~~ basic characteristics ~~information~~ concerning the proposed frequency assignment as listed in Appendix **3**, and an indication of the planned date of bringing into use~~approximate date on which it is planned to begin operations. A copy of this information with the date of dispatch of the request for coordination shall also be sent to the Bureau~~Board for information.	Simplification (See Article S9)
NOC	*Acknowledgement of Receipt of Coordination Data*	
NOC	3.3 An administration with which coordination is sought under paragraph 3.1 shall immediately acknowledge receipt of the coordination data.	
NOC	*Examination of Coordination Data and Agreement Between Administrations*	
NOC	3.4 On receipt of the coordination data, an administration shall, having regard to the proposed date of bringing into use of the assignment for which coordination was requested, promptly examine the matter with regard to both:	

	~~MOD 5~~	
MOD	3.4.1 a) interference which would affect the service rendered by its terrestrial ~~radiocommunication~~ stations ~~or by its earth stations in the opposite direction of transmission,~~ operating in accordance with the Constitution, the Convention and these Regulations, or to be so operated prior to the planned date of bringing into service of the earth station assignment, or within the next three years, whichever is the longer, and	~~(Type 5)~~
ADD	3.4.1 b) interference which would affect the services rendered by its earth stations which are operating, or are planned to be operated in the opposite direction of transmission, prior to the planned date of bringing into service of the earth station assignment, or within the next three years, whichever is the longer. The assignments to be taken into account in this examination are those:	(Type 5)
	3.4.1.b1 for which the associated space network characteristics have been communicated to the Bureau under paragraph 1.3, and	[Consideration of the Plan may be required if the downlink allocation in the Plan was allocated in the uplink to feeder links]
	3.4.1. b2 which are in conformity with No 1503, and	
	3.4.1.b3 either coordinated under No 1107 or paragraph 3.1 above, or	
	3.4.1. b4 to be taken into account for coordination with effect from the date of communication of the information referred to in No 1113 or paragraph 3.2 above; or	
	3.4.1.b5 recorded in the Master Register with a favorable finding with respect to No 1505 or paragraph 5.1.2 below; or	
	3.4.1.b6 recorded in the Master register with an unfavorable finding with respect to No 1505 or paragraph 5.1.2 below, and a favorable finding with respect to No 1509 or paragraph 5.1.4 below; or	
	3.4.1.b7 recorded in the Master Register in application of No1544, if that frequency assignment has not in fact caused harmful interference to any other previously recorded frequency assignment which is in conformity with No. 1503.	
	~~MOD 6~~	
MOD	3.4.2 a) interference which would be caused to reception at an earth station by the service rendered by its terrestrial ~~radiocommunication~~ stations ~~or by its earth stations in the opposite direction of transmission,~~ operating in accordance with the Constitution, the Convention and these Regulations, or to be so operated prior to the planned date of bringing into service of the earth station assignment, or within the next three years, whichever is the longer	
ADD	3.4.2 b) interference which would be caused to reception at an earth station by the service rendered by its earth stations in the opposite direction of transmission, covered under paragraphs 3.4.1.b1 to 3.4.1.b7, which are operating, or are to be operated prior to the planned date of bringing into service of the earth station assignment, or within the next three years, whichever is the longer.*	
NOC	3.5 The administration with which coordination is sought shall, within four months from dispatch of the coordination data:	
MOD	3.5.1 notify the administration requesting coordination of its agreement with a copy to the Bureau~~Board~~, indicating, where appropriate, the part of the allocated frequency band containing the coordinated frequency assignments; or	

	~~**MOD 7**~~	
ADD	3.5.2. Send to that administration a request for inclusion in coordination of the terrestrial ~~radiocommunication~~ stations or the earth stations in the opposite direction of transmission mentioned in 3.4.1a), 3.4.1.b) ~~and~~ 3.4.2 a) and 3.4.2. b) ; *or*	Addition taken from RR 1123. This case has been omitted in Resolution 46, although it is the only one to provide for the case of a terrestrial station to be put in service between the next 3 months and the next 3 years (Type 1)
MOD	3.5.~~2~~3 notify that administration of its disagreement.	
	~~**MOD 8 :**~~	
MOD	3.6 In the cases mentioned in paragraphs 3.5.2 and 3.5.3, the administration with which coordination is sought shall send to the administration requesting coordination a diagram drawn to an appropriate scale indicating the location of those terrestrial ~~radiocommunication~~ stations or earth stations in the opposite direction of transmission which are or will be within the coordination area, together with all other relevant basic characteristics using Appendix **1** or Appendix **3**, as appropriate, and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem.	(Type 1) (Type 5)
MOD	3.7 When the administration with which coordination is sought sends to the administration seeking coordination the information required in the case of paragraph 3.5.~~2~~3, a copy thereof shall also be sent to the Bureau~~Board~~.	
ADD	3.7.a) The Bureau shall consider as notifications in accordance with Section I of Article **12** ~~or Section I of Article 13, as appropriate,~~ only that information relating to existing ~~radiocommunication~~ terrestrial stations, or to those to be brought into use within the next three ~~[months][years]~~.	Addition from RR 1126 and RR 1536 (Type 1).
ADD	3.7.b) The Bureau shall consider as notifications in accordance with Section I of Article 13 only that information relating to existing earth stations, or to those to be brought into use within the next three years.	
	~~**ADD 6 :**~~	
ADD	3.7.1 When an agreement on coordination is reached, as a consequence of paragraphs 3.5 to 3.7, the administration responsible for the terrestrial stations or the earth stations in the opposite direction of transmission, may send to the Bureau the information concerning those stations covered by the agreement which are intended to be notified in accordance with Section I of Article **12** or Section I of Article **13**, as appropriate. The Bureau shall consider as notifications in accordance with those Sections only that information relating to existing ~~radiocommunication~~ stations or to those to be brought into use within the next three years.	Addition from RR 1127 in order to avoid "paper" terrestrial stations (Type 1), with suitable modifications to accomodate earth stations in the opposite direction of transmission (Type 5).
	~~**ADD 7**~~	
ADD	The periods refered to in paragraphs 3.4.1 and 3.4.2 ~~m~~may be extended by agreement between the administrations concerned in order to take planned terrestrial and space networks into account. The earth station to earth station coordination may commence five and a half years before bringing into use these stations.	Addition from RR1120 (Type 1). The period of application of the coordination between two earth stations operating in opposite directions of transmissions needs to be reviewed.

NOC	*Notification of Frequency Assignments in the Event of Continuing Disagreement*	
MOD	3.8 In the event of continuing disagreement between an administration seeking to effect coordination and an administration with which coordination has been sought, the administration seeking coordination shall, except in the cases where the assistance of the Bureau~~Board~~ has been requested, defer the submission of its notice concerning the proposed assignment by six months from the date of the request for coordination, taking into account the provisions of No. **1496**. When the assistance of the Bureau~~Board~~ has been requested, the submission of the notice shall be deferred for a further three months.	
NOC	**Section IV. Coordination of Frequency Assignments to Terrestrial Stations for Transmission in Relation to Earth Stations of a Non-Geostationary Satellite Network**	
NOC	*Requirement for Coordination*	
MOD	4.1 Before an administration notifies to the Bureau~~Board~~, or brings into use any frequency assignment to a terrestrial station for transmission within the coordination area~~1~~ as specified in [Section YY of Article 28] of an earth station of a non-geostationary satellite network, in a band allocated with equal rights to terrestrial radiocommunication services and space radiocommunication services (space-to-Earth), it shall effect coordination of the proposed assignment with the administration responsible for the earth stations with respect to the frequency assignments:	
SUP	~~1 The coordination area is defined as the service area in which it is intended to operate the typical earth stations, extended in all directions by a coordination distance of [500 km], or as a circular zone with a radius of [500 km] centred on the coordinates of the fixed earth station. For a service area in which aircraft earth stations operate, the coordination area is the service area extended in all directions by a coordination distance of [1 000 km].~~	~~See section ...~~ Text to be amended following decisions by Committee 5
ADD	4.1.1 for which the associated space network characteristics have been communicated to the Bureau under paragraph 1.3, and	
MOD	4.1.~~1~~2 which are in conformity with No. **1503**; and	Addition from RR 1151 to RR 1154 (Type 1)
SUP	~~4.1.2 for which coordination has been agreed under paragraph 3.5.1, or~~	
	~~ADD 8~~ :	
SUP	~~4.1.3 which are to be taken into account for coordination with effect from the date of communication of the information referred to in paragraph 3.1.~~	
ADD	4.1.3 either coordinated under No1107 or paragraph 3.1 above, or 4.1.4 to be taken into account for coordination with effect from the date of communication of the information referred to in No 1113 or paragraph 3.2 above; or 4.1.5 recorded in the Master Register with a favorable finding with respect to 1505 or paragraph 5.1.2 below; or 4.1.6 recorded in the Master register with an unfavorable finding with respect to No 1505 or paragraph 5.1.2 below, and a favorable finding with respect to No 1509 or paragraph 5.1.4 below; or 4.1.7 recorded in the Master Register with an unfavorable finding with respect to No 1505 or paragraph 5.1.2 below and No 1509 or paragraph 5.1.4 below, the notifying administration having stated that it accepts the interference resulting from the existing terrestrial stations located within the coordination area of the earth station on the date of its recording.	

ADD	~~ADD 9:~~ ~~4.1.87~~ (2) No coordination under paragraph 4.1 is required when an administration proposes: ~~4.1.98~~ *a)* to bring into use a terrestrial station which is located, in relation to an earth station, outside the coordination area; ~~4.1.109~~ *b)* to change the characteristics of an existing assignment in such a way as ~~not~~ to remain within the envelope of the characteristics of this assignment.~~increase the interference to the earth stations of other administrations;~~ ~~4.1.1110~~ *c)* to bring into use a terrestrial station within the coordination area of an earth station, provided that the proposed terrestrial station assignment is outside any part of a frequency band coordinated under 3.5.1 for reception by that earth station.	Addition from RR 1155 to 1158 (Type 2)
NOC	*Coordination Data*	
NOC	4.2 For the purpose of effecting coordination, the administration requesting coordination shall send to each administration concerned under paragraph 4.1 all pertinent information. The request for coordination may specify all or some of the frequency assignments expected to be used within the next three years by stations of a terrestrial network wholly or partly within the coordination area of the earth stations. Thereafter each assignment shall be dealt with individually.	
NOC	*Acknowledgement of Receipt of Coordination Data*	
NOC	4.3 An administration with which coordination is sought under paragraph 4.1 shall immediately acknowledge receipt of the coordination data.	
NOC	*Examination of Coordination Data and Agreement Between Administrations*	
MOD	4.4 On receipt of the coordination data, the administration with which coordination is sought shall promptly examine the matter with regard to interference which would affect the services rendered by its earth stations covered by paragraphs 4.1 to 4.1.7, which are operating or are to be operated within the next three years.	
NOC	4.5 The administration with which coordination is sought shall, within an overall period of four months from dispatch of the coordination data, either notify the administration requesting coordination of its agreement to the proposed assignment or, if this is not possible, indicate the reasons for its objection and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem.	
NOC	*Notification of Frequency Assignments in the Event of Continuing Disagreement*	
MOD	4.6 In the event of continuing disagreement between an administration seeking to effect coordination and an administration with which coordination has been sought, the administration seeking coordination shall, except in the cases where the assistance of the Bureau~~Board~~ has been requested, defer the submission of its notice concerning the proposed assignment by six months from the date of the request for coordination, taking into account the provisions of Nos. **1230** and **1496**. When the assistance of the Bureau~~Board~~ has been requested, the submission of the notice shall be deferred for a further three months.	

NOC	**Section V. Notification of Frequency Assignments**	
NOC	*Notification of Assignments to Space Stations and Earth Stations*	
MOD	5.1 An administration shall, for the purpose of notifying an assignment to the Bureau~~Board~~, apply the provisions of Article **13.** When applying the provisions of Article **13** to frequency assignment notices relating to space stations and earth stations covered by this Resolution, the Bureau~~Board~~ shall:	
MOD	5.1.1 in applying No. **1504**, also examine the notice with respect to its conformity with the provisions of paragraphs 2.1, 2.2 and 2.5.8 relating to coordination of the use of the frequency assignment with the other administrations concerned;	
MOD	5.1.2 in applying No. **1505**, also examine the notice with respect to its conformity with the provisions of paragraphs 3.1 and 3.1.1 to 3.1.3 relating to coordination of the use of the frequency assignment with the other administrations concerned;	
NOC	5.1.3 in applying No. **1506**, also examine the notice with respect to the probability of harmful interference when the coordination under paragraph 2.1 or 2.2 has not been successfully effected;	
NOC	5.1.4 in applying No. **1509**, also examine the notice with respect to the probability of harmful interference when the coordination under paragraph 3.1 has not been successfully effected;	
NOC	5.1.5 not apply Nos. **1515** and **1516**.	
ADD	5.1.6 apply No. **1550** with respect to the date of publication of the special section of the weekly circular referred to in paragraph 1.3.	
NOC	5.2 The examination under paragraph 5.1.3 or 5.1.4 shall take into account the frequency assignments for transmission or reception already recorded in the Master Register.	
NOC	*Notification of Assignments to Terrestrial Stations*	
MOD	5.3 An administration shall, for the purpose of notifying an assignment to the Bureau~~Board~~, apply the provisions of Article **12.** When applying the provisions of Article **12** the Bureau~~Board~~ shall, in application of No. **1353**, examine frequency assignment notices relating to terrestrial stations covered by this Resolution with respect to their conformity with the provisions of paragraph 4.1 relating to coordination of the use of the frequency assignment with the other administrations concerned	

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COMMITTEE 5

Japan

PROPOSALS FOR THE WORK OF THE CONFERENCE

COORDINATION THRESHOLD TO PROTECT THE LAND MOBILE SERVICE IN THE BAND 1 492 - 1 525 MHz

The following new No. **723D** and the addition of references to the frequency table for the band 1 492 - 1 525 MHz are proposed.

J/187/1(Rev.)

ADD 723D

In the band 1 492 - 1 525 MHz, the coordination thresholds in terms of the power flux-density levels at the surface of the Earth in the application of Resolution **46 (WRC-95)** for space stations in the mobile-satellite (space-to-Earth) service, with respect to the land mobile service used for specialized mobile radios or used in conjunction with public switched networks (PSTN) operating within the territory of Japan, shall be -150 dB(W/m^2) in any 4 kHz band for all angles of arrival, instead of those given in Article **28**. The above threshold level of the power flux-density shall apply until it is changed by a competent world radiocommunication conference.

MHz
1 452 – 1 530

J/187/2(Rev.)
MOD

Allocation to Services		
Region 1	Region 2	Region 3
1 492 – 1 525	**1 492 – 1 525**	**1 492 – 1 525**
FIXED	FIXED	FIXED
MOBILE except aeronautical mobile	MOBILE 723	MOBILE
	MOBILE-SATELLITE (space-to-Earth)	
722 723B	722 722C 723C	722 <u>723D</u>

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WORKING GROUP 5B

Japan

PROPOSALS FOR THE WORK OF THE CONFERENCE

COORDINATION THRESHOLD TO PROTECT THE LAND MOBILE SERVICE IN THE BAND 1 492 - 1 525 MHz

The following new No. 723D and the addition of references to the frequency table for the band 1 492 - 1 525 MHz are proposed.

J/187/1
ADD 723D The coordination thresholds in terms of the power flux-density levels at the surface of the Earth in the application of Resolution **46 (WRC-95)** for space stations in the mobile-satellite service in Region 2 operating in the band 1 492 - 1 525 MHz, with respect to the land mobile service in Region 3, should be -150 dB(W/m^2) in any 4 kHz band for all angles of arrival, instead of those given in Article 28.

MHz
1 452 – 1 530

J/187/2
MOD

Allocation to Services		
Region 1	Region 2	Region 3
1 492 – 1 525	**1 492 – 1 525**	**1 492 – 1 525**
FIXED	FIXED	FIXED
MOBILE except aeronautical mobile	MOBILE 723	MOBILE 723
	MOBILE-SATELLITE (space-to-Earth)	
722 723B	722 722C 723C 723D	722 723D

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COMMITTEE 5

Chairman, Working Group 5B

SECOND REPORT OF THE CHAIRMAN OF WORKING GROUP 5B TO COMMITTEE 5

Working Group 5B has adopted the attached text(s) which it submits to Committee 5 for consideration.

N. KISRAWI
Chairman of Working Group 5B

Annexes: 2

ANNEX 1

DRAFT NEW RECOMMENDATION [COM5-X1]

FREQUENCY SHARING IN THE 1 610.6 - 1 613.8 MHz AND 1 660 - 1 660.5 MHz BANDS BETWEEN THE MOBILE-SATELLITE SERVICE AND THE RADIO ASTRONOMY SERVICE

The World Radiocommunication Conference (Geneva, 1995),

with a view

to facilitate the use of frequency bands allocated to the mobile-satellite services (MSS) and with due regard to existing services to which the frequency spectrum is also allocated;

considering

a) that the bands 1 610.6 - 1 613.8 MHz and 1 660 - 1 660.5 MHz are allocated to the radio astronomy service and the mobile-satellite service (Earth-to-space) on a shared, primary basis;

b) that No. [733E] S5.372 of the Radio Regulations states that "harmful interference shall not be caused to stations of the radio astronomy service using the band 1 610.6 - 1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (No. [2904] S29.13 applies)"; and that No. 736 and [Article 36] Article S29 also point out that emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service;

c) that the nature of objects studied by the radio astronomy service in the bands 1 610.6 - 1 613.8 MHz and 1 660 - 1 660.5 MHz demands maximum flexibility in the planning of observatory frequency selection;

d) that in the bands 1 610.6 - 1 613.8 MHz and 1 660 - 1 660.5 MHz, which are shared between the radio astronomy service and the mobile-satellite service, operational constraints are necessary for mobile earth stations of the mobile-satellite service;

e) that Recommendation ITU-R M.829-1, which relates to sharing between the mobile-satellite service and the radio astronomy service in the 1 660 - 1 660.5 MHz band, notes that further studies are required, particularly in the areas of propagation models and assumptions used for the determination of separation distances;

f) that other studies are currently being conducted within the ITU-R on sharing between the mobile earth stations of the mobile-satellite service and the radio astronomy service in the band 1 610.6 - 1 613.8 MHz;

g) that the threshold levels of interference detrimental to the radio astronomy service are given in Recommendation ITU-R RA.769;

invites the ITU-R

1 to conclude its studies on propagation mechanisms, including those necessary for maritime and aeronautical environments, to establish appropriate separation distances between mobile earth stations of the mobile-satellite service and radio astronomy stations;

2 to conclude studies on technical means to be adopted by the stations of the mobile-satellite service, including blockage of emissions and the use of directional antennas where feasible, when mobile earth stations are operating within the separation distances referred to in *invites* 1 above;

3 and to report the outcome of these studies at least one year before the next competent conference;

urges administrations

to participate actively in these studies.

ANNEX 2

Draft modification to Article [36] S29

MOD 2903 § 9. In applying the measures outlined in this Section, administrations are urged to bear in mind that the radio astronomy service is extremely susceptible to interference from space and airborne transmitters (For further information, see Recommendation ITU-R RA.769).

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COMMITTEE 4
COMMITTEE 5

CHAIRMAN, COMMITTEE 5 *

For Information of Committees 4 and 5

Preliminary Compilation of Coordination Distances for Bands That May Be Subject to the Procedures of MOD Resolution No. 46

This document is intended to facilitate development of coordination distance provisions for application under paragraphs 3.1 and 4.1 of the annex to Resolution 46 (Rev. WRC-95), the current draft of which is presented in Doc. DT/75. The attached Tables 1 - 3 indicate the coordination distances that may be applicable under Resolution 46 (and Article S.5) based on the ITU-R Recommendations identified in Doc. 138 and the preliminary results of work in Committee 5, as reflected in the following documents:

- Earth stations operating at frequencies below 1 GHz (addressed in attached Tables 1a and 1b): Doc.s DT/43, /59 and 85;

- Earth stations operating at frequencies between 1 GHz and 3 GHz (addressed in attached Tables 2a and 2b): Doc.s DT/45(Rev. 1), /60(Rev.1), and /67(Rev.1);

- Non-GSO MSS feeder link earth stations and non-GSO FSS earth stations (addressed in attached Table 3): Doc.s DT/11(Rev. 1), /25(Rev.3), /26, /38(Rev.2), /47(Rev. 1), /50, /53, /56, /57(Rev. 1), /65, /66, /80 and /88.

Tables 1 - 3 address only those frequency sharing situations for which coordination distance provisions have been either suggested in the above DT documents or specified in the ITU-R Recommendations identified in Doc. 138. The term "ground-based", as used in columns 1 and 2 of each table, refers to stations located on the Earth surface (i.e., on land or water).

It should be noted that frequency assignments for earth stations would be coordinated in accordance with paragraphs 2.1 - 2.5 of the modified Resolution 46 (DT/75) in cases where coordination distances are not specified.

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* The information in this document was compiled by Mr. Thomas Sullivan (USA, Box 489) based on comments received in regard to Doc. 138.

Table 1a - Earth Stations Operating on the Earth Surface at Frequencies Below 1 GHz

Frequency Sharing Situation		Applicable ITU-R Recommendation	Coordination Distance
Frequency Band and Earth Station For Which Coordination Area is Determined	Other Service or Station (Station in Terrestrial Service)		(In sharing situations involving services that are allocated with equal rights)
148.0 - 149.9 MHz ground-based (mobile)	ground-based stations	*Case-by-Case Calculation* Rec. ITU-R M.[8/1035] (approved by RA-95)	As determined using Equation (1) and Figure 1 of Rec. ITU-R M.[8/1035] (see Note 1, below)
401 - 401.2 MHz ground-based	meteorological aids (radiosonde)	*Fundamentally Covered Predetermined Distance* Note 3 of Rec. ITU-R IS.850 (Became IS.850-1 based on RA-95 approval of Doc. 2/1005)	Not applicable because sharing is not on an "equal rights" basis. (DT/85)
All bands below 1 GHz ground-based	mobile (aircraft)	*Predetermined Distance* Notes 1/2 of Rec. ITU-R IS.850 (Became IS.850-1 based on RA-95 approval of Doc. 2/1005)	500 km

Note 1 - In this case, the coordination distance is calculated by the administration of the terrestrial station using the parameters of its terrestrial stations and the relevant parameters taken from the Advance Publication for the earth station.

Table 1b - Aircraft Earth Stations Operating at Frequencies Below 1 GHz

Frequency Sharing Situation		Applicable ITU-R Recommendation	Coordination Distance
Frequency Band and Earth Station For Which Coordination Area is Determined	Other Service or Station (Station in Terrestrial Service)		(In sharing situations involving services that are allocated with equal rights)
All bands below 1 GHz aircraft (mobile)	ground-based stations	*Predetermined Distance* Notes 1/2 of Rec. ITU-R IS.850 (Became IS.850-1 based on RA-95 approval of Doc. 2/1005)	Where services are allocated with equal rights: 500 km
All bands below 1 GHz aircraft (mobile)	meteorological aids (radiosonde)	*Fundamentally Covered* *Predetermined Distance* Rec. ITU-R IS.850	Where services are allocated with equal rights: Not applicable because sharing is not on an "equal rights" basis. (DT/85)
All bands below 1 GHz aircraft (mobile)	mobile (aircraft)	*Predetermined Distance* Notes 1/2 of Rec. ITU-R IS.850 (Became IS.850-1 based on RA-95 approval of Doc. 2/1005)	Where services are allocated with equal rights: 1 000 km

Table 2a - Earth Stations Operating on the Earth Surface at Frequencies in the 1 - 3 GHz Range

Frequency Sharing Situation		Applicable ITU-R Recommendation	Coordination Distance
Frequency Band and Earth Station For Which Coordination Area is Determined	Other Service or Station (Station in Terrestrial Service, Earth Station, or Radioastronomy Station)		(In sharing situations involving services that are allocated with equal rights)
ground-based mobile (Note 1) (GSO network)	ground-based stations in terrestrial services	*Case-by-Case Calculation* Rec. ITU-R IS.847	Determined using parameters specified for terrestrial stations in Table 1 or 2, as appropriate, and all applicable Equations and Figures.
ground-based mobile (Note 1) (non-GSO network)	ground-based stations in terrestrial services	*Case-by-Case Calculation* Rec.s ITU-R IS.847 and 849	The methodology of Rec. ITU-R IS.849 is applied in conjunction with Rec. ITU-R IS.847 (see above).
1675 - 1700 MHz ground-based mobile	meteorological aids (radiosonde)	*Fundamentally Covered* *Predetermined Distance* Table 2 and Note 3 of Rec. ITU-R IS.850 (Became IS.850-1 based on RA-95 approval of Doc. 2/1005)	By adaptation of Note 3 of Rec. ITU-R IS.850, the coordination distance would be 582 km (assumes no site shielding with respect to mobile earth stations operating within a service area).
All bands, 1-3 GHz ground-based mobile	terrestrial mobile (aircraft)	*Predetermined Distance* Tables 1 and 2 of Rec. ITU-R IS.850 (Became IS.850-1 based on RA-95 approval of Doc. 2/1005)	500 km
1610.6-1613.8 MHz 1660-1660.5 MHz mobile	ground-based radioastronomy stations	*Case-by-Case Calculation* Rec. ITU-R M.829-1	Rec. 829-1 addresses required "separation" distances for land mobile earth stations and does not specifically address coordination distances.

Note 1 - Rec. ITU-R IS.847 supplies the necessary terrestrail station parameters for the bands 1 492 - 1 530 MHz, 1 555 - 1 559 MHz, 1 610 - 1 645.5 MHz, 1 646.5 - 1 660 MHz, 1 675 - 1 710 MHz, 1 970 - 2 010 MHz, 2 160 - 2 200 MHz, 2 483.5 - 2 520 MHz, and 2 655 - 2 690 MHz.

Table 2b - Aircraft Earth Stations Operating at Frequencies in the 1 - 3 GHz Range

Frequency Sharing Situation		Applicable ITU-R Recommendation	Coordination Distance
Frequency Band and Earth Station For Which Coordination Area is Determined	Other Service or Station (Station in Terrestrial Service, Earth Station, or Radioastronomy Station)		(In sharing situations involving services that are allocated with equal rights)
All bands aircraft (mobile)	ground-based stations in terrestrial services	*Predetermined Distance* Tables 1 and 2 of Rec. ITU-R IS.850 (Became IS.850-1 based on RA-95 approval of Doc. 2/1005)	500 km
1675 - 1700 MHz aircraft (mobile)	meteorological aids (radiosonde)	*Fundamentally Covered* *Predetermined Distance* Rec. ITU-R IS.850 (Became IS.850-1 based on RA-95 approval of Doc. 2/1005)	By adaptation of Rec. ITU-R IS.850: 1 082 km (assuming an interfering signal path tangent to the Earth surface: 500 km from Table 2 for the air-ground path segment plus 582 km from Note 3 for the ground-radiosonde path segment)
All bands aircraft (mobile)	terrestrial mobile (aircraft)	*Predetermined Distance* Tables 1 and 2 of Rec. ITU-R IS.850 (Became IS.850-1 based on RA-95 approval of Doc. 2/1005)	1 000 km

Table 3 - Non-GSO MSS Feeder Link Earth Stations and Non-GSO FSS Earth Stations (Note 1)

Frequency Sharing Situation		Applicable ITU-R Recommendation	Coordination Distance
Frequency Band and Earth Station For Which Coordination Area is Determined	Other Service or Station (Station in Terrestrial Service or Earth Station)		(In sharing situations involving services that are allocated with equal rights)
Bands in which the FSS is already allocated; earth station operating co-directionally	ground-based stations in terrestrial services	*Case-by-Case Calulation* Rec.s ITU-R IS.847 and 849	[19.2-19.7 GHz and 29-29.5 GHz]: predetermined distance - value not given (DT/26);
Bands in which the FSS is already allocated; earth station operating in reverse direction	ground-based stations in terrestrial services	*Fundamentally Covered* *Case-by-Case Calulation* Rec.s ITU-R IS.847 and 849	A) [19.2-19.7 GHz]: [170 km] (DT/53); B) other bands, the methodologies of Rec.s ITU-R IS.847 and 849 could be applied if the necessary parameters for the terrestrial services are supplied.
All bands and earth stations	terrestrial mobile (aircraft)	*Fundamentally Covered* *Predetermined Distance* ITU-R IS.850 (Became IS.850-1 based on RA-95 approval of Doc. 2/1005)	500 km ([170 km] according to DT/53)
Bands in which the FSS is already allocated; earth station operating in reverse direction	earth station operating in opposite direction of transmission	*Fundamentally Covered* *Predetermined Distance* (Rec.s ITU-R IS.847, 848 and 849)	A) [19.2-19.7 GHz and 29-29.5 GHz]: 300 km (DT/26 and Doc. 46); B) [19.2-19.7 GHz]: [170 km] (DT/53); C) [all bands]: further study (DT/66).

Note 1 - Doc. DT/38(Rev.2) indicates that further study is needed in cases involving non-GSO FSS earth stations.

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COMMITTEE 4

REPORT OF THE CHAIRMAN OF WORKING GROUP 4C

1 Having considered a report of ad hoc Group 4C2 (DT/77), the Group adopted draft Resolution [COM4-YYY] attached to this report (Annex 1).

2 The Group agreed the incorporation by reference of the texts attached in Annex 2.

V. RUBIO CARRETÓN
Chairman of Working Group 4C

ANNEX

Principles of incorporation by reference

1 No restrictions are necessary on the inclusion of references where these are non-mandatory. In such cases, reference could be made to "the latest version" of a recommendation.

2 Mandatory references to resolutions or recommendations of a world radiocommunication conference are acceptable without restriction, since such texts will have been agreed by a WRC.

3 Where mandatory references are suggested, and the relevant texts are brief, the reference material should be incorporated into the body of the Radio Regulations.

4 If, on a case-by-case basis, it is decided to incorporate material by reference on a mandatory basis, then the following provisions shall apply:

4.1 the referenced text shall have the same treaty status as the Regulations themselves;

4.2 the reference must be explicit, specifying the specific part of the text (if appropriate) and the version or issue number;

4.3 the referenced text must be adopted by the Plenary of a competent WRC, but should not be part of the Final Acts;

4.4 all texts incorporated by reference must be readily available, for example by being published in a separate volume;

4.5 if, between WRCs, a referenced text (e.g. an ITU-R Recommendation) is updated, the reference in the Radio Regulations shall continue to apply to the original version until such time as a competent WRC agrees to incorporate the new version of the reference. The mechanism for considering such a step requires further study.

ANNEX 1

DRAFT RESOLUTION [COM4-YYY]

REFERENCES TO ITU-R RECOMMENDATIONS IN THE RADIO REGULATIONS

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that, as part of its simplification of the Radio Regulations, the Voluntary Group of Experts proposed that a number of operational, technical, and administrative provisions be transferred to ITU-R Recommendations with their current treaty status maintained through use of incorporation by reference;

b) that the 1995 Radiocommunication Assembly has approved 21 ITU-R Recommendations containing the provisions noted in *considering* a);

c) that only some of these Recommendations have been incorporated by reference by this Conference;

d) that those remaining Recommendations which have not been incorporated by reference should be considered by a future conference;

[e) that principles of incorporation by reference have been adopted by this Conference] [see Annex];

f) that there are many provisions of the current Radio Regulations that utilize incorporation by reference but fail to make explicit reference to the ITU-R Recommendations incorporated;

g) that the 1995 Radiocommunication Assembly by Resolution ITU-R 38 established a special committee to address the review of regulatory/procedural matters;

resolves

1 that the texts of the newly adopted ITU-R Recommendations must be studied and compared with the Radio Regulations to ensure that they are satisfactory;

2 that, in view of *considering* e), the provisions of the Radio Regulations which use mandatory incorporation by reference should be studied to determine whether they require modification pursuant to the principles adopted by this Conference;

urges administrations

to review the ITU-R Recommendations and the provisions of the Radio Regulations employing incorporation by reference in light of *resolves* 1 and 2 above;

instructs the Director of the Radiocommunication Bureau

to arrange for appropriate studies to be conducted by a special committee to address the review of regulatory/procedural matters established by the 1995 Radiocommunication Assembly and that the committee report the results of the studies to the 1997 Conference Preparatory Meeting.

ANNEX 2

List of annexes proposed by the VGE for transfer to ITU-R Recommendations

Annex to proposed Simplified RR	Title	Relevant Art./App. of current RR	Relevant SG/WP	RA95 Doc. / Rec.
Annex 20	International monitoring system	Article 20	SG 1 WP 1C	1/1017 [1C/XA]
Annex 58	Working hours of ship stations	Article 58	SG 8 WP 8B	8/1006 [RR Annex 58 and Appendix 12]
Annex 62A	Sequential single-frequency code system	Article 62	SG 8 WP 8B	8/1014 M.257-2
Annex 62B	Digital selective calling system	Article 62	SG 8 WP 8B	8/1013 M.541-5
Annex 63	Morse telegraphy procedures in the maritime mobile service	Article 63	SG 8 WP 8B	8/1007 [RR Annex 63]
Annex 64	Narrow-band direct-printing telegraphy	Article 64	SG 8 WP 8B	8/1015 M.492-5
Annex 65A	Radiotelephony in the maritime mobile service	Article 65	SG 8 WP 8B	8/1008 [RR Annex 65A]
Annex 65B	Digital selective calling procedures	Article 65	SG 8 WP 8B	8/1013 M.541-5
[Annex AP 6	Determination of necessary bandwidths including examples for their calculation and associated examples for the designation of emissions	Appendix 6, (Article 4)	SG 1 WP 1A	1/1016 [1A/XG]]
[Annex AP 7	Table of transmitter frequency tolerances	Appendix 7	SG 1 WP 1A	1/1015 [1A/XF]]
[Annex AP 8	Table of maximum permitted spurious emission power levels	Appendix 8	SG 1 WP 1A	1/1014 [1A/XE]]
Annex AP 12	Hours of service for ship stations of the second and third categories	Appendix 12	SG 8 WP 8B	8/1006 [RR Annex 58 and Appendix 12]
Annex AP 14	Miscellaneous abbreviations and signals to be used for radiocommunications in the maritime mobile service	Appendix 14	SG 8 WP 8B	8/1009 [RR Appendix 14]
Annex AP 15	SINPO and SINPFEMO Codes	Appendix 15	SG 1 WP 1A	1/1013 [1A/XD]
Annex AP 17	Technical characteristics of single-sideband transmitters used in the maritime mobile service for radiotelephony in the bands between 1 606.5 kHz (1 605 kHz Region 2) and 4 000 kHz and between 4 000 kHz and 27 500 kHz	Appendix 17	SG 8 WP 8B	8/1010 [RR Appendix 17]
Annex AP 19	Technical characteristics for transmitters and receivers used in the maritime mobile service in the band 156 - 174 MHz	Appendix 19	SG 8 WP 8B	8/1016 M.489-1

Annex to proposed Simplified RR	Title	Relevant Art./App. of current RR	Relevant SG/WP	RA95 Doc. / Rec.
Annex AP 20	Characteristics of equipment used for on-board communication in the bands between 450 and 470 MHz	Appendix 20	SG 8 WP 8B	8/1011 [RR Appendix 20]
Annex AP 21	Reports of international monitoring of emissions	Appendix 21	SG 1 WP 1C	1/1017 [1C/XA]
Annex AP 36	Automatic receiving equipment for radiotelegraph and radiotelephone alarm signals	Appendix 36	SG 8 WP 8B	8/1012 [RR Appendix 36]
Annex AP 37A	Technical characteristics of emergency position-indicating radiobeacons operating on the carrier frequencies 121.5 MHz and 243 MHz	Appendix 37A	SG 8 WP 8C	8/1026 M.690
Annex AP 38	Narrow-band direct-printing telegraph equipment in the maritime mobile service using error detection and correction methods	Appendix 38	SG 8 WP 8B	8/1017 M.476-4 8/1018 M.625-2 8/1019 M.627
Annex AP 39	Selective calling system for use in the international maritime mobile service	Appendix 39	SG 8 WP 8B	8/1014 M.257-2

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PLENARY MEETING

REPORT BY THE SECRETARY-GENERAL

During its second Plenary Meeting, following consideration of Document 33, the Conference entrusted the Secretary-General, as Secretary of the Conference, with the task of attempting to find solutions to the issues raised in Document 33 and during discussions regarding provisional application of the Radio Regulations as revised by the present Conference.

Following consultations and a meeting with delegations having expressed a particular interest in this subject, the Secretary-General is able to submit the draft Resolution annexed hereto for consideration by the Plenary Meeting.

A consensus was reached with respect to the draft by those delegations which took part in preparing it.

Pekka TARJANNE
Secretary-General

ANNEX

DRAFT RESOLUTION [PL/XXX]

REVIEW OF THE PROVISIONS OF THE CONSTITUTION RELATING TO REVISIONS OF THE RADIO REGULATIONS

The World Radiocommunication Conference (Geneva, 1995),

noting

a) that, pursuant to Nos. 29 and 31 of the Constitution, the Radio Regulations are an instrument of the Union which complement the provisions of the Constitution and the Convention (Geneva, 1992);

b) that the provisions of No. 216 of the Constitution only apply to revisions of the Radio Regulations adopted prior to 22 December 1992;

c) that revisions of the Radio Regulations adopted after the aforementioned date are governed by Nos. 217 to 223 of the Constitution;

d) that the decisions of this Conference shall in all circumstances be in conformity with the Constitution and Convention (see **CS92**),

considering

a) that radio frequencies and the geostationary-satellite orbit are limited natural resources and that they must be used rationally, efficiently and economically, in conformity with the Radio Regulations so that countries, or groups of countries may have equitable access to both (**CS196**);

b) that these Regulations should be applicable to all the Members of the Union;

c) that ratification, acceptance or approval of the Geneva Constitution and Convention binds Members to amendments of the Radio Regulations adopted prior to the date of signature of the Geneva 1992 Final Acts;

d) that subsequent amendments to the Radio Regulations apply, from the date of their provisional application, to all Members who have signed the respective Final Acts, *provisionally to the extent permitted by their national law* for a period of three years (**CS217**). Members are not required to make known the extent of this provisional application;

e) that world radiocommunication conferences shall normally be convened every two years (**CS90**);

f) that Members would be entitled to participate in such conferences with full voting rights even though they do not apply the previous revisions of the Radio Regulations;

g) that during the period of provisional application, the status of application of the Radio Regulations in each Member's country will be uncertain, and that as a result of the different time periods referred to in *considering* d) and e) above, they will become increasingly more uncertain with each revision,

resolves to request the next Plenipotentiary Conference

to review the provisions of Nos. 217 to 223 of the Constitution in the light of the points raised in the *noting* and *considering* paragraphs of the present Resolution,

resolves to invite Members of the Union

1 in accordance with **CS224**, to propose to the next Plenipotentiary Conference appropriate amendments to the provisions of the Constitution pertaining to the entry into force of the Administrative Regulations, in particular the Radio Regulations, and any consequential impact on the scheduling of conferences;

2 in respect of the revisions of the Radio Regulations adopted by this Conference for provisional application prior to the next World Radiocommunication Conference (WRC-97), to advise the Secretary-General of the status of their provisional application, or whether they consent to be bound or not, prior to WRC-97,

instructs the Secretary-General

to inform the next World Radiocommunication Conference of the Members' responses in accordance with *resolves* 2.

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COMMITTEE 5

REPORT OF THE CHAIRMAN OF COMMITTEE 5 AD HOC 2

Three meetings of Committee 5 Ad Hoc 2 were held on the subject of non-GSO FSS for the purpose of

a) determining an appropriate bandwidth of spectrum and

b) identifying specific bands where non-GSO FSS systems can be located, taking into account existing services, and the fact that sharing studies have not been completed. In addition, 5 Ad Hoc 2 was mandated by Committee 5 to identify any additional sharing studies which should be undertaken as a matter of urgency by the ITU-R beyond those specified in DT/38(Rev.2).

Using the information contained in DT/38(Rev.2) as a guide for the work of 5 Ad Hoc 2, it was considered appropriate that the following points should be taken into account in any further discussions on the implementation of non-GSO FSS as a generic service in the 20/30 GHz frequency bands:

1 There is no disagreement on the need for the service, nor on the fact that the service can be useful in providing and extending telecommunications on a cost-effective basis to remote, rural as well as urban areas.

2 It was noted that the determination of an appropriate amount of spectrum (bandwidth) to permit the operation of non-GSO FSS is dependent on the following non-inclusive set of factors:

2.1 the number of requirements based on the number of subscribers to be served, taking into account regional and demographic differences;

2.2 the nature of the service to be provided; and

2.3 the technical characteristics of any proposed system, taking into account such considerations as the type and grade of service, channel capacity, data and coding rates, as well as the compression and modulation techniques utilized.

./.

3 Concern was expressed by some participants in 5 Ad Hoc 2 that the determination of an appropriate bandwidth is difficult in the absence of the necessary sharing studies, particularly concerning the impact on terrestrial fixed services and a full understanding of the implications of waiving the application of RR 2613, including the impact on planned GSO FSS systems. With respect to the matter of exclusivity, it was argued that the waiver of RR 2613 simply implied that non-GSO FSS would be operated on an equal basis with GSO FSS; in view of this circumstance, it was noted in particular by one administration, in reflecting on a statement made at an earlier meeting, that no decision should be taken retroactively which affects the rights and obligations of Members. Others argued, however, that in view of the fact that the frequency bands under consideration are already allocated to the FSS on a shared basis, the issue of accommodating the non-GSO FSS should be viewed in terms of preserving the option for the operation of such systems in the future, which necessarily includes the identification of a relatively small portion of the overall FSS allocation for the waiver of RR 2613.

4 In general there was no disagreement that sharing studies are necessary. Accordingly, in order to provide more specific guidance to the ITU-R on such studies to be undertaken by the relevant Study Groups, 5 Ad Hoc 2 considered that, in addition to sharing between GSO and non-GSO systems, between non-GSO and terrestrial services, and GSO and terrestrial services, studies should also be focused on sharing between non-GSO FSS and non-GSO FSS.

5 With regard to the specific range of bandwidth for the implementation of non-GSO FSS in Ka-band, the meeting identified 2 values, *viz.,* [50 MHz]
[500 MHz]. It was pointed out by one administration that, while the value of 50 MHz was considered to be appropriate at this stage, it was presented on the understanding that a further allocation of additional spectrum could be made at a later stage.

6 As far as the identification of specific bands where the non-GSO FSS can be located, it was agreed as a general principle that these bands should be adjacent to MSS feeder link spectrum. There was support for 2 x 500 MHz in the bands [18.8 - 19.3 GHz (s-E) and 28.6 - 29.1 GHz (E-s)]; there was also support for 2 x 50 MHz in the bands [19.35 - 19.4 GHz (s-E) and 29.05 - 29.1 GHz (E-s)].

B. A. GRACIE
Chairman of Committee 5 ad hoc 2, # 177

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 193-E
8 November 1995
Original: English

PLENARY MEETING

DRAFT RESOLUTION

OPERATION OF SATELLITE GLOBAL SYSTEMS FOR PERSONAL COMMUNICATIONS

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that, in accordance with No. 6 of its Constitution, the Union has, among its purposes, "to promote the extension of the benefits of the new telecommunication technologies to all the world's inhabitants";

b) that, to this effect, the Union is fostering the use of new technologies in telecommunications and is studying questions relating to this use in the Radiocommunication and the Standardization Sectors;

c) that the Development Telecommunication Sector is studying questions intended to identify the benefits that developing countries may derive from using new technologies;

d) that, among these new technologies, constellations of low-Earth orbiting satellites may provide a global coverage and facilitate low-cost communications;

e) that the ITU Council, at its 1995 Session, resolved in its Resolution 1083 to discuss the theme "Global mobile personal communications by satellite" at the first joint World Telecommunication Policy Forum established by the Kyoto Plenipotentiary Conference (Resolution 2),

recognizing

a) that spectrum available to satellite global systems for personal communications is limited;

b) that successful coordination does not in any way imply licensing authorization to provide a service within the territory of a Member,

considering further

that other countries intending to use these systems should be guaranteed that these systems will be operated in accordance with the Constitution, the Convention and the Administrative Regulations,

noting

a) that the Constitution recognizes the sovereign right of each state to regulate its telecommunications;

b) that the International Telecommunication Regulations "recognize the right of any Member, subject to national law and should it decide to do so, to require that administrations and private operating agencies, which operate in its territory and provide an international telecommunication service to the public, be authorized by that Member", and specifies that "within the framework of the present Regulations, the provision and operation of international telecommunication services in each relation is pursuant to mutual agreement between administrations";

c) that Article 24 of the Radio Regulations specifies the authorities for licensing the operation of stations within any given territory;

d) the right of each Member to decide on its participation in these systems, and the obligations for entities and organizations providing international or national telecommunication services by means of these systems to comply with the legal, financial and regulatory requirements of the administrations in whose territory these services are authorized,

resolves

that administrations licensing global satellite systems and stations intended to provide public personal communications by means of fixed, mobile or transportable terminals shall ensure, when licensing these systems and stations, that they can be operated only from the territory or territories of administrations having authorized such service and stations in compliance with Article 24, in particular provision No. 2020,

urges administrations and other members of the Sectors

to participate in the first World Telecommunication Policy Forum dealing with satellite global systems for personal communications,

invites administrations

to cooperate with worldwide satellite systems operators in establishing mutually beneficial arrangements for the provision of service within their territories,

reminds operators of such systems

when contracting agreements on the operation of their systems from the territory of countries to take account of any potential loss of revenue that these countries may suffer from a possible reduction of their international traffic existing at the time such agreements are executed.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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COMMITTEE 4

SUMMARY RECORD

OF THE

FIFTH MEETING OF COMMITTEE 4

(VGE REPORT ON THE SIMPLIFICATION OF THE RADIO REGULATIONS)

Monday, 6 November 1995, at 1430 hours

Chairman: Mr. M. GODDARD (United Kingdom)

Subjects discussed		**Documents**
1	Approval of the summary record of the third meeting of Committee 4	133
2	Third report of Working Group 4A	142
3	Reports of Working Group 4B	149, 154, 161, 162
4	Second and third reports of Working Group 4C	159, DT/36

1 Approval of the summary record of the third meeting of Committee 4 (Document 133)

1.1 The summary record of the third meeting (Document 133) was **approved**, subject to editorial corrections requested by the **delegates of the United States** (paragraph 4.17) and **Argentina** (paragraph 4.16).

2 Third report of Working Group 4A (Document 142)

2.1 The **Chairman of Working Group 4A**, introducing Document 142, said that the Group had simply made one editorial change to Article S4.

2.2 The text of Article S4 as given in the Annex to Document 142 was **approved**.

3 Reports of Working Group 4B (Documents 149, 154, 161, 162)

Document 149

3.1 The **Chairman of Working Group 4B**, introducing Document 149, said that the Working Group was in favour of maintaining Article 17 of the current Radio Regulations, subject to some editorial amendments, and of deferring discussion of its simplification to WRC-97. He drew attention to draft Resolution COM4-YY, presented in Attachment 1 to Document 149 and entitled "Simplification of Article 17 of the Radio Regulations". The draft Resolution had the effect of preserving the text of Article S12 of the VGE to allow for its consideration by WRC-97.

3.2 It was **agreed** that consideration of Article S12 should be deferred to WRC-97.

3.3 The editorial amendments to Article 17 of the Radio Regulations, as set out in paragraph b of Document 149, were **approved**.

3.4 The **delegate of New Zealand** said that, as implementation of the operative parts of the draft Resolution appeared to be within the capability of the present Conference, the draft Resolution as it stood might not be necessary. The **delegate of Morocco** endorsed that view.

3.5 The **Chairman of Working Group 4B**, supported by the **delegate of Russia**, said that in his opinion, the text proposed by the VGE had no legal status. If that text, in particular Article S12, was to be preserved for future consideration, it would have to be contained in a Resolution. The VGE had proposed Article S12 to replace Article 17 of the Radio Regulations. The Working Group, however, considered that Article 17 of the Radio Regulations should be maintained, and that Article S12 should be considered by WRC-97.

3.6 The **delegate of Morocco** said that he had no difficulty with the proposal that Article 17 of the Radio Regulations should be maintained until WRC-97, when HF broadcasting would be discussed and consideration could be given to Article S12 of the VGE. There were two ways of achieving that procedure: either a Resolution, reproducing Article S12 of the VGE, or inclusion of both Article 17 and Article S12 in the Final Acts of the present Conference, on the understanding that Article S12 would come into effect at a subsequent specified date following consideration by WRC-97. If the majority were in favour of a Resolution, he could go along with it. Referring to the draft Resolution contained in Document 149, he suggested the deletion of the text of *further resolves*, as Article 17 should remain applicable in its entirety. The **delegate of Saudi Arabia** supported the latter comment.

3.7 The **Chairman of Working Group 4B** said that the draft Resolution should specify that Article 17 was being maintained in place of Article S12.

3.8 The **delegate of the United Kingdom** agreed with that view. Article 17 covered various activities; the aim was to ensure that it would be maintained as currently applied by the Radiocommunication Bureau until it was considered by Task Group 10/5 of ITU-R Study Group 10 and WRC-97.

3.9 The **Chairman** suggested adding the words "and hence Article 17 shall continue to apply" at the end of *resolves* in order to avoid any ambiguity about the status of Article 17.

3.10 The **delegate of the United Kingdom** said that such wording failed to reflect the fact that certain aspects of Article 17 were not currently applied by the Bureau. Referring simply to "Article 17" suggested that the Bureau would be required to apply that Article in its entirety, as it currently stood in the Radio Regulations. The aim, however, was for the Bureau to continue its current practice of applying the relevant part of Article 17.

3.11 In the light of those comments, the **Chairman** suggested that the words "and hence Article 17 shall continue to be applied as at present" should be added at the end of *resolves,* and that the text of *further resolves* should be deleted.

3.12 It was so **agreed**.

3.13 The **delegate of Morocco** suggested the deletion of the text of *instructs the Director of the Radiocommunication Bureau*, as the Working Group of the Plenary was considering a Resolution concerning ITU-R studies to be carried out before 1997.

3.14 The **Chairman** suggested that the text of *instructs the Director of the Radiocommunication Bureau* should be maintained in square brackets until it had been established that the Working Group of the Plenary would in fact address the matter.

3.15 It was so **agreed**.

3.16 The **delegate of Morocco**, referring to *recognizing* b), suggested that the text should be amended to read as follows: "... ITU-R is studying alternative planning procedures ...".

3.17 It was so **agreed**.

3.18 The draft Resolution, as amended, was **approved**.

3.19 Following a suggestion by the **delegate of Germany**, the **Chairman** said that he would send a note to the Working Group of the Plenary inviting them to take the Resolution into account when considering the provisional agenda for WRC-97.

Document 154

3.20 The **Chairman of Working Group 4B**, introducing Document 154, said that the conclusions of the Working Group were along the lines of those of the CPM. In particular, an updated version of Article S10 would serve as a useful model for future conferences considering modification of plans.

3.21 The **delegate of Germany**, supporting in principle the conclusion of the Working Group that Article S10 should not be included in the simplified Radio Regulations, suggested that some temporal reference should be included.

3.22 The **delegate of France**, supported by the **delegate of Saudi Arabia**, said that WRC-95 should not attempt to prejudge the decisions of a future WRC, which would have the right to modify the Radio Regulations if it so wished.

3.23 The conclusions of the Working Group, as set out in paragraphs 1), 2) and 3) of Document 154, were **approved**.

3.24 The **delegate of Sweden** asked whether the title "Article S10" could be left open in the simplified Radio Regulations in order to avoid renumbering the subsequent Articles.

3.25 The **Chairman** said that leaving an empty title might cause confusion and lead to accusations of prejudging future actions. He suggested that it would therefore be preferable to maintain a logical sequence of numbering in the simplified Radio Regulations.

3.26 It was so **agreed**.

3.27 Referring to draft Recommendation COM 4-XX on procedures for modification of a frequency allotment or assignment plan, contained in the Attachment to Document 154, the **delegate of Morocco** said that *considering* e) should be deleted, as its meaning was unclear.

3.28 It was so **agreed**.

3.29 The **delegate of Spain** drew attention to an error in the Spanish version of *considering in particular* a). The **Chairman** said that the text would be aligned with the English version.

3.30 Referring to the Annex to the draft Recommendation, which consisted of Article S10 as modified by the CPM, the **delegate of Morocco** said that it would be more appropriate to send Article S10 as recommended by the VGE to WRC-97, since that would be consistent with the procedure adopted in relation to Article S12. It would be up to WRC-97 to consider whether the amendments proposed by the CPM were appropriate or not.

3.31 The **delegate of France** said that the CPM had proposed its amendments to Article S10 because it had found Article S10 inadequate in relation to Appendices 30 and 30A. It would therefore not be appropriate to send only the VGE version to WRC-97.

3.32 The **delegate of Germany** supported the delegate of France. The Annex should contain the version amended by the Conference, which was to be forwarded for further study.

3.33 The **Chairman** said that it had been proposed that the procedures set out in the Annex should be considered by regional conferences with a view to their implementation. The Committee would surely wish to annex the most up-to-date version of Article S10 to the Recommendation, i.e. that modified by the CPM. He invited the Committee to comment on modified Article S10 as it appeared in the Annex to the draft Recommendation, noting that the Article had been designated "Article T10".

3.34 The **delegate of Spain** said that the new paragraph T10.24, in its second sentence, appeared to say that every time the master copy of the Plan was updated, the Master Register would automatically be updated. That seemed to be inconsistent with the new paragraph T10.25.

3.35 The **Chairman of Working Group 4B** said that the delegate of Spain had a valid point. The underlined text in the new T10.24 could be deleted.

3.36 The **delegate of Germany** said that he had no objection to the deletion of the underlined text in T10.24, since the Conference would not be adopting the text in the Annex. It would simply be putting forward ideas for consideration by future conferences.

3.37 The **Chairman** suggested that the underlined text in the new T10.24 should be deleted.

3.38 It was so **agreed**.

3.39 The **Chairman**, responding to a question by the **delegate of Morocco**, proposed that in T10.1 the reference in square brackets to "30, 30A" should be deleted.

3.40 It was so **agreed**.

3.41 The **Chairman** proposed that modified Article S10 should be approved by the Committee.

3.42 The **delegate of Morocco** formally requested that the summary records should note that his Administration would not be bound by the modifications to Article S10.

3.43 The **Chairman** pointed out that the text contained nothing more than recommendations for future consideration, and was not binding on anyone.

3.44 Draft Recommendation COM4-XX, as amended, was **approved**.

3.45 The **Chairman**, replying to a question by the **delegate of Saudi Arabia**, explained that modified Article S10 was entitled "Article T10" in Recommendation COM 4-XX in order to distinguish it from Article S10 of the VGE.

Document 161

3.46 Referring to Article S7 as set out in Document 161, the **delegate of Morocco** said that the wording in ADD S7.5bis appeared to apply to Articles 11 and 14. While the wording of ADD S7.5bis was correct with regard to Article 11, that was not the case for Article 14, since a frequency assignment prior to notification depended not on the date but on conformity with the Radio Regulations.

3.47 The **delegate of the United States** said that the problem might be solved by deleting the words "of the date" at the end of ADD 7.5bis.

3.48 The **delegate of Morocco** said that he was prepared to accept that suggestion provisionally, but needed further time to consider it.

3.49 The **Chairman** suggested the deletion of the words "of the date", recognizing the need to return to the matter if it was subsequently considered that the problem had not been solved.

3.50 Subject to that understanding, Article S7, as amended, was **approved**.

3.51 Referring to Article S8 as set out in Document 161, the **delegate of Luxembourg** said that in MOD S8.3 the references in square brackets should read "S11.31 to S11.34 and 11.41 as appropriate". In MOD S8.5, the first reference in square brackets should read "S11.31".

3.52 The **Chairman** invited the Committee to note the amended references.

3.53 The **delegate of Germany** said that since there was only one reference in the first square brackets in MOD S8.5, the words "as appropriate" should be deleted.

3.54 It was so **agreed**.

3.55 The **delegate of Morocco**, opposing the suppression of S8.2, said that since the first version of the Radio Regulations in 1947, the right to international protection of assignments had been accepted. There was a need to define international protection in relation to S8.1. While MOD S8.3 covered coordinating procedures with respect to bilateral agreements, such agreements did not bind countries which were not parties to such an agreement. He therefore considered that there should be a clear definition of the right to international protection, such as had been contained in S8.2, specifying which assignments were thus protected. He objected to international protection for systems only coordinated under bilateral agreements.

3.56 The **Chairman of Drafting Group 4B2** said that, in considering international protection against harmful interference, it had been noticed that there was no difference in the application of the criteria in S9 and S11, other than the question of harmful interference under Article S15. It was thus possible to make a further simplification of the VGE text by suppressing S8.2 and modifying S8.3. The last sentence of S8.3 maintained the right to international recognition

3.57 The **delegates of Russia** and **France** supported the suppression of S8.2 and the modification of S8.3, as proposed by the Working Group.

3.58 The **delegate of Morocco** said that the outcome of the VGE's work had to meet the requirements of all Members of the Union. Under the original S8.3, assignment in conformity with the Radio Regulations entailed the right to international recognition, meaning that such assignments should be taken into account when selecting frequencies, but there was no notion of protection. The right to international protection of frequency assignments was covered in S8.2. With the text of Article S8 as it appeared in Document 161, the right to international recognition was no longer limited to conformity with the Table of Frequency Allocations, but also depended on the coordination of assignments. Furthermore, an assignment that was not coordinated no longer had any right to international recognition, while under the current Radio Regulations such an assignment maintained its right to international recognition, only having an obligation not to cause interference to coordinated assignments. S4.2 and S4.3 specifically extended the right to international protection to include assignments that had simply been the subject of bilateral coordination. He considered that drafting unacceptable and therefore proposed that S8.2 should be retained to deal with international protection, together with S8.3, as drafted by the VGE, covering international recognition.

3.59 The **delegates of Saudi Arabia**, **Senegal, Oman** and **Algeria** supported the delegate of Morocco.

3.60 The **Chairman**, noting the divergence of views, suggested that consideration of S8.2 and S8.3 should be deferred in order to provide an opportunity for informal discussion, and that the remaining paragraphs of Article S8 should be approved.

3.61 It was so **agreed**.

Document 162

3.62 Referring to Section I of Article S9, as set out in the Annex to Document 162, the **delegate of Morocco** said that SUP A.S9.3 would imply the deletion of Resolution 46 (WARC-92). He sought clarification.

3.63 The **Chairman of Drafting Group 4B2** said that Resolution 46 was being revised by WRC-95 and the revised Resolution would take effect from the closure of the Conference until the simplified Radio Regulations came into force. There would therefore be no reference in the simplified Radio Regulations to Resolution 46, since the procedures contained in the Annex to Resolution 46 would be included in the simplified Radio Regulations.

3.64 The **delegate of Morocco** considered that, in view of the complexity of the procedures, Resolution 46 might usefully have been carried forward to WRC-97, but he agreed to accept SUP A.S9.3.

3.65 The **Chairman** explained that the square brackets around SUP A.S9.4 would remain, pending the decisions on Appendices 30 and 30A. The **Chairman of Drafting Group 4B2** added that the intention was to avoid a possible duplication of text dealing with procedures.

3.66 The **delegate of Morocco** asked for clarification of the proposal to replace Articles 6 and 7 by the new Article S9.

3.67 The **Chairman of Drafting Group 4B2** said that Articles 6 and 7 would duplicate Article S9; it was therefore considered appropriate to suspend the application of Articles 6 and 7 pending the decision by WRC-97 on Appendices 30 and 30A.

3.68 Drawing attention to the alternative texts for MOD S9.2, the **Chairman of Drafting Group 4B2** suggested that the second text should be retained with the following amendment: replacement of the words following "the use of an additional frequency band" by "to the geostationary- or non-geostationary-satellite network or in frequency bands not subject to the procedure of Section II of Article S9 which involve an extended service area for the non-geostationary-satellite network shall require advance publication".

3.69 The **delegates of Russia** and **the United States** said that the text suggested by the Chairman of Drafting Group 4B2 would be satisfactory provided it was clear that a renewal of advance publication would be required.

3.70 The **delegate of Morocco** said that he had no objection to the suggested text, but pointed out that Appendix 4 referred to frequency range, not frequency band. He thought, however, that criteria relating to the extension of service area should apply not only to non-GSO networks where coordination was not required, but also to cases where it was.

3.71 The **delegate of Canada** said that, in general, he could support the proposed text. Reflecting the concern voiced by the delegate of Russia, he stressed that it should be made clear that the advance publication requirement would relate only to incremental portions, an extended frequency range or a new service area, and not to the entire network. The **delegate of the United States** agreed with that view.

3.72 The **Chairman of Drafting Group 4B2** said that the word "range" had been used for the sake of consistency in terminology. The intention in any case was that, pursuant to the decision of the 1988 Conference (WARC Orb-88), for geostationary-satellite networks only a new frequency band or range would require a renewal of advance publication, limited to the particular band or range.

3.73 The **delegate of Morocco** said that the requirement should apply to geostationary and non-geostationary networks alike. The text should either give equal treatment to both types of network or be deleted.

3.74 The **delegate of Spain** said that his delegation would have difficulty with the suggested text, which failed to deal with cases of service-area modification.

3.75 The **delegate of France** said that his delegation would have no difficulty in accepting the text for geostationary- and non-geostationary-satellite networks alike if there was a single criterion - namely, the establishment of a new frequency band - for the requirement of renewed advance publication.

3.76 The **delegate of Russia** said that the complexity of the matter had been evident from the discussions in Working Group 4B. Indeed, it might not be within the purview of the present Conference to decide what the significant criteria for renewal of advance publication should be. There was, perhaps, a need for some guidelines, pending a decision by WRC-97 on a suitable text to appear in either the Radio Regulations or the Rules of Procedure.

3.77 The **Chairman** suggested that a further text should be prepared, taking into account the points raised during the discussion, for consideration by Committee 4 at a later meeting.

3.78 It was so **agreed**.

3.79 ADD S9.2bis, ADD S9.2ter and MOD S9.3 were **approved**, subject to a minor editorial amendment to the French text.

3.80 Following a proposal by the **delegate of Canada** with respect to ADD S9.3.1bis, it was **agreed** to delete the words "or systems". Following a further observation by the **delegate of Morocco**, it was **agreed** to defer consideration of ADD S9.3.1 bis pending clarification of the text.

3.81 Referring to SUP S9.3.1, the **delegate of Morocco** said that the purpose of S9.3.1 was to show that, when a power flux-density limit was indicated and a satellite system worked within it, coordination was not required. If S9.3.1 was deleted, that approach would not be reflected.

3.82 The **Chairman of Drafting Group 4B2** said that S9.3.1 referred to those cases where a power flux-density limit was specified. By adding a footnote (ADD S9.3.1 bis) to "terrestrial stations" in MOD S9.3, the intention was to involve terrestrial stations only in the cases covered by the references in the footnote.

3.83 As footnote ADD S9.3.1 bis remained pending, it was **agreed** to put SUP S9.3.1 in square brackets.

3.84 MOD S9.4 and MOD S9.5 were **approved**.

3.85 ADD S9.5bis was **approved**, subject to a minor editorial amendment proposed by the **delegate of Morocco**.

3.86 ADD S9.5ter was **approved**, the asterisk and footnote being deleted.

3.87 The **Chairman** said that the various outstanding points arising from Document 162 would be considered by Committee 4 at a later meeting.

4 Second and third reports of Working Group 4C (Documents 159, DT/36)

4.1 The **Chairman of Working Group 4C** introduced Documents DT/36 and 159.

4.2 The **Chairman** invited the Committee to consider Article S19, as set out in the Annex to Document DT/36. He pointed out that S19.50.1 should be corrected to read MOD S19.50.1.

4.3 Article S19 was **approved**.

4.4 The **Chairman** invited the Committee to consider ADD Appendix S42, as set out in the Annex to Document DT/36.

4.5 ADD Appendix S42 was **approved**.

4.6 The **Chairman of Working Group 4C**, referring to an observation by the **delegate of Germany**, said that draft Resolution [COM4-#], entitled "Further studies concerning application of Article S19 (identification of stations)" and contained in Annex 4 to Document 159, had been left pending until Article S19 had been considered. Working Groups 4C and 4C1 had agreed on a text with square brackets around *considering* d). The intention of the last sentence was simply to draw the attention of the Working Group of the Plenary to the recommendation that the review of Article S19 should be included in the agenda of WRC-97. The **Chairman** pointed out that the last sentence was not part of the text of the draft Resolution.

4.7 The **delegate of the United States** said that, in Working Group 4C, he had proposed the addition to that draft Resolution of some wording taken from his Administration's proposals in Addendum 18 to Document 9.

4.8 The **delegate of Mexico** supported that proposal of the United States.

4.9 The **Chairman** suggested that the Committee should consider Document 159, including its Annex 4, at a later meeting.

4.10 It was so **agreed**.

4.11 The **delegate of Morocco** said that, in general, WRC-95 should avoid adding too many items to the agenda of WRC-97.

4.12 The **Chairman** invited the Committee to consider Article S20 as set out in the Annex to Document DT/36. Following an observation by the **delegate of Mexico**, he said that the heading "Article 20" in the main text of the document would be corrected to read "Article S20".

4.13 Articles S20 and S25, as set out in the Annex to Document DT/36, were **approved**.

The meeting rose at 1735 hours.

The Secretary:
M. GIROUX

The Chairman:
M. GODDARD

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

COMMITTEE 4

Latvia (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

The Republic of Latvia proposes the inclusion of its name in the following footnote.

LVA/195/1

MOD 608C
S5.221 Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from stations of the fixed or mobile services in the following countries: Algeria, the Federal Republic of Germany, Saudi Arabia, Australia, Austria, Bangladesh, Belarus, Belgium, Brunei Darussalam, Bulgaria, Cameroon, Canada, Cyprus, Colombia, Congo, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Spain, Ethiopia, the Russian Federation, Finland, France, Ghana, Greece, Honduras, Hungary, Iran, Ireland, Iceland, Israel, Italy, Japan, Jordan, Kenya, Latvia, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Mozambique, Namibia, Norway, New Zealand, Oman, Pakistan, Panama, Papua New Guinea, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Romania, the United Kingdom, Singapore, Sri Lanka, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, the Czech and Slovak Federal Republic, Thailand, Tunisia, Turkey, Ukraine, Yemen and Yugoslavia that operate in accordance with the Table of Frequency Allocations.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

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COMMITTEE 4

FINAL REPORT OF THE CHAIRMAN OF WORKING GROUP 4C

At its ninth meeting the Working Group continued consideration of the matter of incorporation by reference of the ITU-R Recommendations.

With regard to the ITU-R Recommendations, approved by the 1995 Radiocommunication Assembly on the basis of the VGE proposals and listed in Document 21(Corr.1), references to Recommendation [1A/XG] - VGE proposed Annex AP6; Recommendation [1A/XF] - Annex AP7 and Recommendation [1A/XE] - Annex AP8 were considered. Many delegations supported the VGE proposal to use these new ITU-R Recommendations in the texts of the Radio Regulations through incorporation by reference.

However, the delegations of Cuba and Argentina prefer to keep provisions of these Recommendations in the main body of the Radio Regulations.

After lengthy discussions, some delegations proposed that three Recommendations be considered in Committee 4 with a wider representation of administrations.

The delegate of Cuba was of the opinion that the contents of Annex AP20 (ITU-R Recommendation [RR Appendix 20] and AP21 (ITU-R Recommendation [1C/XA] approved by the Radiocommunication Assembly) should also be kept in the Radio Regulations).

Working Group 4C noted that although the VGE proposed to transfer the text of Annex AP37 in ITU-R Recommendations, no such Recommendation had been prepared and approved by the Assembly. The Group decided that the current text of Appendix 37 should remain in the Radio Regulations.

Having considered the proposal from the European countries (EUR/5/27), the Working Group adopted draft new Resolution [COM4-RRR] "Revision of the References of the ITU-R Recommendations Incorporated by Reference to the Radio Regulations" (see Annex).

Annex: 1

ANNEX

ADD

DRAFT RESOLUTION [COM4-RRR]

REVISION OF THE REFERENCES TO THE ITU-R RECOMMENDATIONS INCORPORATED BY REFERENCE IN THE RADIO REGULATIONS

The World Radiocommunication Conference (Geneva, 1995),

considering

a) that the VGE proposed the transfer of certain texts of the Radio Regulations to other documents, especially to the ITU-R Recommendations, using the incorporation by reference procedure;

b) that, in some cases, the Radio Regulation provisions imply the obligation of the Members to conform to the criteria or specifications incorporated by reference;

c) that references to the incorporated texts shall be explicit and shall refer to a precisely identified provision;

d) that, taking into account the rapid evolution of technology, the ITU-R sector may revise the Recommendations incorporated by reference in short periods of time;

e) that the revised and approved Recommendations will not have the same legal force as the initial Recommendation, incorporated by reference, until a competent world radiocommunication conference has delivered its decision;

f) that a procedure is necessary to ensure in the cases provided for in the Radio Regulations, the obligation to conform to the provisions reflecting the most recent technical developments;

resolves

1 that each Radiocommunication Assembly shall communicate to the following World Radiocommunication Conference the list of Recommendations incorporated by reference in the Radio Regulations, which have been revised and approved during the elapsed study session;

2 that, on this basis, the WRC shall examine the revised Recommendations, and decide whether or not to update the corresponding references in the Radio Regulations;

3 that, if the WRC decides not to update the corresponding references, the ITU-R shall continue the publication of the ITU-R Recommendation currently referenced in the Radio Regulations;

4 that the WRCs shall place on the agenda of future WRCs, the examination of Recommendations in conformity with *resolves* 1 and *resolves* 2 of this Resolution;

urges administrations

to participate actively in the work of the ITU-R Study Groups and the Radiocommunication Assembly in the revision of those Recommendations which are treated as mandatory references in the provisions of the Radio Regulations.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 197-E
8 November 1995
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COMMITTEE 4

Zambia (Republic of)

PROPOSALS FOR THE WORK OF THE CONFERENCE

The Republic of Zambia proposes the inclusion of its name in the following footnote.

ZMB/197/1

MOD 608C
S5.221 Stations of the mobile-satellite service in the band 148 - 149.9 MHz shall not cause harmful interference to, or claim protection from stations of the fixed or mobile services in the following countries: Algeria, the Federal Republic of Germany, Saudi Arabia, Australia, Austria, Bangladesh, Belarus, Belgium, Brunei Darussalam, Bulgaria, Cameroon, Canada, Cyprus, Colombia, Congo, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Spain, Ethiopia, the Russian Federation, Finland, France, Ghana, Greece, Honduras, Hungary, Iran, Ireland, Iceland, Israel, Italy, Japan, Jordan, Kenya, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Mozambique, Namibia, Norway, New Zealand, Oman, Pakistan, Panama, Papua New Guinea, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Romania, the United Kingdom, Singapore, Sri Lanka, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, the Czech and Slovak Federal Republic, Thailand, Tunisia, Turkey, Ukraine, Yemen ~~and~~, Yugoslavia and Zambia that operate in accordance with the Table of Frequency Allocations.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Corrigendum 1 to Document 198-E
11 November 1995
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COMMITTEE 4

REPORT FROM DRAFTING GROUP 4B2 TO COMMITTEE 4

Replace the following provisions by the attached text.

G.C. BROOKS
Chairman, Drafting Group 4B2

ANNEX 1

ARTICLE S9

MOD **Section II. Coordination Procedure~~2~~3**

MOD **S9.8** b)* for a transmitting space station of the fixed-satellite service using the geostationary-satellite orbit in a frequency band shared on an equal primary basis with the broadcasting-satellite service in respect of ~~space~~ stations of the latter service which are subject to ~~a~~the Appendix **S30** plan;

MOD **S9.9** c)* for a transmitting space station of the fixed-satellite service using the geostationary-satellite orbit in a frequency band shared on an equal primary basis with the feeder links of the broadcasting-satellite service which are subject to ~~a~~the Appendix **S30A** plan;

MOD **S9.14** ~~h~~iii) ~~for a station in~~which is a space station of a satellite network ~~using a non-geostationary-satellite orbit in the frequency bands to which Resolution 46 applies~~ in respect of stations of terrestrial services where the ~~pfd limits~~threshold value ~~are~~is exceeded ~~VGE Note 3~~;

~~ADD~~SUP S9.14.1 ~~The provisions of No. S9.14 shall also be applied to a transmitting space station in a satellite network using the geostationary-satellite orbit in respect of terrestrial stations under [Nos. S5.348, S5.354, S5.389, S5.402 and S5.414].~~

ADD S9.15 iv) if either a specific earth station or typical earth station of a non-geostationary satellite network in respect of terrestrial stations in frequency bands allocated with equal rights to space and terrestrial services and where the coordination area of the earth station includes the territory of another country;

ADD S9.16 v) if a transmitting ~~or receiving~~ station of a terrestrial service is located within the coordination area of an earth station in a non-geostationary satellite network;

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* ~~[~~Application of these provisions is suspended pending the decision of WRC-97 on revision of Appendices 30 and 30A~~.]~~ with respect to Articles 6 and 7 of those two Appendices.

MOD **S9.~~15~~17** ~~i~~f)** for any ~~individual~~specific earth station or typical mobile earth station in frequency bands above 1 GHz allocated with equal rights to space and terrestrial services in respect of terrestrial stations and where the coordination area of the earth station includes the territory of another country~~VGE Note 4~~, with the exception of the coordination under No. **S9.15**;

MOD **S9.~~17~~18** ~~k~~h)** for any transmitting station of a terrestrial service in the bands mentioned in No. **S9.~~15~~17** within the coordination area of an earth station with the exception of the coordination under No. **S9.16**;

(MOD) **S9.19** ~~m~~i)** for any transmitting station of a terrestrial service in a frequency band shared on an equal primary basis with the broadcasting-satellite service;

~~[~~**SUP** **S9.20** To be discussed in 4C.~~]~~

MOD **S9.31** The information sent under No. **S9.29** shall also, in the cases covered by Nos. **S9.15** ~~or~~, **S9.~~16~~17 or S9.17bis**, include a copy of diagrams drawn to appropriate scale indicating for both transmission and reception the location of the earth station and its associated coordination area, or the coordination area related to the service area in which it is intended to operate the mobile earth station, and the data on which the diagrams are based. In respect of terrestrial stations, in the cases covered by Nos. **S9.16, S9.18** and **S9.19** the information shall include the locations of the terrestrial stations ~~of a terrestrial network wholly or partly~~ within the coordination area of the relevant earth station.

MOD **S9.32** If the responsible administration, ~~following the application of Nos. S9.22 to S9.27,~~ concludes that coordination is not required under **S9.7 - S9.9**, it ~~may~~shall send the relevant information ~~of~~pursuant to Appendix **S4** to the Bureau for action under **S9.34** ~~or under Section I of Article S11~~.

MOD **S9.33** If for any reason an administration can not act in accordance with **S9.29**, it shall seek the assistance of the Bureau. The ~~latter~~Bureau shall then send the request for coordination to the administration concerned and ~~shall provide the necessary assistance, taking~~take any necessary further action as appropriate under **S9.45** and **S9.46**.

** ~~[~~The ~~A~~application of these provisions with respect to the bands and services of Articles 6 and 7 of Appendices 30 and 30A is suspended pending the decision of WRC-97 on revision of Appendices 30 and 30A.~~]~~

Sub-Section IIC. Action Upon a Request for Coordination

MOD **S9.50** An administration having received a request for coordination under **S9.7** to **S9.21**, or having been included in the procedure following action under No. **S9.41**, shall promptly examine the matter with regard to interference which may be caused to, or in certain cases, by its own assignments[1, 2]. For the assignments to be taken into account, see in accordance with Appendix **S5**[3].

MOD **S9.52** If an administration, following its action under Nos. **S9.50** does not agree to the request for coordination, it shall within the same four-month period inform the requesting administration of its disagreement and shall provide information concerning its own assignments upon which that disagreement is based. It shall also make such suggestions as it is able to offer with a view to a satisfactory resolution of the matter. A copy of that information shall be sent to the Bureau. Where that information relates to terrestrial stations or earth stations operating in the opposite direction of transmission within the coordination area of an earth station, it only that information relating to existing radiocommunication stations or to 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 Nos. **S11.2** [or **S11.9**].

ADD S9.52A In the case of coordination requested under **S9.14**, on receipt of the special section referred to in **S9.38**, and within the same four-month period from the publication of that special section, an administration in need of assistance may inform the Bureau that it has recorded existing or planned terrestrial stations that might be affected by the planned satellite network and may request the Bureau to determine the need for coordination by applying the Annex 2 criteria. The Bureau shall inform the administration seeking coordination of this request, indicating the date by which it may be able to provide the results of its analysis. When these results are available, the Bureau shall inform both administrations. This request shall be considered as a disagreement, pending the results of the determination by the Bureau of the need for coordination.

ADD S9.52ter For coordination requests under Nos. **S9.11 - S9.14** and **S9.21**, an administration not responding under No. **S9.52** within the same four month-period shall be regarded as unaffected and in the cases of **S9.11 - S9.14** the provisions of Nos. **S9.48** and **S9.49** shall apply.

ADD S9.52ter1 For coordination requests under Nos. **S9.12 - S9.14**, forty-five days prior to the expiry of the same four-month period, the Bureau shall dispatch a circular telegram to all administrations, bringing the matter to their attention. Upon receipt of the circular telegram mentioned above, an administration shall acknowledge receipt immediately by telegram. If no acknowledgement is received within thirty days, the Bureau shall dispatch a telegram requesting acknowledgement, to which the receiving administration shall reply within a further period of fifteen days.

NOCMOD **S9.61** The Bureau, acting on a request for assistance under No. **S9.60**, shall forthwith request the administration concerned to give an early decision in the matter or provide the relevant information.

~~NOC~~MOD S9.62

If the administration concerned still does not give a ~~decision in the matter~~response within thirty days of the Bureau's action under No. **S9.61** the provisions of Nos. **S9.48** and **S9.49** shall apply.

Consequential MOD to 15.43

In the case where an administration has difficulty in identifying a source of harmful interference in the HF bands and urgently wishes to seek the assistance of the Bureau, it shall promptly inform the Bureau.

SUP

RESOLUTION 103

ADD S11.41bis

Should the assignments that were the basis of the unfavourable finding under Nos. **S11.32bis** or **S11.33** not be brought into use within the period mentioned in Nos. **S11.24**, **S11.25** ~~and~~or **S11.44**, as appropriate, then the finding of the assignments resubmitted under **S11.41** shall be reviewed accordingly.

MOD S13.21

The Bureau shall submit to the Board the final drafts of all proposed changes to the Rules of Procedure~~, together with any comments received from administrations which have not been taken fully into account and the Bureau's recommendations thereon~~. The Rules of Procedure approved by the Board shall be published and shall be open for comments by administrations. In case of continuing disagreement the matter shall be submitted by the Director with the agreement of the concerned administration to ~~a forthcoming~~the next WRC. The Director of the Bureau shall also inform the appropriate Study Group(s) of this matter (see Resolution 35). Pending resolution of the matter, the Board and the Bureau shall continue to use the particular Rule of Procedure in dispute but, following resolution of the matter by a decision of a world radiocommunication conference, the Board shall promptly review and revise as necessary the Rules of Procedure and the Bureau shall review all relevant findings.

~~MOD~~SUP

RESOLUTION 35 (REV.WRC-95)

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

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COMMITTEE 4

REPORT FROM WORKING GROUP 4B TO COMMITTEE 4

Attached you will find material relating to provisions **ADD S11.43bister1** and **S11.43bister2** as contained in Annex 2 of Document 198.

P. ABOUDARHAM
Chairman, Working Group 4B

Annex: 1

ANNEX

ADD S11.43bister1

Where the notifying administration resubmits the notice and the Bureau finds that the coordination procedures mentioned in **S11.32** have been successfully completed with all administrations whose space or terrestrial radiocommunication stations may be affected, the assignment shall be recorded in the Master Register. The date of receipt by the Bureau of the original notice shall be entered in the appropriate column of the Master Register. The date of receipt by the Bureau of the resubmitted notice shall be entered in the Remarks Column.

ADD S11.43bister2

Where the notifying administration resubmits the notice with a request that the Bureau effect the required coordination under **S9.7-S9.[20]**, the Bureau shall take the necessary action in accordance with the relevant provisions of Articles **S9** and **S11**, as appropriate. However, in any subsequent recording of the assignment, the date of receipt by the Bureau of the resubmitted notice shall be entered in the Remarks Column.

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COMMITTEE 4

REPORT FROM WORKING GROUP 4B TO COMMITTEE 4

Attached as Annexes 1 and 2 are the proposed revised texts for Article S9.1 (Section II) and Article S11.

It is to be noted by WG 4A that all references in Article S5 to Article 14 should be changed to S9.21 and all references to Resolution 46 in Article S5 should be changed to S9.11bis.

The representative of BR pointed out the implications in BR of the proposed changes to S9.30.

With respect to the ADD S11.32bis.1 it is understood that the Bureau will consult the administrations concerned on the most recent information before conducting the examination.

With the proposals for Article S11 the suggested addition of S9.5A in DT/13(Rev.1) can be suppressed.

Attached as Annexes 3 and 4 are the proposed revised texts for Articles S13 and S14.

In respect to the changes to S13.20, it is understood that the drafts will be circulated to administrations.

Attached as Annex 5 is the revised text for Resolution 35.

P. ABOUDARHAM
Chairman, Working Group 4B

Annexes: 5

ANNEX 1

ARTICLE S9

MOD **Section II. Coordination Procedure[2 3]**

A.S9.II.1 [2] These procedures ~~may be~~are also applicable for earth stations of the earth exploration-satellite service, space research service, space operation service and radiodetermination-satellite service intended to be used while in motion or during halts at unspecified points.

ADD A.S9.II.2 [3] The word "coordination" as used throughout this Article refers also to the process of seeking an agreement of other administrations when required under No. **S9.21**.

Sub-Section IIA. Requirement and Request for Coordination

MOD **S9.6** Before an administration[1, ~~2~~] notifies to the Bureau or brings into use a frequency assignment in any of the cases listed below, it shall effect coordination, as required, with other administrations identified under No. **S9.27**:

NOC **S9.6.1** [1] In the case of coordination of an assignment in a satellite network in relation to another satellite network, an administration may act on behalf of a group of named administrations. 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 networks or systems.

SUP **S9.6.2**

MOD **S9.7** a) for a station in a satellite network using the geostationary-satellite orbit in respect of any other satellite network using that orbit, for ~~all~~any space radiocommunication services and frequency bands except those covered by ~~a world plan~~the plans of Appendices **S30, S30A** and **S30B**;

MOD **S9.8** b)* for a transmitting space station of the fixed-satellite service using the geostationary-satellite orbit in a frequency band shared on an equal primary basis with the broadcasting-satellite service in respect of ~~space~~ stations of the latter service which are subject to ~~a~~the Appendix **S30** plan;

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* [Application of these provisions is suspended pending the decision of WRC-97 on revision of Appendices 30 and 30A.]

MOD **S9.9** c)* for a transmitting space station of the fixed-satellite service using the geostationary-satellite orbit in a frequency band shared on an equal primary basis with the feeder links of the broadcasting-satellite service which are subject to athe Appendix **S30A** plan;

SUP **S9.10**

(MOD) **S9.11** ed) for a space station in the broadcasting-satellite service, in any band shared on an equal primary basis with terrestrial services and in which there is no plan for the broadcasting-satellite service, in respect of terrestrial services;

ADD S9.11bis e) for a station for which the requirement to coordinate is included in a footnote of the Table of Frequency Allocations referring to this provision:

MOD **S9.12** fi) ~~for a station~~ in a satellite network using a non-geostationary-satellite orbit ~~in the frequency bands to which Resolution 46 applies~~ in respect of any other satellite network using a non-geostationary-satellite orbit, and in respect of any other satellite network using the geostationary-satellite orbit, with the exception of the coordination under No. **S9.17bis**;

MOD **S9.13** gii) ~~for a station~~ in a satellite network using the geostationary-satellite orbit ~~in the frequency bands to which Resolution 46 applies~~ in respect of any other satellite network using a non-geostationary-satellite orbit;

MOD **S9.14** hiii) ~~for a station~~ in a satellite network using a non-geostationary-satellite orbit~~:~~, ~~in the frequency bands to which Resolution 46 applies~~ in respect of stations of terrestrial services where the pfd ~~limits~~threshold value ~~are~~is exceeded ~~VGE Note 3~~;

SUP VGE Note 3.

ADD S9.14.1 The provisions of No. **S9.14** shall also be applied to a transmitting space station in a satellite network using the geostationary-satellite orbit in respect of terrestrial stations under [Nos. **S5.348**, **S5.354**, **S5.389**, **S5.402** and **S5.414**].

ADD S9.15 iv) if either a specific earth station or typical earth station in respect of terrestrial stations in frequency bands allocated with equal rights to space and terrestrial services and where the coordination area of the earth station includes the territory of another country;

SUP **S9.16 (of VGE)**

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* [Application of these provisions is suspended pending the decision of WRC-97 on revision of Appendices 30 and 30A.]

ADD S9.16 v) if a transmitting or receiving station of a terrestrial service within the coordination area of an earth station in a non-geostationary satellite network;

MOD **S9.~~15~~17** ~~i~~f)* for any ~~individual~~specific earth station or typical mobile earth station in frequency bands above 1 GHz allocated with equal rights to space and terrestrial services in respect of terrestrial stations and where the coordination area of the earth station includes the territory of another country~~VGE Note 4~~, with the exception of the coordination under No. **S9.15**;

SUP VGE Note 4.

ADD S9.17bis g) for any specific earth station in respect of other earth stations operating in the opposite direction of transmission in frequency bands allocated with equal rights to space radiocommunication services in both directions of transmissions and where the coordination area of the earth station includes the territory of another country;

MOD **S9.~~17~~18** ~~k~~h)* for any transmitting station of a terrestrial service in the bands mentioned in No. **S9.~~15~~17** within the coordination area of an earth station with the exception of the coordination under No. **S9.16**;

SUP **S9.18 (of VGE)**

(MOD) **S9.19** ~~m~~i)* for any transmitting station of a terrestrial service in a frequency band shared on an equal primary basis with the broadcasting-satellite service;

[SUP **S9.20** To be discussed in 4C.]

MOD **S9.21** ~~o~~i) for any station of a service for which the requirement ~~to coordinate or~~ to ~~obtain~~seek the agreement of other administrations is included in a footnote of the Table of Frequency Allocations referring to this provision. ~~or in any other provision of these Regulations.~~~~VGE Note 5~~

SUP VGE Note 5.

SUP **S9.22**

MOD **S9.23** Whenever there is a requirement to effect more than one form of coordination in accordance with No. **S9.30**, the requests shall be appropriately identified by reference to Nos. **S9.7** to **S9.21**, and they shall as far as possible be sent to the Bureau and where appropriate shall be published simultaneously.

SUP **S9.24**

SUP **S9.25**

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* [Application of these provisions is suspended pending the decision of WRC-97 on revision of Appendices 30 and 30A.]

MOD **S9.26** Coordination may be effected for a satellite network using the information relating to the space station, including its service area, and the parameters of one or more typical earth stations located in all or parts of the service area of the space station. ~~The same provision shall apply~~Coordination may also be effected for terrestrial stations using the information relating to typical terrestrial stations except for those mentioned in Nos. **S11.18** to **S11.23**.

MOD **S9.27** Frequency assignments to be taken into account in effecting coordination are ~~specified for each case in~~identified by using Appendix **S5**. ~~The requesting administration shall, by applying the calculation method and criteria contained in that Appendix to those frequency assignments, identify the administrations with which coordination is to be effected.~~

MOD **S9.28** In the case of requests for coordination under No. **S9.29**, the requesting administration shall, by applying the calculation method and criteria contained in Appendix **S5** to those frequency assignments, identify, to the extent possible, the administrations with which coordination is to be effected.

MOD **S9.29** Requests for coordination made under Nos. **S9.15 - S9.19** shall be sent by ~~T~~the requesting administration ~~shall then send~~ to the identified administrations, ~~with a copy to the Bureau[1], a request for coordination~~ together with the appropriate information listed in Appendix **S4** to these Regulations.

SUP **S9.29.1**

MOD **S9.30** ~~The requesting administration may alternatively send the appropriate information to the Bureau for publication in the Weekly Circular[2] as a request for coordination.~~Requests for coordination made under Nos. **S9.7 - S9.14 [S9.20]** and **S9.21** shall be sent by the requesting administration to the Bureau together with the appropriate information listed in Appendix **S4** to these Regulations.

SUP **S9.30.1**

MOD **S9.31** The information sent under No. **S9.29** shall also, in the cases covered by Nos. **S9.15** ~~**or**~~, **S9.**~~**16**~~**17 or S9.17bis**, include a copy of diagrams drawn to appropriate scale indicating for both transmission and reception the location of the earth station and its associated coordination area, or the coordination area related to the service area in which it is intended to operate the mobile earth station, and the data on which the diagrams are based. In respect of terrestrial stations, in the cases covered by Nos. **S9.16** and **S9.18**, the information shall include the locations of the stations of a terrestrial network wholly or partly within the coordination area of the relevant earth station.

MOD **S9.32** If the responsible administration, following the application of Nos. ~~**S9.22 to**~~ **S9.27**, concludes that coordination is not required, it may send the relevant information ~~of~~pursuant to Appendix **S4** to the Bureau for action under **S9.34** ~~or under Section I of Article S11~~.

ADD S9.32bis If the responsible administration, following the application of Nos. **S9.15** to **S9.19**, concludes that coordination is not required, it may send the relevant information pursuant to Appendix **S4** to the Bureau for action under Section I of Article **S11**.

MOD **S9.33** If for any reason an administration can not act in accordance with **S9.29**, it shall seek the assistance of the Bureau. The latter shall then send the request to the administration concerned and shall provide the necessary assistance~~, taking~~. The Bureau shall also take any necessary further action under **S9.45** and **S9.46**.

MOD **S9.34** On receipt of the complete information sent under No. ~~**S9.29**~~**S9.30** or No. **S9.32** the Bureau shall promptly:

NOC **S9.35** a) examine that information with respect to its conformity with No. **S11.31**;

MOD **S9.36** b) identify in accordance with No. **S9.27** any ~~other~~ administrations ~~whose services may be affected~~, with which coordination may need to be effected[4];

ADD S9.36.1 [4] The list of administrations identified by the Bureau under Nos. **S9.11 - S9.14** and **S9.21** is only for information purposes to help administrations comply with this procedure.

MOD **S9.37** c) include their names in the publication under No. **S9.38** ~~information sent under No. S9.29~~;

MOD **S9.38** d) publish, as appropriate,[3] the complete information in the Weekly Circular within four months. When the Bureau is not in a position to comply with the time limit referred to above, it shall periodically so inform the administrations, giving the reasons therefor~~;~~.

SUP **S9.38.1**

SUP **S9.39**

MOD **S9.40** f) inform the administrations concerned of its actions~~;~~ and communicate the results of its calculations, drawing attention to the relevant Weekly Circular.

ADD S9.40bis If the information is found to be incomplete, the Bureau shall immediately seek from the administration concerned any clarification and information not provided.

MOD **S9.41** Following receipt of the Weekly Circular, referring to requests for coordination under Nos. **S9.7 - S9.9**, an administration believing that it should have been included in the request shall, within four months of the date of publication of the relevant Weekly Circular, inform the initiating administration and the Bureau, giving its technical reasons for doing so, and shall request that its name be included.

MOD **S9.42** The Bureau shall study this information on the basis of Appendix **S5** ~~and the Rules of Procedure~~ and shall inform both administrations of its conclusions. Should the Bureau agree to include the administration in the request, it shall publish an addendum to the publication under No. **S9.38**.

MOD **S9.43** ~~When these Regulations do not permit the identification of all affected administrations,~~ Following action under No. **S9.41**, those administrations not responding within the time limit specified in No. **S9.41** shall be regarded as unaffected and the provisions of Nos. **S9.48** and **S9.49** shall apply.

MOD **S9.44** The administration ~~seeking agreement~~requesting coordination and those with which it is ~~sought~~requested, or the Bureau when acting pursuant to No. **S7.6**, may request any additional information they consider necessary. ~~The Bureau shall be sent copies of any such requests and the replies.~~

Sub-Section IIB. Acknowledgement of Receipt of a Request for Coordination

MOD **S9.45** An administration receiving a request for coordination under No. **S9.29** shall, within 30 days from the date of the ~~relevant Weekly Circular~~request, acknowledge receipt by telegram to the requesting administration~~, with a copy to the Bureau~~. In the absence of an acknowledgement of receipt of its request within the 30 days the requesting administration shall send a telegram requesting an acknowledgement~~, with a copy to the Bureau~~.

NOC **S9.46** If there is no acknowledgement of receipt within 15 days of its second request sent under No. **S9.45** the requesting administration may seek the assistance of the Bureau. In this event the Bureau shall forthwith send a telegram to the administration which has failed to reply requesting an immediate acknowledgement.

NOC **S9.47** If there is no acknowledgement of receipt within 30 days after the Bureau's action under No. **S9.46** it shall be deemed that the administration which has failed to acknowledge receipt has undertaken:

NOC **S9.48** a) that no complaint will be made in respect of any harmful interference affecting its own assignments which may be caused by the assignment for which coordination was requested; and

NOC **S9.49** b) that the use of its own assignments will not cause harmful interference to the assignment for which coordination was requested.

Sub-Section IIC. Action Upon a Request for Coordination

MOD **S9.50** An administration having received a request for coordination, or having been included in the procedure following action under No. **S9.41**, shall promptly examine the matter with regard to interference which may be caused to, or in certain cases, by its own assignments[1,2]. ~~For the assignments to be taken into account, see~~ in accordance with Appendix **S5**[3].

SUP **S9.50.1**

NOC **S9.50.2** [2] In the absence of specific provisions in these Regulations relating to the evaluation of interference, the calculation methods and the criteria should be based on relevant ITU-R recommendations agreed by the administrations concerned. In the event of disagreement on a Recommendation or in the absence of such a Recommendation, the methods and criteria shall be agreed between the administrations concerned. Such agreements shall be concluded without prejudice to other administrations.

NOC **S9.50.3** [3] Where Appendix **S5** specifies a period for which planned assignments may be taken into account, that period may be extended by agreement between the administrations concerned.

MOD **S9.51** Following its action under No. **S9.50** the administration with which coordination was sought under Nos. **S9.7 - S9.9** shall within four months of the date of the relevant Weekly Circular either inform the requesting administration and the Bureau of its agreement~~VGE Note 6~~ or act under No. **S9.52**. ~~In the case of a request for coordination which is not required to be published in the Weekly Circular, the (i.e. **S9.15 - S9.19**), four-month period shall commence on the date of the request.~~

SUP VGE Note 6.

ADD S9.51bis Following its action under No. **S9.50** the administration with which coordination was sought under Nos. **S9.15 - S9.19** shall within four months of the date of dispatch of the coordination data either inform the requesting administration of its agreement or act under No. **S9.52**.

MOD **S9.52** If an administration, following its action under Nos. **S9.50** does not agree to the request for coordination, it shall within the same four-month period inform the requesting administration of its disagreement and shall provide information concerning its own assignments upon which that disagreement is based. It shall also make such suggestions as it is able to offer with a view to a satisfactory resolution of the matter. A copy of that information shall be sent to the Bureau. Where that information relates to terrestrial stations or earth stations operating in the opposite direction of transmission within the coordination area of an earth station, ~~it~~only that information relating to existing radiocommunication stations or to 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 Nos. **S11.2** [or **S11.9**].

ADD S9.52bis When an agreement on coordination is reached, the administration responsible for the terrestrial stations or the earth station operating in the opposite direction of transmission may send to the Bureau the information concerning those stations covered by the agreement which are intended to be notified under Nos. **S11.2** or **[S11.9]**. The Bureau shall consider as notifications only that information relating to existing terrestrial or earth stations operating in the opposite direction of transmission or to those to be brought into use within the next three years.

ADD S9.52ter For coordination requests under Nos. **S9.11 - S9.14** and **S9.21**, an administration not responding under No. **S9.52** within the same four month-period shall be regarded as unaffected and the provisions of Nos. **S9.48** and **S9.49** shall apply.

NOC **S9.53** Thereafter, the requesting and responding administrations shall make all possible mutual effort, to overcome the difficulties, in a manner acceptable to the parties concerned.

NOC **S9.54** Either the administration seeking coordination or one whose assignments may be affected thereby may request additional information which it may require to assess the interference to its own assignments or to assist in resolving the matter.

MOD **S9.55** All administrations may use correspondence, any appropriate means of telecommunication, or meetings as necessary to assist in resolving the matter, the results of which shall be communicated to and published in the Weekly Circular, as appropriate, by the Bureau.

SUP **S9.56**

SUP **S9.56.1** Resolution 110 of WRC (ORB-88) may need to be deleted.

SUP **S9.57**

MOD **S9.58** An administration which initiated the coordination, as well as any administration with which coordination is sought, shall communicate to the Bureau any modifications to the published characteristics of their respective networks that were required to reach agreement on the coordination. The Bureau shall publish this information in accordance with No. **S9.38**, indicating that these modifications resulted from the joint effort of the administrations concerned to reach agreement on coordination and for this reason they should be given special consideration. These modifications may involve the application of Sub-Section **IIA** of Article **S9** with respect to other administrations.

NOC **S9.59** If there is disagreement between the administration seeking coordination and an administration with which coordination is sought as to the level of acceptable interference, either may seek the assistance of the Bureau; in such a case it shall provide the necessary information to enable the Bureau to endeavour to effect such coordination.

MOD

Sub-Section IID. Action in the Event of No Reply, No Decision or Disagreement Upon a Request for Coordination

MOD S9.60 If an administration with which coordination is sought fails to reply or to give a decision under No. **S9.51** ~~in the matter~~or following its action under No. **S9.52** fails to reply, to give a decision or to provide information concerning its own assignments upon which its disagreement is based within the same four-month period specified in No. **S9.51**, the requesting administration may seek the assistance of the Bureau.

NOC S9.61 The Bureau, acting on a request for assistance under No. **S9.60**, shall forthwith request the administration concerned to give an early decision in the matter.

NOC S9.62 If the administration concerned still does not give a decision in the matter within thirty days of the Bureau's action under No. **S9.61** the provisions of Nos. **S9.48** and **S9.49** shall apply.

MOD S9.63 If there is continuing disagreement, or if any administration involved in the matter has requested the assistance of the Bureau, the ~~latter~~Bureau shall seek any necessary information to enable it to assess the interference. It shall communicate its conclusions to the administrations involved.

MOD S9.64 If after the Bureau has communicated its conclusions to the administrations involved the disagreement remains unresolved, the administration which requested coordination shall, having regard to the other provisions of this Section, defer the submission of its notice of frequency assignments under Article **S11** to the Bureau for six months from the date of the request or the Weekly Circular containing the request for coordination, as appropriate.

MOD S9.65 If at the date of receipt of a notice under No. **S9.64** above the Bureau has been informed of a continuing disagreement, ~~it~~the Bureau shall examine the notice under Nos. **S11.32bis** or **S11.33**[1] and shall act in accordance with No. **S11.38**.

MOD S9.65.1 [1] A notice of a frequency assignment, for which coordination was requested under No. **S9.21** and about which there is a continuing disagreement, shall not be examined under Nos. **S11.32bis** or **S11.33**; it shall, however, be examined under No. ~~**S9.31**~~**S11.31** ~~taking into account No. **S5.45**~~.

ANNEX 2

ARTICLE S11

MOD **Notification and Recording of Frequency Assignments[1,~~2~~]**

Section I. Notification

A.S11.1 [1] For the notification and recording of assignments in the following Regions and frequency bands see the appropriate appendices:

Region 1	**Region 2**	**Region 3**	**Appendix**
11.7 - 12.5 GHz	12.2 - 12.7 GHz	11.7 - 12.2 GHz	S30
14.5 - 14.8 GHz 17.3 - 18.1 GHz	17.3 - 17.8 GHz	14.5 - 14.8 GHz 17.3 - 17.8 GHz	S30A
All Regions, Fixed Satellite Service only 6 725 - 7 025 MHz (Earth-to-space) 10.7 - 10.95 GHz (space-to-Earth) 12.75 - 13.25 GHz (Earth-to-space)		4 500 - 4 800 MHz (space-to-Earth) 11.2 - 11.45 GHz (space-to-Earth)	S30B

SUP **A.S11.2**

NOC **S11.1** The expression "frequency assignment", wherever it appears in this Article, shall be understood to refer either to a new frequency assignment or to a change in an assignment already recorded in the Master Register.

MOD **S11.2** Any frequency assignment to a transmitting station ~~for transmitting~~and to its associated receiving stations except for those mentioned in Nos. **S11.13** and **S11.14** shall be notified to the Bureau:

NOC **S11.3** a) if the use of that assignment is capable of causing harmful interference to any service of another administration; or

NOC **S11.4** b) if that assignment is to be used for international radiocommunication; or

MOD **S11.5** c) if that assignment is subject to a world or regional frequency allotment or assignment plan which does not have its own notification procedure; or

SUP **S11.6**

NOC **S11.7** e) if it is desired to obtain for that assignment international recognition; or

NOC **S11.8** f) if it is a non-conforming assignment under No. **S8.4** and if the administration desires to have it recorded for information.

NOC **S11.9** Similar notification shall be made of a frequency assignment to a receiving earth station or space station, or to a land station for reception from mobile stations, when:

MOD **S11.10** a) any of the conditions in Nos. **S11.4**, **S11.5**, ~~**S11.6**~~ or **S11.7** apply to the receiving station; or

NOC **S11.11** b) any of the conditions in No. **S11.2** apply to the associated transmitting station.

MOD **S11.12** Any frequency ~~or frequency band~~ to be used for reception by a particular radioastronomy station may be notified if it is desired that such data should be included in the Master Register.

MOD **S11.13** Assignments involving specific frequencies which are prescribed by these Regulations for common use by terrestrial stations of a given service shall not be notified. They shall be entered in the Master Register and a consolidated table shall also be published in the Preface to the International Frequency List (the IFL).

NOC **S11.14** Frequency assignments for ship stations and for mobile stations of other services, for stations in the amateur service, for earth stations in the amateur-satellite service, and those for broadcasting stations in the high frequency bands [5 950 - 6 200 kHz, 7 100 - 7 300 kHz (Regions 1 and 3), 9 500 - 9 775 kHz, 11 700 - 11 975 kHz, 15 100 - 15 450 kHz, 17 770 - 17 900 kHz, 21 450 - 21 750 kHz, 25 670 - 26 100 kHz,] ~~between 5 900 kHz and 26 100 kHz~~for which Article **[S12A]** applies shall not be notified under this Article. ~~For assignments to broadcasting stations in these bands see Article **S12**.~~

MOD **S11.15** When notifying a frequency assignment the administration[1] shall provide the relevant characteristics listed in Appendix **S4** ~~and submit them in accordance with the practices recommended in the Rules of Procedure~~. Alternatively, if an administration has already communicated information to the Bureau under ~~the procedure of Article **S9**~~No. **S9.30**, it may identify that communication as notification and send to the Bureau only the changes thereto.

MOD **S11.15.1** [1] A frequency assignment to a space station or typical earth station as part of the satellite network may be notified by one administration acting on behalf of a group of named administrations. Any further notice (modification or deletion) relating to such an assignment shall, in the absence of information to the contrary, be regarded as having been submitted on behalf of the entire group.

SUP **S11.16**

SUP **S11.16.1**

MOD **S11.17** Frequency assignments relating to a number of stations or earth stations may be notified in the form of the characteristics of a typical station or a typical earth station and the intended geographical area of operation. Except for ~~receiving land stations or~~ mobile earth stations, individual notices of frequency assignments are however necessary in the following cases (see also No. **S11.14**):

MOD **S11.18** a) stations covered by ~~an~~the allotment or assignment plan ~~other than those covered by the plans of Appendices **S30A** (Regions 1 and 3) and **S30B**;~~of Appendices **S25**, **S26** and **S27**.

NOC **S11.19** b) broadcasting stations;

MOD **S11.20** c) terrestrial stations within coordination ~~distance~~area of an earth station;[1]

MOD **S11.21** d) any terrestrial stations, in bands shared with space services, which exceeds the limits specified in ~~these Regulations~~[No. **S21.3**] in accordance with [No. **S21.7**];[1]

NOC **S11.22** e) earth stations the coordination area which extends to the territory of another administration;[1]

NOC **S11.23** f) earth stations whose interference potential is greater than that of a coordinated typical earth station.[1]

MOD **S11.20.1** to **S11.23.1** [1] In these cases individual notices of frequency assignments are required in frequency bands ~~[above 1 GHz]~~**VGE Note 4** allocated with equal rights to terrestrial and space services where coordination is required under Appendix S5, Table S5-1.

SUP VGE Note 4.

MOD **S11.24** Notices relating to assignments for stations of terrestrial services, except for those mentioned in Nos. ~~**S11.16 and**~~ **S11.25** shall reach the Bureau not earlier than three months before, preferably not later than one month before, and in no case later than one month after, the assignments are brought into use. ~~The notices containing a request for assistance mentioned under No. **S11.16** shall reach the Bureau not earlier than one year before the assignments are to be brought into use.~~

NOC **S11.25** Notices relating to assignments for stations in space services, and for terrestrial stations involved in the coordination of a satellite network, shall reach the Bureau not earlier than three years before and not later than three months before the assignments are brought into use.

SUP **S11.26**

NOC

Section II. Examination of Notices and Recording of Frequency Assignments in the Master Register

MOD **S11.27** Notices ~~which are found to be incomplete~~not containing the [basic] characteristics specified in Appendix **S4** shall be returned with comments to help the notifying administration to complete and submit them again.

MOD **S11.28** Complete n~~N~~otices ~~which, following the application of the Rules of Procedure, are found to be complete~~ shall be marked by the Bureau with their date of receipt and shall~~, except for those mentioned in No. S11.16,~~ be examined in the date order of their receipt. On receipt of a complete notice the Bureau shall, within no more than two months, publish its contents, with any diagrams and maps and the date of receipt, in the Weekly Circular which shall constitute the acknowledgement to the notifying administration of receipt of its notice. When the Bureau is not in a position to comply with the time limit referred to above, it shall periodically so inform the administrations, giving the reasons therefor.

MOD **S11.29** The Bureau shall not postpone the formulation of a finding on a complete notice unless it lacks sufficient data to reach a conclusion thereon. Moreover, the Bureau shall not act upon any notice having a technical bearing on an earlier notice which is still under consideration by the Bureau until it has reached a finding with respect to the earlier notice.~~VGE Note 10~~

SUP VGE Note 10.

NOC **S11.30** Each notice shall be examined:

MOD **S11.31** a) with respect to its conformity with the Table of Frequency Allocations[1] and the ~~associated~~other provisions~~VGE Note 2~~[2] of these Regulations except those relating to conformity with the procedures for obtaining coordination ~~or agreement~~, or the probability of harmful interference or those relating to conformity with a plan~~; and~~, as appropriate, which are subject of the following sub-paragraphs;~~1~~[3]

MOD **S11.31.1** [1] Conformity with the Table of Frequency Allocations implies the successful application of No. **S9.21**, ~~when it applies to a footnote to the Table of Frequency Allocations (see also No. S9.65.1)~~when necessary.

ADD S11.31.2 The "other provisions" shall be identified and included in the Rules of Procedure.

ADD S11.31.3 Notices relating to radio astronomy stations are only examined with respect to No. **S11.31**.

MOD **S11.32** b) with respect to its conformity with the procedures relating to coordination ~~or agreement~~ with other administrations applicable to the radiocommunication service and the frequency band concerned; or

ADD S11.32bis c) with respect to the probability of harmful interference that may be caused to or from assignments recorded either with a favourable finding in application of Nos. **S11.36** and **S11.37** or **S11.38** or in application of No. **S11.41** or published under Nos. **S9.38** or **S9.58** but not yet notified, as appropriate, in respect of which the notifying administration states that the procedure for coordination under No. **S9.7** could not be successfully completed (see also No. **S9.65**);[1] or

ADD S11.32bis1 [1] The examination of such a notice with respect to any other frequency assignment for which a request for coordination under **S9.7** has been published under No. **S9.38** but not yet notified shall be examined by the Bureau in the order of their publication under the same number using the most recent information available.

MOD **S11.33** ~~c~~d) with respect to the probability of harmful interference that may be caused to or from other recorded assignments with a favourable finding in application of Nos. **S11.36** and **S11.37** or **S11.38** or in application of No. **S11.41**, as appropriate, in respect of which the notifying administration states that the procedure for coordination or prior agreement under Nos. **S9.17**[3], **S9.17bis** or **S9.18**[3] could not be successfully completed (see also No. **S9.65**);~~[1,2]~~ or

SUP **S11.33.1**

NOC **S11.33.2** [2] The examination under No. **S11.33** shall also take into account assignments for terrestrial services which are in use or which are to be brought into use within the next three years and have been communicated to the Bureau as a result of continuing disagreement in coordination.

ADD S11.33.3 [3] When typical earth stations are involved, administrations are required to furnish the necessary information to enable the Bureau to effect the examination.

MOD **S11.34** ~~d~~e) where appropriate, with respect to its conformity with a world or regional allotment or assignment plan and their associated provisions~~; or~~.

SUP **S11.35**

MOD **S11.36** When the examination with respect to No. **S11.31** leads to a favourable finding, the assignment shall be recorded in the Master Register or examined further with respect to Nos. **S11.32** to ~~**S11.35**~~**S11.34** as appropriate. When the finding with respect to No. **S11.31** is unfavourable the assignment shall be recorded in the Master Register only if it includes a reference to No. **S4.4**, otherwise the notice shall be returned with an indication of the appropriate action.

MOD **S11.37** When the examination with respect to No. **S11.32** leads to a favourable finding the assignment shall be recorded in the Master Register indicating the administrations with which the procedure for coordination ~~or agreement~~ has been completed. When the finding is unfavourable, the notice shall be returned to the notifying administration, with an indication of the appropriate action, if Nos. **S11.32bis** or **S11.33** do~~es~~ not apply. ~~VGE NOTE 11~~

SUP VGE Note 11.

MOD **S11.38** When the examination with respect to Nos. **S11.32bis** or **S11.33** leads to a favourable finding the assignment shall be recorded in the Master Register indicating the names of the administrations with which coordination was completed and those with which it was not completed but in respect of which the finding was favourable. When the finding is unfavourable the notice shall be returned with an indication of the appropriate action.

MOD **S11.39** When the examination with respect to No. **S11.34** leads to a favourable finding the assignment shall be recorded in the Master Register. When the finding is unfavourable the notice shall be returned to the notifying administration, with an indication of the appropriate action~~, if No. S11.35 does not apply.~~ ~~VGE Note 11~~ However, the notices under Appendices **S26** and **S27** shall be treated as follows:

ADD S11.39A In the case of a notice in conformity with the technical principles of the Appendix **S27**, but not in conformity with the Allotment Plan, the Bureau shall examine whether the protection specified in Appendix **S27** is afforded to the allotments in the Plan and to assignments already recorded in the Master Register with a favourable finding.

ADD S11.39B When the examination under **S11.39A** leads to a favourable finding the assignment shall be recorded in the Master Register. When the finding is unfavourable the assignment shall be recorded in the Master Register with a symbol indicating that it shall cause no harmful interference to any frequency assignment which is either in conformity with the Allotment Plan, or is recorded in the Master Register with a favourable finding with respect to **S11.39A**.

ADD S11.39C In the case of a notice in conformity with the technical principles of the Appendix **S26**, but not in conformity with the Allotment Plan, it shall be examined with respect to the allotments in Part III of Appendix **S26**.

ADD S11.39D When the examination under **S11.39C** leads to a favourable finding the assignment shall be recorded in the Master Register. When the finding is unfavourable the assignment shall be recorded in the Master Register with a symbol indicating that it shall cause no harmful interference to any frequency assignment which is either in conformity with the Allotment Plan, or is recorded in the Master Register with a favourable finding with respect to **S11.39C**.

SUP **S11.40**

MOD **S11.41** After the return of notice under No. **S11.38** ~~**or S11.40**~~, should the notifying administration resubmit the notice and insist upon its reconsideration, the Bureau shall enter the assignment provisionally in the Master Register with an indication of those administrations whose assignments were the basis of the unfavourable finding. ~~However, t~~The entry shall be ~~retained~~changed from provisional to definitive recording in the Master Register only if the Bureau is

informed that the new assignment has been in use together with the assignment which was the basis for the unfavourable finding for at least four months without any complaint of harmful interference being made (see Nos. **S11.47** and **S11.49**). ~~If harmful interference is actually caused, the administration responsible for the frequency assignment must on receipt of advice, eliminate the interference~~.

ADD S11.41.1 The entry shall be definitive in the case of a frequency assignment to a receiving station under the condition that the notifying administration has undertaken that no complaint will be made in respect of any harmful interference affecting its own assignment which may be caused by the assignment which was the basis for the unfavourable finding.

ADD S11.41bis Should the assignments that were the basis of the unfavourable finding under No. **S11.33** not be brought into use within the period mentioned in Nos. **S11.25** and **S11.44**, as appropriate, then the finding of the assignments resubmitted under **S11.41** shall be reviewed accordingly.

MOD **S11.42** Should harmful interference be caused by an assignment recorded under No. **S11.41** to any recorded assignment ~~recorded with a favourable finding with respect to No. S11.32 or No. S11.33~~which was the basis of the unfavourable finding, the station using the ~~former~~ frequency assignment recorded under No. **S11.41** shall, upon receipt of advice thereof, immediately eliminate this harmful interference.

NOC **S11.43** In every case when a new assignment is recorded in the Master Register it shall, in accordance with the provisions of Article **S8** of this Chapter, include an indication of the finding and of the consequent status of the assignment. This information shall also be published in the Weekly Circular.

ADD S11.43bis A notice of a change in the characteristics of an assignment already recorded, as specified in Appendix **S4**, shall be examined by the Bureau according to Nos. **S11.31** to **S11.34** as appropriate.

ADD S11.43ter In the case of a change in the characteristics of an assignment which is in conformity with No. **S11.31**, should the Bureau reach a favourable finding with respect to Nos. **S11.32** to **S11.34**, where appropriate, or find that the changes do not increase the probability of harmful interference to assignments already recorded, the amended assignment shall retain the original date of entry in the Master Register. The date of receipt by the Bureau of the notice relating to the change shall be entered in the Master Register.

ADD S11.43ter.1
ADD S11.43ter.2

[To be developed based on current No. 1531 and No. 1532.]

MOD **S11.44** The notified date of bringing into use of ~~a~~any assignment[1] to a space station ~~in~~of a satellite network shall be no later than six years following the date of publication of the relevant Weekly Circular ~~containing the data for advance publication~~referred to in No. **S9.2ter**. The notified date of bringing into use will be extended at the request of the notifying administration by not more than three years.

SUP **S11.44.1**

MOD **S11.45** The notified date of bringing into use of an assignment to[2] a terrestrial station will be extended at the request of the notifying administration by not more than six months.

SUP **S11.45.1**

MOD **S11.46** In applying the provisions of this Article any resubmitted notice which is received by the Bureau more than six months after the date of return by the Bureau of the original notice shall be considered to be a new notice.~~VGE Note 10~~

MOD **S11.47** All frequency assignments notified in advance of their being brought into use shall be entered provisionally in the Master Register. Within thirty days of such an assignment being brought into use the notifying administration shall so inform the Bureau. If the Bureau does not receive that confirmation within the above period it shall cancel the entry. The Bureau shall however consult the administration concerned before taking such action. ~~In the absence of a reply the matter should be referred to the Board.~~

MOD **S11.48** If after the expiry of the period of six years, plus the extension mentioned in No. **S11.44**, as appropriate, from the date of publication of the relevant Weekly Circular, the administration responsible for the satellite network has not submitted the Appendix **S4** information ~~for coordination under No. S9.6 or~~ for notification under No. **S11.2** and not brought the frequency assignments to stations of the network into use, ~~as appropriate,~~ the information published under Nos. ~~**S9.1**~~**S9.2ter** and **S9.38** shall be cancelled only after the administration concerned ha~~d~~s been informed, at least three months before the expiry date referred to in S11.44.

NOC **S11.49** Where the use of a recorded assignment to a space station is suspended for a period not exceeding eighteen months, the notifying administration shall, as soon as possible, inform the Bureau of the date on which such use was suspended and of the date on which the assignment is to be brought back into regular use. This latter date shall not exceed two years from the date of suspension.

ANNEX 3

ARTICLE S13

Instructions to the Bureau

Section I. Assistance to Administrations by the Bureau

MOD **S13.1** When an administration has difficulty in the application of the procedures of Articles **S9 ~~and S10~~** the Bureau shall upon request endeavour to assist in cases where:

NOC **S13.2** a) there is disagreement about the level of interference that may result from a proposed modification of a plan or from a request for coordination; or

NOC **S13.3** b) agreement to a proposed modification of a plan or a decision on a request for coordination cannot be attained for any other reason; or

NOC **S13.4** c) a special study of the case is required.

SUP **S13.5**

SUP **S13.6**

SUP **S13.7**

SUP **S13.8**

NOC **S13.9** When an administration has difficulty in resolving a case of harmful interference and seeks the assistance of the Bureau the latter shall, as appropriate, help in identifying the source of the interference and seek the cooperation of the responsible administration in resolving the matter and prepare for consideration by the Board a report including draft recommendations to the administrations concerned.

NOC **S13.10** When an administration so requests the Bureau shall, using such means at its disposal as are appropriate in the circumstances, conduct a study of reported cases of alleged contravention or non-observance of these Regulations and shall prepare a report for consideration by the Board including draft recommendations to the administrations concerned.

MOD **Section II. Maintenance of the Master Register <u>and of World Plans</u> by the Bureau**

MOD **S13.11** The Bureau shall be solely responsible for maintenance of the Master Register ~~in accordance with the Rules of Procedure and shall in particular~~:

NOC **S13.12** a) following consultation with administrations, from time to time make any necessary adjustments to the format, structure and presentation of data in the Master Register;

SUP **S13.13**

SUP **S13.13.1**

NOC **S13.14** c) enter in the Master Register and publish in the Preface to the International Frequency List (the IFL) all frequencies prescribed by these Regulations for common use;

MOD **S13.15** d) make appropriate entries in the Master Register resulting from its examinations of notices of frequency assignments in accordance with ~~the Rules of Procedure~~Article S11;

NOC **S13.16** e) maintain and periodically update the Preface to the IFL.

NOC **S13.17** The Bureau shall also compile, for publication by the Secretary-General in the form of the IFL, comprehensive listings of the entries extracted from the Master Register and such other extracts as may periodically be required.

ADD S13.17bis For all world frequency allotment or assignment plans contained in Appendices to these Regulations, or adopted by world conferences convened by the Union, the Bureau shall maintain master copies of the plans, incorporating any agreed modifications, and shall provide such copies in an appropriate form for publication by the Secretary-General when justified by circumstances.

NOC **Section III. Maintenance of the Rules of Procedure by the Bureau**

NOC **S13.18** The Board shall approve a set of Rules of Procedure to govern its own activities and those of the Radiocommunication Bureau in the application of the Radio Regulations, to ensure the impartial, accurate and consistent processing of notices of frequency assignments and to assist in the application of these Regulations.

NOC **S13.19** The Rules of Procedure shall include, inter alia, calculation methods and other data required for the application of these Regulations. These shall be based upon the decisions of world radiocommunication conferences and the recommendations of the Radiocommunication Sector. Where requirements arise for new data for which there are no such decisions or recommendations the Bureau shall develop it in accordance with Nos. **S13.20** and **S13.21**, and shall revise it when appropriate decisions or recommendations are available.

MOD **S13.20** The Bureau shall when appropriate prepare draft modifications or additions to the Rules of Procedure which shall be ~~published~~made available for comment ~~by administrations~~ before being submitted to the Board.

MOD **S13.21** The Bureau shall submit to the Board the final drafts of all proposed changes to the Rules of Procedure~~, together with any comments received from administrations which have not been taken fully into account and the Bureau's recommendations thereon~~. The Rules of Procedure approved by the Board shall be published and shall be open for comments by administrations. In case of continuing disagreement the matter shall be submitted to a forthcoming WRC. The Director of the Bureau shall also inform the appropriate Study Group(s) of this matter (see Resolution 35).

NOC **S13.22** If an administration or the Board or the Bureau identifies a need for a special study, in relation to the Rules of Procedure, of any provisions of the Radio Regulations or of a regional agreement with an associated frequency allotment or assignment plan, the case shall be handled under Nos. **S13.20** and **S13.21**. The same shall apply if as a consequence of the review of a finding or other action by the Board it is necessary to re-examine the Rules of Procedure.

NOC **S13.23** The Rules of Procedure shall be maintained and published in a form that will facilitate easy modification and maximize their value to administrations and other users.

ANNEX 4

NOC

ARTICLE S14

Procedure for the Review of a Finding or Other Decision of the Bureau

MOD **S14.1** Any administration may request a review of a finding, or of the results of a special study under these Regulations or under a regional agreement and plan, or of any other decision of the Bureau. The review of a finding may also be undertaken on the initiative of the Bureau itself when it considers this is justified.

NOC **S14.2** For this purpose the administration concerned shall send to the Bureau the request for a review; it shall also cite the relevant provisions of the Radio Regulations and other references and shall state the redress or other action it seeks.

MOD **S14.3** The Bureau shall promptly acknowledge receipt of the request and shall~~, having regard to the Rules of Procedure,~~ forthwith consider the matter. Thereafter, every effort shall be made with the administration concerned to resolve the matter without adversely affecting the interests of other administrations.

NOC **S14.4** If the outcome of the review successfully resolves the matter with the requesting administration without adversely affecting the interests of other administrations, the Bureau shall publish an outline of the review, the arguments, the settlement and any implications affecting other administrations for the information of all members of the Union.

NOC **S14.5** If the review does not successfully resolve the matter, or if it would adversely affect the interests of other administrations, the Bureau shall prepare a report and send it in advance to the administration which requested the review and to any others concerned to enable them, if they so desire, to address the Board. The Bureau shall then send the report with all supporting documentation to the Board.

NOC **S14.6** The decision of the Board on the review to be taken in accordance with the Convention, shall be regarded as final in so far as the Bureau and the Board are concerned. That decision with the supporting information shall be published as under No. **S14.4**. However, if the administration which requested the review disagrees with the decision of the Board it may raise the matter at a world radiocommunication conference.

NOC **S14.7** The Bureau shall then initiate all other necessary action upon the decision of the Board.

ADD S14.7bis Following resolution of the matter by a decision at a world radiocommunication conference, the Bureau shall promptly take the consequential actions including a request to the Board for reviewing all relevant findings, if necessary.

MOD **S14.8** ~~The Rules of Procedure of the Radio Regulations Board and t~~The minutes of its meetings shall be published and circulated among the Members of the Union by means of Circular-letters of the Bureau.

NOC **S14.9** A copy of all documents of the Board, including its minutes, shall be available for public inspection in the offices of the Bureau.

ANNEX 5

F/54/14
MOD

RESOLUTION 35 (Rev.WRC-95)

RELATING TO A PROCEDURE FOR RESOLVING A DISAGREEMENT OVER THE ~~TECHNICAL STANDARDS OR~~ RULES OF PROCEDURE OF THE ~~INTERNATIONAL FREQUENCY REGISTRATION~~ RADIO REGULATIONS BOARD

The World ~~Administrative~~ Radiocommunication Conference, Geneva, 19~~79~~95,

considering

a) that, in accordance with ~~No. 1001.1~~CV169, the ~~Technical Standards and~~ Rules of Procedure of the ~~IFRB~~RRB shall be distributed to all Members of the Union and shall be open to comment from administrations;

b) that an administration may disagree with the substantive contents of these documents;

c) that, in the event of such a disagreement remaining unresolved, there should be a procedure for the resolution of that disagreement,

recognizing

a) that~~, with respect to the Technical Standards, the CCIR could provide the best source of professional advice~~ the ITU-R study groups can study both technical and regulatory matters;

b) that~~, with respect to the Rules of Procedure, a world administrative radio conference could provide the best source of interpretation of the Radio Regulations~~ the ITU-R has established the Conference Preparatory Meeting (CPM) to prepare for the items on the agenda of the next WRCs,

resolves

1. that~~, in the event of an unresolved disagreement over the substantive contents of the Technical Standards of the IFRB, the Board, in agreement with the administration concerned, shall refer the question to the CCIR for international study and the development of a Recommendation thereon by the next Plenary Assembly of the CCIR~~ the agenda of each WRC shall contain an item dealing with an unresolved disagreement between the RRB and an administration on the RRB Rules of Procedure;

2. that, in the event ~~of the CCIR not having formulated a Recommendation thereon, or in the event~~ of an unresolved disagreement over the substantive contents of the Rules of Procedure of the ~~IFRB~~RRB, ~~in either case~~ the matter may be referred ~~to the Administrative Council~~by the Director of the Radiocommunication Bureau, with the agreement of the concerned administration, to the ITU-R study group(s) and/or the CPM as appropriate for study, and the Director is to prepare a report if necessary for ~~inclusion in the agenda of~~consideration by the next world ~~administrative~~ radiocommunication conference;

3. that, pending resolution of the matter, the Board and the Bureau shall continue to use the particular ~~Technical Standard or~~ Rule of Procedure in dispute but that, following resolution of the matter ~~by a CCIR Recommendation or~~ by a decision of a world ~~administrative~~ radiocommunication conference, the Board shall promptly ~~take the consequential action including a~~review and revise as necessary the Rules of Procedure and the Bureau shall review ~~of~~ all relevant findings.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

Document 199-E
8 November 1995
Original: English

WORKING GROUP OF THE PLENARY

Republic of India, United States of America

PROPOSALS FOR THE WORK OF THE CONFERENCE

During consideration of the proposals from administrations relating to the earth exploration-satellite service for use by both passive and active sensors at this Conference, the above-named administrations have become aware that one important requirement has not yet been addressed. That is the need for a wideband allocation in which to transmit very high rate sensor data back to Earth.

It is necessary to ensure the availability of a suitable band for the return to Earth of important environmental monitoring and ecological data. The only band wide enough to support this function is currently allocated on a secondary basis from 25.5 - 27.0 GHz. The importance of the data suggests that a review of this allocation is an urgent matter, taking into account Resolution 35 (Kyoto, 1994).

It is therefore proposed to include in the agenda of WRC-97, under agenda item 3:

IND/USA/199/1

3.2.x review the status of the allocation to the earth exploration-satellite service (space-to-Earth) from 25.5 - 27.0 GHz, based on studies conducted in the ITU-R study groups and the CPM, and to take the action deemed appropriate in regard to this allocation.

INTERNATIONAL TELECOMMUNICATION UNION

WRC-95 WORLD RADIOCOMMUNICATION CONFERENCE

Document 200-E
9 November 1995

GENEVA, 23 OCTOBER – 17 NOVEMBER 1995

LIST OF DOCUMENTS

(Documents 151 - 200)

Doc.	Source	Title	Destination
151	MRC	Proposals for the work of the Conference	C4, C5
152	WG 5B	Note by the Chairman of Working Group 5B to the Chairman of Working Group 4B	WG 4B
153	MRC	Proposals for the work of the Conference	WG 5B
154	WG 4B	Report by the Chairman of Working Group 4B to the Chairman of Committee 4	C4
155	C4	First series of text submitted by Committee 4 to the Editorial Committee	C6
156	USA	Information paper	WG 5A
157	C4	Summary record of the fourth meeting of Committee 4	C4
158	[1]	Proposals for the work of the Conference	C5
159 (Rév.2)	WG 4C	Third Report of Working Group 4C	C4
160	-	*To be published*	-
161	WG 4B	First Report from the Chairman of Working Group 4B to Committee 4	C4
162 + Corr.1	WG 4B	Second Report from the Chairman of Working Group 4B to Committee 4	C4

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[1] CAN, CHL, CLM, EQA, USA, MEX, PRG, PRU, SUR, URG, VEN.

Doc.	Source	Title	Destination
163	WG 2A	First Report by Working Group 2A to Committee 2	C2
164 (Rev.1)	WG PL	First series of texts submitted by the Working Group of the Plenary to the Editorial Committee	C6
165 + Corr.1	[2]	Proposals for the work of the Conference	WG 5A
166 + Corr.1	[3]	Proposals for the work of the Conference	WG 5A
167	PAK	Proposals for the work of the Conference	WG PL
168	WG 5B	First Report of the Chairman of Working Group 5B to Committee 5	C5
169	PL	Minutes of the third Plenary Meeting	PL
170	[4]	Proposals for the work of the Conference	WG PL
171	AFG	Proposals for the work of the Conference	C4, C5 WG PL
172	JMC	Proposals for the work of the Conference	C4
173	TRD	Proposals for the work of the Conference	C4
174	MDA	Proposals for the work of the Conference	C4
175	SRL	Proposals for the work of the Conference	C4
176 + Add.1	WG 4C	Report by the Chairman of Working Group 4C	C4
177	C5	Summary record of the fifth meeting of Committee 5	C5
178 + Add.1	C4	Second series of texts submitted by Committee 4 to the Editorial Committee	C6
179	VTN	Proposals for the work of the Conference	C4

[2] BRU, CHN, KOR, IRN, J, MLA, PAK, RUS, SNG, THA.

[3] BRU, CHN, KOR, IND, J, MLA, PHL, RUS, SNG, THA.

[4] AUS, CHN, IND, INS, IRN, J, MLA, MNG, PAK, THA.

Doc.	Source	Title	Destination
180	C6	**B.1** - First series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
181	WG PL	Draft Resolution	WG PL
182	BHR	Proposals for the work of the Conference	C4
183	C5	Summary record of the sixth meeting of Committee 5	C5
184	C5	Summary record of the seventh meeting of Committee 5	C5
185	WG 4A	Fourth Report of Working Group 4A	C4
186	WG 4B	Third report from the Chairman of Working Group 4B to Committee 4	C4
187	J	Proposals for the work of the Conference	WG 5B
188	WG 5B	Second Report of the Chairman of Working Group 5B to Committee 5	C5
189	C5	Preliminary compilation of coordination distances for bands that may be subject to the procedures of MOD Resolution 46	C4, C5
190	WG 4C	Report of the Chairman of Working Group 4C	C4
191	SG	Report by the Secretary-General: Draft Resolution	PL
192	Ad hoc 2/C5	Report of the Chairman of Committee 5 ad hoc 2	C5
193	SG	Draft Resolution: Operation of satellite global systems for personal communications	PL
194	C4	Summary record of the fifth meeting of Committee 4	C4
195	LVA	Proposals for the work of the Conference	C4
196	WG 4C	Final report of the Chairman of Working Group 4C	C4
197	ZMB	Proposals for the work of the Conference	C4
198	WG 4B	Report from Working Group 4B to Committee 4	C4
199	IND, USA	Proposals for the work of the Conference	WG PL
200	SG	List of documents (151 - 200)	-