INTERNATIONAL TELECOMMUNICATION UNION

FINAL ACTS

of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (WARC-92)

Malaga-Torremolinos, 1992

Geneva 1992

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NOTE

The following symbols have been used to indicate the nature of the revision in each case:

ADD = addition of a new provision

MOD = modification of an existing provision

(MOD) = editorial modification of an existing provision

NOC = provision unchanged

SUP = deletion of an existing provision

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RECOMMENDATIONS

FINAL ACTS

of the
World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (WARC-92) Malaga-Torremolinos 1992

PREAMBLE

Taking into account the relevant Resolutions and Recommendations adopted by the World Administrative Radio Conference for the Planning of the HF Bands Allocated to the Broadcasting Service (Geneva, 1987) (HFBC-87), the World Administrative Radio Conference for the Mobile Services (Geneva, 1987) (MOB-87) and the World Administrative Radio Conference on the Use of the Geostationary-Satellite Orbit and the Planning of Space Services Utilizing It (Geneva, 1988) (ORB-88), the Plenipotentiary Conference of the International Telecommunication Union (Nice, 1989) decided, in its Resolution 1, to convene in Spain, for a period of four weeks and two days, in the first quarter of 1992, a World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum, having regard to the Resolutions and Recommendations of the above-mentioned Conferences.

On the basis of this decision, the Administrative Council of the Union, at its 45th session in 1990, adopted Resolution 995 making the necessary arrangements for convening such a world administrative radio conference. In Resolution 995, the Administrative Council decided that the Conference would be held in Spain for a period of four weeks and two days from 3 February 1992. When establishing the agenda for the Conference, the Administrative Council took full account of Resolutions 1, 7 and 9 of the Plenipotentiary Conference (Nice, 1989).

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum, accordingly convened on the appointed date, considered and adopted a partial revision of the Radio Regulations in accordance with its agenda. Details of this partial revision and of the related action taken by the Conference are given in the Annex hereto.

In accordance with its agenda, the Conference also reviewed and, where necessary, revised or abrogated certain existing Resolutions and Recommendations and adopted a number of new Resolutions and Recommendations.

The partial revision of the Radio Regulations, as adopted by the Conference, shall form an integral part of those Regulations and shall enter into force on **12 October 1993 at 0001 hours UTC**.

The delegates signing the partial revision of the Radio Regulations contained in the present Final Acts hereby declare that, should a Member of the Union make reservations concerning the application of one or more of the provisions of the revised Radio Regulations, no other Member shall be obliged to observe that provision or those provisions in its relations with that particular Member.

In accordance with No. 172 of the International Telecommunication Convention (Nairobi, 1982), Members of the Union shall inform the Secretary-General of their approval of the partial revision of the Radio Regulations by the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992). The Secretary-General shall inform Members promptly of the receipt of such notifications of approval.

IN WITNESS WHEREOF, the delegates of the Members of the International Telecommunication Union named below have, on behalf of their respective competent authorities, signed one copy of the present Final Acts in the English, Arabic, Chinese, Spanish, French and Russian languages. This copy shall remain in the archives of the Union. The Secretary-General shall forward one certified true copy to each Member of the International Telecommunication Union.

Done at Malaga-Torremolinos, 3 March 1992

For the People's Democratic Republic of Algeria:

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ALI HAMZA
ABDELMALEK HOUYOU
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ANNEX

Partial Revision of the Radio Regulations and the Appendices thereto

ARTICLE 1

Terms and Definitions

Section I. General Terms

NOC **3**

NOC **4**

NOC **7**

Section III. Radio Services

MOD **24** WARC-92 3.5 *Inter-Satellite Service:* A *radiocommunication service* providing links between artificial *satellites*.

NOC **26**

NOC **36**

ADD **46A** WARC-92 3.27A *Radiolocation-Satellite Service:* A *radiodetermination-satellite service* used for the purpose of *radiolocation*.

This service may also include the *feeder links* necessary for its operation.

MOD **48** WARC-92 3.29 *Earth Exploration-Satellite Service:* A *radiocommunication service* between *earth stations* and one or more *space stations*, which may include links between *space stations*, in which:

- information relating to the characteristics of the Earth and its natural phenomena, including data relating to the state of the environment, is obtained from *active sensors* or *passive sensors* on Earth *satellites*;
- similar information is collected from airborne or Earth-based platforms;
- such information may be distributed to *earth stations* within the system concerned;
- platform interrogation may be included.

This service may also include *feeder links* necessary for its operation.

Section V. Operational Terms

NOC **110**

NOC **111**

NOC **112**

NOC **117**

Section VII. Frequency Sharing

NOC **163**

Section VIII. Technical Terms Relating to Space

NOC **181**

MOD **182** 8.14 *Geostationary-satellite orbit:* The *orbit* of a *geo-synchronous satellite* whose circular and direct *orbit* lies in the plane of the Earth's equator.
WARC-92

ARTICLE 8

Frequency Allocations

Section I. Regions and Areas

MOD **404** **WARC-92** § 4. 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 lying outside the above limits are included in the European Broadcasting Area.

Section IV. Table of Frequency Allocations

PART A*

Changes made to the tables and if appropriate, to the related footnotes

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* *Note by the General Secretariat:* The changes are presented in the following order:

- Part A – Changes made to the tables and, if appropriate, to the related footnotes.
- Part B – Changes made to the footnotes only.

MOD

kHz

5 730 – 6 200

Allocation to Services		
Region 1	Region 2	Region 3
5 730 – 5 900 FIXED LAND MOBILE	**5 730 – 5 900** FIXED MOBILE except aeronautical mobile (R)	**5 730 – 5 900** FIXED Mobile except aeronautical mobile (R)
5 900 – 5 950	BROADCASTING 521A 521B 521C	
5 950 – 6 200	BROADCASTING	

ADD **521A** WARC-92 The use of the bands 5 900 – 5 950 kHz, 7 300 - 7 350 kHz, 9 400 - 9 500 kHz, 11 600 - 11 650 kHz, 12 050 - 12 100 kHz, 13 570 - 13 600 kHz, 13 800 - 13 870 kHz, 15 600 - 15 800 kHz, 17 480 - 17 550 kHz and 18 900 - 19 020 kHz by the broadcasting service is limited to single-sideband emissions with the characteristics specified in Appendix **45** to the Radio Regulations.

ADD **521B** WARC-92 The use of the bands 5 900 - 5 950 kHz, 7 300 - 7 350 kHz, 9 400 - 9 500 kHz, 11 600 - 11 650 kHz, 12 050 - 12 100 kHz, 13 570 - 13 600 kHz, 13 800 - 13 870 kHz, 15 600 - 15 800 kHz, 17 480 - 17 550 kHz and 18 900 - 19 020 kHz by the broadcasting service shall be subject to the planning procedures to be drawn up by a competent world administrative radio conference.

ADD **521C** **WARC-92** The band 5 900 - 5 950 kHz is allocated, until 1 April 2007, to the fixed service on a primary basis, as well as to the following services: in Region 1 to the land mobile service on a primary basis, in Region 2 to the mobile except aeronautical mobile (R) service on a primary basis, and in Region 3 to the mobile except aeronautical mobile (R) service on a secondary basis, subject to application of the procedure referred to in Resolution **21 (WARC-92)**. After 1 April 2007, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

MOD

kHz

7 300 – 8 100

Allocation to Services		
Region 1	Region 2	Region 3
7 300 – 7 350	BROADCASTING 521A 521B 528A	
7 350 – 8 100	FIXED Land Mobile 529	

ADD **528A** The band 7 300 - 7 350 kHz is allocated, until 1 April 2007, to the fixed
WARC-92 service on a primary basis and to the land mobile service on a secondary basis, subject to application of the procedure referred to in Resolution **21 (WARC-92)**. After 1 April 2007, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

MOD

kHz

9 040 – 9 900

Allocation to Services		
Region 1	Region 2	Region 3
9 040 – 9 400	FIXED	
9 400 – 9 500	BROADCASTING 521A 521B 529B	
9 500 – 9 900	BROADCASTING 530 531	

ADD **529B** The bands 9 400 - 9 500 kHz, 11 600 - 11 650 kHz, 12 050 - 12 100 kHz,
WARC-92 15 600 - 15 800 kHz, 17 480 - 17 550 kHz and 18 900 - 19 020 kHz are allocated to the fixed service on a primary basis until 1 April 2007, subject to application of the procedure referred to in Resolution **21 (WARC-92)**. After 1 April 2007, frequencies in these bands may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

MOD

kHz

11 400 – 12 230

Allocation to Services		
Region 1	Region 2	Region 3
11 400 – 11 600	FIXED	
11 600 – 11 650	BROADCASTING 521A 521B 529B	
11 650 – 12 050	BROADCASTING 530 531	
12 050 – 12 100	BROADCASTING 521A 521B 529B	
12 100 – 12 230	FIXED	

MOD

kHz

13 410 – 14 000

Allocation to Services		
Region 1	Region 2	Region 3
13 410 – 13 570	FIXED Mobile except aeronautical mobile (R) 534	
13 570 – 13 600	BROADCASTING 521A 521B 534A	
13 600 – 13 800	BROADCASTING 531	
13 800 – 13 870	BROADCASTING 521A 521B 534A	
13 870 – 14 000	FIXED Mobile except aeronautical mobile (R)	

ADD **534A** WARC-92 The bands 13 570 - 13 600 kHz and 13 800 - 13 870 kHz are allocated, until 1 April 2007, to the fixed service on a primary basis and to the mobile except aeronautical mobile (R) service on a secondary basis, subject to application of the procedure referred to in Resolution **21 (WARC-92)**. After 1 April 2007, frequencies in these bands may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

MOD

kHz

15 100 – 16 360

Allocation to Services		
Region 1	Region 2	Region 3
15 100 – 15 600	BROADCASTING 531	
15 600 – 15 800	BROADCASTING 521A 521B 529B	
15 800 – 16 360	FIXED 536	

MOD

kHz

17 410 – 17 900

Allocation to Services		
Region 1	Region 2	Region 3
17 410 – 17 480	FIXED	
17 480 – 17 550	BROADCASTING 521A 521B 529B	
17 550 – 17 900	BROADCASTING 531	

MOD

kHz

18 900 – 19 680

Allocation to Services		
Region 1	Region 2	Region 3
18 900 – 19 020	BROADCASTING 521A 521B 529B	
19 020 – 19 680	FIXED	

MOD

MHz

137 – 137.175

Allocation to Services		
Region 1	Region 2	Region 3
137 – 137.025	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 599B Fixed Mobile except aeronautical mobile (R) 596 597 598 599 599A	
137.025 – 137.175	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Mobile-Satellite (space-to-Earth) 599B Fixed Mobile except aeronautical mobile (R) 596 597 598 599 599A	

ADD **599A** The use of the band 137 - 138 MHz by the mobile-satellite service is
WARC-92 subject to the application of the coordination and notification procedures set forth in Resolution **46 (WARC-92)**. However, coordination of a space station of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced by the station exceeds –125 dB(W/m2/4 kHz) at the Earth's surface. The above power flux-density limit shall apply until such time as a competent world administrative radio conference revises it. In making assignments to the space stations in the mobile-satellite service in the above band, administrations shall take all practicable steps to protect the radio astronomy service in the 150.05 - 153 MHz band from harmful interference from unwanted emissions.

ADD **599B** The use of the bands 137 - 138 MHz, 148 - 149.9 MHz and 400.15 -
WARC-92 401 MHz by the mobile-satellite service and the band 149.9 - 150.05 MHz by the land mobile-satellite service is limited to non-geostationary-satellite systems.

MOD

MHz

137.175 – 138

Allocation to Services		
Region 1	Region 2	Region 3
137.175 – 137.825	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 599B Fixed Mobile except aeronautical mobile (R) 596 597 598 599 599A	
137.825 – 138	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Mobile-Satellite (space-to-Earth) 599B Fixed Mobile except aeronautical mobile (R) 596 597 598 599 599A	

MOD

MHz

148 – 150.05

Allocation to Services		
Region 1	Region 2	Region 3
148 – 149.9 FIXED MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (Earth-to-space) 599B 608 608A 608C	**148 – 149.9** FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 599B 608 608A 608C	
149.9 – 150.05 RADIONAVIGATION-SATELLITE LAND MOBILE-SATELLITE (Earth-to-space) 599B 609B 608B 609 609A		

ADD **608A** The use of the band 148 - 149.9 MHz by the mobile-satellite service is
WARC-92 subject to the application of the coordination and notification procedures set forth in Resolution **46 (WARC-92)**. The mobile-satellite service shall not constrain the development and use of fixed, mobile and space operation services in the band 148 - 149.9 MHz. Mobile earth stations in the mobile-satellite service shall not produce a power flux-density in excess of –150 dB(W/m^2/4 kHz) outside national boundaries.

ADD **608B** The use of the band 149.9 - 150.05 MHz by the land mobile-satellite
WARC-92 service is subject to the application of the coordination and notification procedures set forth in Resolution **46 (WARC-92)**. The land mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the band 149.9 - 150.05 MHz. Land mobile earth stations of the land mobile-satellite service shall not produce power flux-density in excess of –150 dB(W/m^2/4 kHz) outside national boundaries.

ADD **608C** **WARC-92** 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, New Zealand, Norway, 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.

ADD **609B** **WARC-92** In the band 149.9 - 150.05 MHz, the allocation to the land mobile-satellite service shall be on a secondary basis until 1 January 1997.

MOD

MHz

273 – 322

Allocation to Services		
Region 1	Region 2	Region 3
273 – 312	FIXED MOBILE 641	
312 – 315	FIXED MOBILE Mobile-Satellite (Earth-to-space) 641 641A	
315 – 322	FIXED MOBILE 641	

MOD

MHz

335.4 – 399.9

Allocation to Services		
Region 1	Region 2	Region 3
335.4 – 387	FIXED MOBILE 641	
387 – 390	FIXED MOBILE Mobile-Satellite (space-to-Earth) 641 641A	
390 – 399.9	FIXED MOBILE 641	

NOC **641**

ADD **641A** WARC-92 The bands 312 - 315 MHz (Earth-to-space) and 387 - 390 MHz (space-to-Earth) in the mobile-satellite service may also be used by non-geostationary-satellite systems. Such use is subject to the application of the coordination and notification procedures set forth in Resolution **46 (WARC-92)**.

MOD

MHz

400.15 – 401

Allocation to Services		
Region 1	Region 2	Region 3
400.15 – 401	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) 647A MOBILE-SATELLITE (space-to-Earth) 599B Space Operation (space-to-Earth) 647 647B	

ADD **647A** **WARC-92** The band 400.15 - 401 MHz is also allocated to the space research service in the space-to-space direction for communications with manned space vehicles. In this application, the space research service will not be regarded as a safety service.

ADD **647B** **WARC-92** The use of the band 400.15 - 401 MHz by the mobile-satellite service is subject to the application of the coordination and notification procedures set forth in Resolution **46 (WARC-92)**. However, coordination of a space station of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced by the station exceeds –125 dB(W/m^2/4 kHz) at the Earth's surface. The above power flux-density limit shall apply until such time as a competent world administrative radio conference revises it. In making assignments to the space stations in the mobile-satellite service in the above band, administrations shall take all practicable steps to protect the radio astronomy service in the band 406.1 - 410 MHz from harmful interference from unwanted emissions.

MOD

MHz

410 – 420

Allocation to Services		
Region 1	Region 2	Region 3
410 – 420	FIXED MOBILE except aeronautical mobile Space Research (space-to-space) 651A	

ADD **651A** (WARC-92) Use of the band 410 - 420 MHz by the space research service is limited to communications within 5 km of an orbiting, manned space vehicle.

MOD

MHz

942 – 960

Allocation to Services		
Region 1	Region 2	Region 3
942 – 960 FIXED MOBILE except aeronautical mobile BROADCASTING 703 704	**942 – 960** FIXED MOBILE	**942 – 960** FIXED MOBILE BROADCASTING 701

SUP **708**
WARC-92

MOD

MHz

470 – 890

Allocation to Services		
Region 1	Region 2	Region 3
470 – 790 BROADCASTING 676 677A 683 684 685 686 686A 687 689 693 694	**470 – 512** BROADCASTING Fixed Mobile 674 675	**470 – 585** FIXED MOBILE BROADCASTING 673 677 679
	512 – 608 BROADCASTING 678	**585 – 610** FIXED MOBILE BROADCASTING RADIONAVIGATION 688 689 690
	608 – 614 RADIO ASTRONOMY Mobile-Satellite except aeronautical mobile-satellite (Earth-to-space)	
790 – 862 FIXED BROADCASTING 694 695 695A 696 697 700B 702	**614 – 806** BROADCASTING Fixed Mobile 675 692 692A 693	**610 – 890** FIXED MOBILE BROADCASTING
862 – 890 FIXED MOBILE except aeronautical mobile BROADCASTING 703 700B 704	**806 – 890** FIXED MOBILE BROADCASTING 692A 700 700A	677 688 689 690 691 693 701

MOD

MHz

890 – 942

<table>
<tr><td colspan="3">Allocation to Services</td></tr>
<tr><td>Region 1</td><td>Region 2</td><td>Region 3</td></tr>
<tr><td rowspan="3">890 – 942
FIXED
MOBILE except aeronautical mobile
BROADCASTING 703
Radiolocation

704</td><td>890 – 902
FIXED
MOBILE except aeronautical mobile
Radiolocation
700A 704A 705</td><td rowspan="3">890 – 942
FIXED
MOBILE
BROADCASTING
Radiolocation

706</td></tr>
<tr><td>902 – 928
FIXED
Amateur
Mobile except aeronautical mobile
Radiolocation
705 707 707A</td></tr>
<tr><td>928 – 942
FIXED
MOBILE except aeronautical mobile
Radiolocation
705</td></tr>
</table>

ADD **700A** *Additional allocation:* in Canada, the United States and Mexico, the
WARC-92 bands 849 - 851 MHz and 894 - 896 MHz are also allocated to the aeronautical mobile service on a primary basis, for public correspondence with aircraft. The use of the band 849 - 851 MHz is limited to transmissions from aeronautical stations and the use of the band 894 - 896 MHz is limited to transmissions from aircraft stations.

ADD **700B** *Additional allocation:* in Belarus, the Russian Federation and Ukraine,
WARC-92 the bands 806 - 840 MHz (Earth-to-space) and 856 - 890 MHz (space-to-Earth) are also allocated to the mobile-satellite, except aeronautical mobile-satellite (R) service. The use of these bands by this service shall not cause harmful interference to, or claim protection from, services in other countries operating in accordance with the Table of Frequency Allocations and is subject to special agreements between the administrations concerned.

MOD

MHz

1 429 – 1 525

Allocation to Services		
Region 1	Region 2	Region 3
1 429 – 1 452 FIXED MOBILE except aeronautical mobile 722 723B	**1 429 – 1 452** FIXED MOBILE 723 722	
1 452 – 1 492 FIXED MOBILE except aeronautical mobile BROADCASTING-SATELLITE 722A 722B BROADCASTING 722A 722B 722 723B	**1 452 – 1 492** FIXED MOBILE 723 BROADCASTING-SATELLITE 722A 722B BROADCASTING 722A 722B 722 722C	
1 492 – 1 525 FIXED MOBILE except aeronautical mobile 722 723B	**1 492 – 1 525** FIXED MOBILE 723 MOBILE-SATELLITE (space-to-Earth) 722 722C 723C	**1 492 – 1 525** FIXED MOBILE 723 722

ADD **722A** (WARC-92) Use of the band 1 452 - 1 492 MHz by the broadcasting-satellite service, and by the broadcasting service, is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (WARC-92)**.

ADD **722B** *Different category of service:* in the Federal Republic of Germany,
WARC-92 Bangladesh, Botswana, Bulgaria, Burkina Faso, Colombia, Cuba, Denmark, Egypt, Ecuador, Spain, Greece, Hungary, Ireland, Italy, Jordan, Kenya, Malawi, Mozambique, Panama, Poland, Portugal, United Kingdom, Sri Lanka, Sweden, Swaziland, Czech and Slovak Federal Republic, Yemen, Yugoslavia and Zimbabwe, the allocation of the band 1 452 - 1 492 MHz to the broadcasting-satellite service and the broadcasting service is on a secondary basis until 1 April 2007.

ADD **722C** *Alternative allocation:* in the United States of America, the band 1 452 -
WARC-92 1 525 MHz is allocated to the fixed and mobile services on a primary basis. (See also No. **723**.)

ADD **723B** *Additional allocation:* in Belarus, the Russian Federation and Ukraine,
WARC-92 the band 1 429 - 1 535 MHz is also allocated to the aeronautical mobile service on a primary basis exclusively for the purposes of aeronautical telemetry within the national territory. As of 1 April 2007, the use of the band 1 452 - 1 492 MHz is subject to agreement between the administrations concerned.

ADD **723C** The use of the band 1 492 - 1 525 MHz by the mobile-satellite service is
WARC-92 subject to the application of the coordination and notification procedures set forth in Resolution **46** (**WARC-92**). However, with the exception of the situation referred to in No. **723**, on a provisional basis, coordination of space stations of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced at the Earth's surface exceeds the limits in No. **2566**. 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.

MOD

MHz

1 525 – 1 530

Allocation to Services		
Region 1	Region 2	Region 3
1 525 – 1 530	**1 525 – 1 530**	**1 525 – 1 530**
SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)
FIXED	MOBILE-SATELLITE (space-to-Earth)	FIXED
MARITIME MOBILE-SATELLITE (space-to-Earth)	Earth Exploration-Satellite	MOBILE-SATELLITE (space-to-Earth)
Land Mobile-Satellite (space-to-Earth) 726B	Fixed	Earth Exploration-Satellite
Earth Exploration-Satellite	Mobile 723	Mobile 723 724
Mobile except aeronautical mobile 724		
722 723B 725 726A 726D	722 723A 726A 726D	722 726A 726D

MOD **726A** The bands 1 525 - 1 544 MHz, 1 545 - 1 559 MHz, 1 626.5 - 1 645.5 MHz and 1 646.5 - 1 660.5 MHz shall not be used for feeder links of any service. In exceptional circumstances, however, an earth station at a specified fixed point in any of the mobile-satellite services may be authorized by an administration to communicate via space stations using these bands.

WARC-92

MOD **726B** The use of the bands 1 525 - 1 530 MHz, 1 533 - 1 544 MHz, 1 626.5 - 1 631.5 MHz and 1 634.5 - 1 645.5 MHz by the land mobile-satellite service is limited to non-speech low bit-rate data transmissions.

WARC-92

ADD **726D** **WARC-92** The use of the bands 1 525 - 1 559 MHz and 1 626.5 - 1 660.5 MHz by the mobile-satellite services are subject to the application of the coordination and notification procedures set forth in Resolution **46 (WARC-92)**. In Regions 1 and 3 in the band 1 525 - 1 530 MHz coordination of space stations of the mobile-satellite services with respect to terrestrial services is required only if the power flux-density produced at the Earth's surface exceeds the limits in No. **2566**. In respect of assignments operating in the band 1 525 - 1 530 MHz, 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.

MOD

MHz

1 530 – 1 533

Allocation to Services		
Region 1	Region 2	Region 3
1 530 – 1 533	**1 530 – 1 533**	
SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)	
MARITIME MOBILE-SATELLITE (space-to-Earth)	MARITIME MOBILE-SATELLITE (space-to-Earth)	
LAND MOBILE-SATELLITE (space-to-Earth)	LAND MOBILE-SATELLITE (space-to-Earth)	
Earth Exploration-Satellite	Earth Exploration-Satellite	
Fixed	Fixed	
Mobile except aeronautical mobile	Mobile 723	
722 723B 726A 726D	722 726A 726C 726D	

SUP **726**
WARC-92

ADD **726C** WARC-92 *Additional allocation:* in Argentina, Australia, Brazil, Canada, the United States, Malaysia and Mexico, the band 1 530 - 1 544 MHz is also allocated to the mobile-satellite (space-to-Earth) service, and the band 1 626.5 - 1 645.5 MHz is also allocated to the mobile-satellite (Earth-to-space) service, on a primary basis subject to the following conditions:

maritime mobile-satellite distress and safety communications shall have priority access and immediate availability over all other mobile-satellite communications operating under this provision. Communications of mobile-satellite system stations not participating in the global maritime distress and safety system (GMDSS) shall operate on a secondary basis to distress and safety communications of stations operating in the GMDSS. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services.

MOD

MHz

1 533 – 1 559

Allocation to Services		
Region 1	Region 2	Region 3
1 533 – 1 535 SPACE OPERATION (space-to-Earth) MARITIME MOBILE-SATELLITE (space-to-Earth) Earth Exploration-Satellite Fixed Mobile except aeronautical mobile Land Mobile-Satellite (space-to-Earth) 726B 722 723B 726A 726D	**1 533 – 1 535** SPACE OPERATION (space-to-Earth) MARITIME MOBILE-SATELLITE (space-to-Earth) Earth Exploration-Satellite Fixed Mobile 723 Land Mobile-Satellite (space-to-Earth) 726B 722 726A 726C 726D	
1 535 – 1 544	MARITIME MOBILE-SATELLITE (space-to-Earth) Land Mobile-Satellite (space-to-Earth) 726B 722 726A 726C 726D 727	
1 544 – 1 545	MOBILE-SATELLITE (space-to-Earth) 722 726D 727 727A	
1 545 – 1 555	AERONAUTICAL MOBILE-SATELLITE (R) (space-to-Earth) 722 726A 726D 727 729 729A 730	
1 555 – 1 559	LAND MOBILE-SATELLITE (space-to-Earth) 722 726A 726D 727 730 730A 730B 730C	

ADD **730B** *Alternative allocation:* in Australia, Canada and Mexico, the band
WARC-92 1 555 - 1 559 MHz is allocated to the mobile-satellite (space-to-Earth) service, the band 1 656.5 - 1 660 MHz is allocated to the mobile-satellite (Earth-to-space) service, and the band 1 660 - 1 660.5 MHz is allocated to the mobile-satellite (Earth-to-space) and the radio astronomy services, on a primary basis.

ADD **730C** *Alternative allocation:* in Argentina and the United States, the band
WARC-92 1 555 - 1 559 MHz is allocated to the mobile-satellite (space-to-Earth) service, the band 1 656.5 - 1 660 MHz is allocated to the mobile-satellite (Earth-to-space) service, and the band 1 660 - 1 660.5 MHz is allocated to the mobile-satellite (Earth-to-space) and radio astronomy services, on a primary basis subject to the following conditions: the aeronautical mobile-satellite (R) service shall have priority access and immediate availability over all other mobile-satellite communications within a network operating under this provision; mobile-satellite systems shall be interoperable with the aeronautical mobile-satellite (R) service; account shall be taken of the priority of safety-related communications in the other mobile-satellite services.

MOD

MHz

1 610 – 1 613.8

Allocation to Services		
Region 1	Region 2	Region 3
1 610 – 1 610.6 AERONAUTICAL RADIONAVIGATION MOBILE-SATELLITE (Earth-to-space) 722 727 730 731 731E 732 733 733A 733B 733E 733F	**1 610 – 1 610.6** AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) MOBILE-SATELLITE (Earth-to-space) 722 731E 732 733 733A 733C 733D 733E	**1 610 – 1 610.6** AERONAUTICAL RADIONAVIGATION MOBILE-SATELLITE (Earth-to-space) Radiodetermination-Satellite (Earth-to-space) 722 727 730 731E 732 733 733A 733B 733E
1 610.6 – 1 613.8 AERONAUTICAL RADIONAVIGATION MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY 722 727 730 731 731E 732 733 733A 733B 733E 733F 734	**1 610.6 – 1 613.8** AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY 722 731E 732 733 733A 733C 733D 733E 734	**1 610.6 – 1 613.8** AERONAUTICAL RADIONAVIGATION MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY Radiodetermination-Satellite (Earth-to-space) 722 727 730 731E 732 733 733A 733B 733E 734

MOD

MHz

1 613.8 – 1 626.5

Allocation to Services		
Region 1	Region 2	Region 3
1 613.8 – 1 626.5 AERONAUTICAL RADIONAVIGATION MOBILE-SATELLITE (Earth-to-space) Mobile-Satellite (space-to-Earth) 722 727 730 731 731E 731F 732 733 733A 733B 733E 733F	**1 613.8 – 1 626.5** AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) MOBILE-SATELLITE (Earth-to-space) Mobile-Satellite (space-to-Earth) 722 731E 731F 732 733 733A 733C 733D 733E	**1 613.8 – 1 626.5** AERONAUTICAL RADIONAVIGATION MOBILE-SATELLITE (Earth-to-space) Radiodetermination-Satellite (Earth-to-space) Mobile-Satellite (space-to-Earth) 722 727 730 731E 731F 732 733 733A 733B 733E

SUP **731A**
WARC-92

SUP **731B**
WARC-92

SUP **731C**
WARC-92

SUP **731D**
WARC-92

ADD **731E** The use of the band 1 610 - 1 626.5 MHz by the mobile-satellite service
WARC-92 (Earth-to-space) and by the radiodetermination-satellite service (Earth-to-space) is subject to the application of the coordination and notification procedures set forth in Resolution **46 (WARC-92)**. A mobile earth station operating in either of the services in this band shall not produce an e.i.r.p. density in excess of –15 dB(W/4 kHz) in the part of the band used by systems operating in accordance with the provisions of No. **732**, unless otherwise agreed by the affected administrations. In the part of the band where such systems are not operating, a value of –3 dB(W/4 kHz) is applicable. Stations of the mobile-satellite service shall not cause harmful interference to, or claim protection from, stations in the aeronautical radionavigation service, stations operating in accordance with the provisions of No. **732** and stations in the fixed service operating in accordance with the provisions of No. **730**.

ADD **731F** The use of the band 1 613.8 - 1 626.5 MHz by the mobile-satellite
WARC-92 service (space-to-Earth) is subject to the application of the coordination and notification procedures set forth in Resolution **46 (WARC-92)**.

MOD **733A** With respect to the radiodetermination-satellite and mobile-satellite
WARC-92 services the provisions of No. **953** do not apply in the frequency band 1 610 - 1 626.5 MHz.

MOD **733E** Harmful interference shall not be caused to stations of the radio
WARC-92 astronomy service using the band 1 610.6 - 1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services. (No. **2904** applies.)

MOD **734** In making assignments to stations of other services, administrations are
WARC-92 urged to take all practicable steps to protect the radio astronomy service in the band 1 610.6 - 1 613.8 MHz from harmful interference. Emissions from space or air-borne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. **343** and **344** and Article **36**).

MOD

MHz

1 626.5 – 1 660.5

Allocation to Services		
Region 1	Region 2	Region 3
1 626.5 – 1 631.5 MARITIME MOBILE-SATELLITE (Earth-to-space) Land Mobile-Satellite (Earth-to-space) 726B 722 726A 726D 727 730	**1 626.5 – 1 631.5** MOBILE-SATELLITE (Earth-to-space) 722 726A 726C 726D 727 730	
1 631.5 – 1 634.5	MARITIME MOBILE-SATELLITE (Earth-to-space) LAND MOBILE-SATELLITE (Earth-to-space) 722 726A 726C 726D 727 730 734A	
1 634.5 – 1 645.5	MARITIME MOBILE-SATELLITE (Earth-to-space) Land Mobile-Satellite (Earth-to-space) 726B 722 726A 726C 726D 727 730	
1 645.5 – 1 646.5	MOBILE-SATELLITE (Earth-to-space) 722 726D 734B	
1 646.5 – 1 656.5	AERONAUTICAL MOBILE-SATELLITE (R) (Earth-to-space) 722 726A 726D 727 729A 730 735	
1 656.5 – 1 660	LAND MOBILE-SATELLITE (Earth-to-space) 722 726A 726D 727 730 730A 730B 730C 734A	
1 660 – 1 660.5	RADIO ASTRONOMY LAND MOBILE-SATELLITE (Earth-to-space) 722 726A 726D 730A 730B 730C 736	

MOD

MHz

1 670 – 1 700

Allocation to Services		
Region 1	Region 2	Region 3
1 670 – 1 675	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE 740A 722	
1 675 – 1 690 METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 722	**1 675 – 1 690** METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) 722 735A	**1 675 – 1 690** METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 722
1 690 – 1 700 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) Fixed Mobile except aeronautical mobile 671 722 741	**1 690 – 1 700** METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (Earth-to-space) 671 722 735A 740	**1 690 – 1 700** METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) 671 722 740 742

ADD **735A** WARC-92 In the band 1 675 - 1 710 MHz, stations in the mobile-satellite service shall not cause harmful interference to, nor constrain the development of, the meteorological-satellite and meteorological aids services (see Resolution **213 (WARC-92)**) and the use of this band shall be subject to the provisions of Resolution **46 (WARC-92)**.

ADD **740A** WARC-92 The bands 1 670 - 1 675 MHz and 1 800 - 1 805 MHz are intended for use, on a worldwide basis, by administrations wishing to implement aeronautical public correspondence. The use of the band 1 670 - 1 675 MHz by stations in the systems for public correspondence with aircraft is limited to transmissions from aeronautical stations and the use of the band 1 800 - 1 805 MHz is limited to transmissions from aircraft stations.

MOD

MHz

1 700 – 1 970

Allocation to Services		
Region 1	Region 2	Region 3
1 700 – 1 710 FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 671 722	**1 700 – 1 710** FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) 671 722 735A	**1 700 – 1 710** FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 671 722 743
1 710 – 1 930 FIXED MOBILE 740A 722 744 745 746 746A		
1 930 – 1 970 FIXED MOBILE 746A	**1 930 – 1 970** FIXED MOBILE Mobile-Satellite (Earth-to-space) 746A	**1 930 – 1 970** FIXED MOBILE 746A

MOD

MHz

1970 – 2010

Allocation to Services		
Region 1	Region 2	Region 3
1970 – 1980 FIXED MOBILE 746A	**1970 – 1980** FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 746A 746B 746C	**1970 – 1980** FIXED MOBILE 746A
1980 – 2010	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 746A 746B 746C	

ADD **746A** The frequency bands 1885 - 2025 MHz and 2110 - 2200 MHz are
WARC-92 intended for use, on a worldwide basis, by administrations wishing to implement the future public land mobile telecommunication systems (FPLMTS). Such use does not preclude the use of these bands by other services to which these bands are allocated. The frequency bands should be made available for FPLMTS in accordance with Resolution **212 (WARC-92)**.

ADD **746B** The use of the bands 1 970 - 2 010 MHz and 2 160 - 2 200 MHz by the
WARC-92 mobile-satellite service shall not commence before 1 January 2005 and is subject to the application of the coordination and notification procedures set forth in Resolution **46 (WARC-92)**. In the band 2 160 - 2 200 MHz coordination of space stations of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced at the Earth's surface exceeds the limits in No. **2566**. 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.

ADD **746C** In the United States of America, the use of the bands 1 970 - 2 010 MHz
WARC-92 and 2 160 - 2 200 MHz by the mobile-satellite service shall not commence before 1 January 1996.

MOD

MHz

2 010 – 2 200

Allocation to Services		
Region 1	Region 2	Region 3
2 010 – 2 025	FIXED MOBILE 746A	
2 025 – 2 110	FIXED MOBILE 747A SPACE RESEARCH (Earth-to-space) (space-to-space) SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) 750A	
2 110 – 2 120	FIXED MOBILE SPACE RESEARCH (deep space) (Earth-to-space) 746A	
2 120 – 2 160 FIXED MOBILE 746A	**2 120 – 2 160** FIXED MOBILE Mobile-Satellite (space-to-Earth) 746A	**2 120 – 2 160** FIXED MOBILE 746A
2 160 – 2 170 FIXED MOBILE 746A	**2 160 – 2 170** FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 746A 746B 746C	**2 160 – 2 170** FIXED MOBILE 746A
2 170 – 2 200	FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 746A 746B 746C	

MOD

MHz

2 200 – 2 290

Allocation to Services		
Region 1	Region 2	Region 3
2 200 – 2 290	FIXED SPACE RESEARCH (space-to-Earth) (space-to-space) SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) MOBILE 747A 750A	

SUP **747**
WARC-92

ADD **747A** WARC-92 In making assignments to the mobile service in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz, administrations shall take into account Resolution **211 (WARC-92)**.

SUP **748**
WARC-92

SUP **749**
WARC-92

SUP **750**
WARC-92

ADD **750A** Administrations are urged to take all practicable measures to ensure that
WARC-92 space-to-space transmissions between two or more non-geostationary satellites, in the space research, space operations and Earth exploration-satellite services in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz, shall not impose any constraints on Earth-to-space, space-to-Earth and other space-to-space transmissions of those services and in those bands between geostationary and non-geostationary satellites.

MOD

MHz

2 290 – 2 483.5

Allocation to Services		
Region 1	Region 2	Region 3
2 290 – 2 300	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)	
2 300 – 2 450 FIXED MOBILE Amateur Radiolocation 664 751A 752	**2 300 – 2 450** FIXED MOBILE RADIOLOCATION Amateur 664 750B 751 751B 752	
2 450 – 2 483.5 FIXED MOBILE Radiolocation 752 753	**2 450 – 2 483.5** FIXED MOBILE RADIOLOCATION 751 752	

SUP **743A**
WARC-92

ADD **750B** *Additional allocation:* in the United States of America and India, the
WARC-92 band 2 310 - 2 360 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial sound broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (WARC-92)**.

MOD **751** In Australia, the United States and Papua New Guinea, the use of the
WARC-92 band 2 300 - 2 390 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services. In Canada, the use of the band 2 300 - 2 483.5 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services.

ADD **751A** In France, the use of the band 2 310 - 2 360 MHz by the aeronautical
WARC-92 mobile service for telemetry has priority over other uses by the mobile service.

ADD **751B** Space stations of the broadcasting-satellite service in the band 2 310 -
WARC-92 2 360 MHz operating in accordance with No. **750B** that may affect the services to which this band is allocated in other countries shall be coordinated and notified in accordance with Resolution **33 (WARC-79)**. Complementary terrestrial broadcasting stations shall be subject to bilateral coordination with neighbouring countries prior to their bringing into use.

MOD

MHz

2 483.5 – 2 500

Allocation to Services		
Region 1	Region 2	Region 3
2 483.5 – 2 500	**2 483.5 – 2 500**	**2 483.5 – 2 500**
FIXED	FIXED	FIXED
MOBILE	MOBILE	MOBILE
MOBILE-SATELLITE (space-to-Earth)	RADIODETERMINATION-SATELLITE (space-to-Earth) 753A	RADIOLOCATION
Radiolocation	RADIOLOCATION	MOBILE-SATELLITE (space-to-Earth)
	MOBILE-SATELLITE (space-to-Earth)	Radiodetermination-Satellite (space-to-Earth) 753A
733F 752 753 753A 753B 753C 753F	752 753D 753F	752 753C 753F

MOD **753** WARC-92 *Different category of service:* in France, the band 2 450 - 2 500 MHz is allocated on a primary basis to the radiolocation service (see No. **425**). Such use is subject to agreement with administrations having services operating or planned to operate in accordance with the Table of Frequency Allocations which may be affected.

MOD **753C** WARC-92 *Different category of service:* in Angola, Australia, Bangladesh, Burundi, China, Côte d'Ivoire, Ethiopia, India, the Islamic Republic of Iran, 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.

SUP **753E**
WARC-92

ADD **753F** The use of the band 2 483.5 - 2 500 MHz by the mobile-satellite and the
WARC-92 radiodetermination-satellite services is subject to the application of the coordination and notification procedures set forth in Resolution **46 (WARC-92)**. Coordination of space stations of the mobile-satellite and radiodetermination-satellite services with respect to terrestrial services is required only if the power flux-density produced at the Earth's surface exceeds the limits in No. **2566**. 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.

MOD

MHz

2 500 – 2 520

Allocation to Services		
Region 1	Region 2	Region 3
2 500 – 2 520 FIXED 762 763 764 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) 754 754B 755A 756 759 760A	**2 500 – 2 520** FIXED 762 764 FIXED-SATELLITE (space-to-Earth) 761 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) 754 754A 755 755A 760A	

MOD **754**
WARC-92 Subject to agreement obtained under the procedure set forth in Article **14**, the band 2 520 - 2 535 MHz (until 1 January 2005 the band 2 500 - 2 535 MHz) may also be used for the mobile-satellite (space-to-Earth), except aeronautical mobile-satellite, service for operation limited to within national boundaries. The coordination and notification procedures set forth in Resolution **46 (WARC-92)** apply. However, coordination of space stations of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced by the station exceeds the limits in No. **2566**.

ADD **754B**
WARC-92 *Additional allocation:* in France, the band 2 500 - 2 550 MHz is also allocated to the radiolocation service on a primary basis. Such use is subject to agreement with the administrations having services operating or planned to operate in accordance with the Table of Frequency Allocations which may be affected.

ADD **755A** In the band 2 500 - 2 520 MHz, the power flux-density at the surface of
WARC-92 the Earth from space stations operating in the mobile-satellite (space-to-Earth) service shall not exceed –152 dB(W/m^2/4 kHz) in Argentina, unless otherwise agreed by the administrations concerned.

ADD **760A** The allocation of the frequency band 2 500 - 2 520 MHz to the
WARC-92 mobile-satellite service (space-to-Earth) shall be effective on 1 January 2005 and is subject to the application of the coordination and notification procedures set forth in Resolution **46 (WARC-92)**. Coordination of space stations of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced at the Earth's surface exceeds the limits in No. **2566**. 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.

MOD

MHz

2 520 – 2 655

Allocation to Services		
Region 1	Region 2	Region 3
2 520 – 2 655 FIXED 762 763 764 MOBILE except aeronautical mobile BROADCASTING-SATELLITE 757 760 720 754 754B 756 757A 758 759	**2 520 – 2 655** FIXED 762 764 FIXED-SATELLITE (space-to-Earth) 761 MOBILE except aeronautical mobile BROADCASTING-SATELLITE 757 760 720 754 755	**2 520 – 2 535** FIXED 762 764 FIXED-SATELLITE (space-to-Earth) 761 MOBILE except aeronautical mobile BROADCASTING-SATELLITE 757 760 754 **2 535 – 2 655** FIXED 762 764 MOBILE except aeronautical mobile BROADCASTING-SATELLITE 757 760 720 757A

MOD **757** The use of the band 2 520 - 2 670 MHz by the broadcasting-satellite
WARC-92 service is limited to national and regional systems for community reception and such use shall be subject to agreement obtained under the procedure set forth in Article **14**. The power flux-density at the Earth's surface shall not exceed the values given in Nos. **2561** to **2564**.

ADD **757A** *Additional allocation:* in Bangladesh, Belarus, China, the Republic of
WARC-92 Korea, the Russian Federation, India, Japan, Pakistan, Singapore, Sri Lanka, Thailand and Ukraine, the band 2 535 - 2 655 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to provisions of Resolution **528 (WARC-92)**. The provisions of Nos. **757** and **2561** to **2564** do not apply to this additional allocation.

MOD **758** *Alternative allocation:* in the Federal Republic of Germany and Greece,
WARC-92 the band 2 520 - 2 670 MHz is allocated to the fixed service on a primary basis.

MOD

MHz

2 655 – 2 690

Allocation to Services		
Region 1	Region 2	Region 3
2 655 – 2 670	**2 655 – 2 670**	**2 655 – 2 670**
FIXED 762 763 764	FIXED 762 764	FIXED 762 764
MOBILE except aeronautical mobile	FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 761	FIXED-SATELLITE (Earth-to-space) 761
BROADCASTING-SATELLITE 757 760	MOBILE except aeronautical mobile	MOBILE except aeronautical mobile
Earth Exploration-Satellite (passive)	BROADCASTING-SATELLITE 757 760	BROADCASTING-SATELLITE 757 760
Radio Astronomy	Earth Exploration-Satellite (passive)	Earth Exploration-Satellite (passive)
Space Research (passive)	Radio Astronomy	Radio Astronomy
	Space Research (passive)	Space Research (passive)
758 759 765 766	765 766	765 766
2 670 – 2 690	**2 670 – 2 690**	**2 670 – 2 690**
FIXED 762 763 764	FIXED 762 764	FIXED 762 764
MOBILE except aeronautical mobile	FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 761	FIXED-SATELLITE (Earth-to-space) 761
MOBILE-SATELLITE (Earth-to-space)	MOBILE except aeronautical mobile	MOBILE except aeronautical mobile
Earth Exploration-Satellite (passive)	MOBILE-SATELLITE (Earth-to-space)	MOBILE-SATELLITE (Earth-to-space)
Radio Astronomy	Earth Exploration-Satellite (passive)	Earth Exploration-Satellite (passive)
Space Research (passive)	Radio Astronomy	Radio Astronomy
	Space Research (passive)	Space Research (passive)
764A 765 766	764A 765 766	764A 765 766

ADD **764A** The allocation of the frequency band 2 670 - 2 690 MHz to the mobile-satellite service shall be effective from 1 January 2005. When introducing mobile-satellite systems in this band administrations shall take all necessary steps to protect the satellite systems operating in this band prior to 3 March 1992. The coordination of mobile-satellite systems in the band shall be in accordance with Resolution **46 (WARC-92)**.
WARC-92

MOD **766** Subject to agreement obtained under the procedure set forth in Article **14**, the band 2 655 - 2 670 MHz (until 1 January 2005 the band 2 655 - 2 690 MHz) may also be used for the mobile-satellite (Earth-to-space), except aeronautical mobile-satellite, service for operation limited to within national boundaries. The coordination and notification procedures set forth in Resolution **46 (WARC-92)** apply.
WARC-92

MOD

GHz

13.75 – 14

Allocation to Services		
Region 1	Region 2	Region 3
13.75 – 14	RADIOLOCATION FIXE-SATELLITE (Earth-to-space) Standard Frequency and Time Signal-Satellite (Earth-to-space) Space Research 713 853 854 855 855A 855B	

ADD **855A** **WARC-92** In the band 13.75 - 14 GHz, the e.i.r.p. of any emission from an earth station in the fixed-satellite service shall be at least 68 dBW, and should not exceed 85 dBW, with a minimum antenna diameter of 4.5 metres. In addition the e.i.r.p., averaged over one second, radiated by a station in the radiolocation and radionavigation services towards the geostationary-satellite orbit shall not exceed 59 dBW. These values shall apply subject to review by the CCIR and until they are changed by a future competent world administrative radio conference (see Resolution **112 (WARC-92)**).

ADD **855B** **WARC-92** In the band 13.75 - 14 GHz geostationary space stations in the space research service, for which information for advance publication has been received by the IFRB prior to 31 January 1992, shall operate on an equal basis with stations in the fixed-satellite service; after that date new geostationary space stations in the space research service will operate on a secondary basis. Until 1 January 2000, stations in the fixed-satellite service shall not cause harmful interference to non-geostationary space stations in the space research and Earth exploration-satellite services; after that date these non-geostationary space stations will operate on a secondary basis in relation to the fixed-satellite service.

MOD

GHz

17.3 – 18.1

<table>
<tr><th colspan="3">Allocation to Services</th></tr>
<tr><th>Region 1</th><th>Region 2</th><th>Region 3</th></tr>
<tr><td>17.3 – 17.7
FIXED-SATELLITE
(Earth-to-space) 869
Radiolocation

868</td><td>17.3 – 17.7
FIXED-SATELLITE
(Earth-to-space) 869
BROADCASTING-SATELLITE
Radiolocation
868 868A 869A</td><td>17.3 – 17.7
FIXED-SATELLITE
(Earth-to-space) 869
Radiolocation

868</td></tr>
<tr><td rowspan="2">17.7 – 18.1
FIXED
FIXED-SATELLITE
(space-to-Earth)
(Earth-to-space) 869
MOBILE</td><td>17.7 – 17.8
FIXED
FIXED-SATELLITE
(space-to-Earth)
(Earth-to-space) 869
BROADCASTING-SATELLITE
Mobile 869B
868A 869A</td><td rowspan="2">17.7 – 18.1
FIXED
FIXED-SATELLITE
(space-to-Earth)
(Earth-to-space) 869
MOBILE</td></tr>
<tr><td>17.8 – 18.1
FIXED
FIXED-SATELLITE
(space-to-Earth)
(Earth-to-space) 869
MOBILE</td></tr>
</table>

ADD **868A** (WARC-92) In the band 17.3 - 17.8 GHz, sharing between the fixed-satellite service (Earth-to-space) and the broadcasting-satellite service shall also be in accordance with the provisions of section 1 of Annex 4 of Appendix **30A**.

ADD **869A** In Region 2, the allocation to the broadcasting-satellite service in the
WARC-92 band 17.3 - 17.8 GHz shall come into effect on 1 April 2007. After that date, use of the fixed-satellite (space-to-Earth) service in the band 17.7 - 17.8 GHz shall not claim protection from and shall not cause harmful interference to operating systems in the broadcasting-satellite service.

ADD **869B** In Region 2, the allocation of the band 17.7 - 17.8 GHz to the mobile
WARC-92 service is on a primary basis until 31 March 2007.

MOD

GHz

18.1 – 18.6

Allocation to Services		
Region 1	Region 2	Region 3
18.1 – 18.4	FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 870A MOBILE 870 870B	
18.4 – 18.6	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE	

ADD **870A** The use of the band 18.1 - 18.4 GHz by the fixed-satellite service
WARC-92 (Earth-to-space) is limited to feeder links for the broadcasting-satellite service.

ADD **870B** *Alternative allocation:* in the Federal Republic of Germany, Denmark,
WARC-92 the United Arab Emirates, Greece, Poland, the Czech and Slovak Federal Republic and the United Kingdom, the band 18.1 - 18.4 GHz is allocated to the fixed, fixed-satellite (space-to-Earth) and mobile services on a primary basis. The provisions of No. **870** also apply.

MOD

GHz

19.7 – 20.2

Allocation to Services		
Region 1	Region 2	Region 3
19.7 – 20.1 FIXED-SATELLITE (space-to-Earth) Mobile-Satellite (space-to-Earth) 873	**19.7 – 20.1** FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 873 873A 873B 873C 873D 873E	**19.7 – 20.1** FIXED-SATELLITE (space-to-Earth) Mobile-Satellite (space-to-Earth) 873
20.1 – 20.2	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 873 873A 873B 873C 873D	

MOD **873** WARC-92 *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.

ADD **873A** WARC-92 In order to facilitate interregional coordination between networks in the mobile-satellite and fixed-satellite services, carriers in the mobile-satellite service that are most susceptible to interference shall, to the extent practicable, be located in the higher parts of the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz.

ADD **873B** In the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz in Region 2, and in the
WARC-92 bands 20.1 - 20.2 GHz and 29.9 - 30 GHz in Regions 1 and 3, networks which are both in the fixed-satellite service and in the mobile-satellite service may include links between earth stations at specified or unspecified points or while in motion, through one or more satellites for point-to-point and point-to-multipoint communications.

ADD **873C** In the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz, the provisions of
WARC-92 No. **953** do not apply with respect to the mobile-satellite service.

ADD **873D** The allocation to the mobile-satellite service is intended for use by
WARC-92 networks which use narrow spot-beam antennas and other advanced technology at the space stations. Administrations operating systems in the mobile-satellite service in the band 19.7 - 20.1 GHz in Region 2 and in the band 20.1 - 20.2 GHz shall take all practicable steps to ensure the continued availability of these bands for administrations operating fixed and mobile systems in accordance with the provisions of No. **873**.

ADD **873E** The use of the bands 19.7 - 20.1 GHz and 29.5 - 29.9 GHz by the
WARC-92 mobile-satellite service in Region 2 is limited to satellite networks which are both in the fixed-satellite service and in the mobile-satellite service as described in No. **873B**.

MOD

GHz

21.4 – 22

Allocation to Services		
Region 1	Region 2	Region 3
21.4 - 22 FIXED MOBILE BROADCASTING-SATELLITE 873F	**21.4 - 22** FIXED MOBILE	**21.4 - 22** FIXED MOBILE BROADCASTING-SATELLITE 873F 873G

ADD **873F** In Regions 1 and 3, the allocation to the broadcasting-satellite service in
WARC-92 the band 21.4 - 22 GHz shall come into effect on 1 April 2007. The use of this band by the broadcasting-satellite service after that date and on an interim basis prior to that date is subject to the provisions of Resolution **525 (WARC-92)**.

ADD **873G** *Additional allocation:* in Japan, the band 21.4 - 22 GHz is also allocated
WARC-92 to the broadcasting service on a primary basis.

MOD

GHz

22.5 – 23

Allocation to Services		
Region 1	Region 2	Region 3
22.5 – 22.55	FIXED MOBILE	
22.55 – 23	FIXED INTER-SATELLITE MOBILE 879	

SUP **877**
WARC-92

SUP **878**
WARC-92

MOD

GHz

24.25 – 25.25

Allocation to Services		
Region 1	Region 2	Region 3
24.25 – 24.45 FIXED	**24.25 – 24.45** RADIONAVIGATION	**24.25 – 24.45** RADIONAVIGATION FIXED MOBILE
24.45 – 24.65 FIXED INTER-SATELLITE	**24.45 – 24.65** RADIONAVIGATION INTER-SATELLITE 882E	**24.45 – 24.65** RADIONAVIGATION FIXED INTER-SATELLITE MOBILE 882E
24.65 – 24.75 FIXED INTER-SATELLITE	**24.65 – 24.75** INTER-SATELLITE RADIOLOCATION-SATELLITE (Earth-to-space)	**24.65 – 24.75** FIXED INTER-SATELLITE MOBILE 882E 882F
24.75 – 25.25 FIXED	**24.75 – 25.25** FIXED-SATELLITE (Earth-to-space) 882G	**24.75 – 25.25** FIXED FIXED-SATELLITE (Earth-to-space) 882G MOBILE 882F

ADD **882E** The inter-satellite service shall not claim protection from harmful
WARC-92 interference from airport surface detection equipment stations of the radionavigation service.

ADD **882F** *Additional allocation:* in Japan, the band 24.65 - 25.25 GHz is also
WARC-92 allocated to the radionavigation service on a primary basis until 2008.

ADD **882G** In the band 24.75 - 25.25 GHz, feeder links to stations of the
WARC-92 broadcasting-satellite service shall have priority over other uses in the fixed-satellite service (Earth-to-space). Such other uses shall protect and shall not claim protection from existing and future operating feeder-link networks to such broadcasting satellite stations.

MOD

GHz

25.25 – 29.5

Allocation to Services		
Region 1	Region 2	Region 3
25.25 – 25.5	FIXED MOBILE INTER-SATELLITE 881A Standard Frequency and Time Signal-Satellite (Earth-to-space)	
25.5 – 27	FIXED MOBILE INTER-SATELLITE 881A Earth Exploration-Satellite (space-to-Earth) Standard Frequency and Time Signal-Satellite (Earth-to-space)	
27 – 27.5 FIXED MOBILE INTER-SATELLITE 881A	**27 – 27.5** FIXED FIXED-SATELLITE (Earth-to-space) MOBILE INTER-SATELLITE 881A 881B	
27.5 – 28.5	FIXED FIXED-SATELLITE (Earth-to-space) 882D MOBILE 882A 882B	
28.5 – 29.5	FIXED FIXED-SATELLITE (Earth-to-space) 882D MOBILE Earth Exploration-Satellite (Earth-to-space) 882C 882B	

ADD **881A** Use of the 25.25 - 27.5 GHz band by the inter-satellite service is limited
WARC-92 to space research and Earth exploration-satellite applications, and also transmissions of data originating from industrial and medical activities in space.

ADD **881B** Space services using non-geostationary satellites operating in the
WARC-92 inter-satellite service in the band 27 - 27.5 GHz are exempt from the provisions of No. **2613**.

MOD

GHz

29.5 – 30

Allocation to Services		
Region 1	Region 2	Region 3
29.5 – 29.9 FIXED-SATELLITE (Earth-to-space) 882D Mobile-Satellite (Earth-to-space) Earth Exploration-Satellite (Earth-to-space) 882C 882B 883	**29.5 – 29.9** FIXED-SATELLITE (Earth-to-space) 882D MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (Earth-to-space) 882C 873A 873B 873C 873E 882B 883	**29.5 – 29.9** FIXED-SATELLITE (Earth-to-space) 882D Mobile-Satellite (Earth-to-space) Earth Exploration-Satellite (Earth-to-space) 882C 882B 883
29.9 – 30	FIXED-SATELLITE (Earth-to-space) 882D MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (Earth-to-space) 882C 873A 873B 873C 882 882A 882B 883	

ADD **882A** WARC-92 *Additional allocation:* the bands 27.500 - 27.501 GHz and 29.999 - 30.000 GHz are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis for the beacon transmissions intended for up link power control.

Such space-to-Earth transmissions shall not exceed an equivalent isotropically radiated power (e.i.r.p.) of +10 dBW in the direction of adjacent satellites on the geostationary-satellite orbit. In the band 27.500 - 27.501 GHz, such space-to-Earth transmissions shall not produce a power flux-density in excess of the values specified in No. **2578** on the Earth's surface.

ADD **882B** WARC-92 *Additional allocation:* the band 27.501 - 29.999 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions intended for up link power control.

ADD **882C** In the band 28.5 - 30 GHz, the earth exploration-satellite service is
WARC-92 limited to the transfer of data between stations and not to the primary collection of information by means of active or passive sensors.

ADD **882D** The band 27.5 - 30 GHz may be used by the fixed-satellite service
WARC-92 (Earth-to-space) for the provision of feeder links for the broadcasting-satellite service.

MOD **883** *Additional allocation:* in Afghanistan, Algeria, Saudi Arabia, Bahrain,
WARC-92 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. **2505** and **2508** shall apply.

MOD

GHz

31.8 – 32.3

Allocation to Services		
Region 1	Region 2	Region 3
31.8 – 32	RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) 892 893	
32 – 32.3	INTER-SATELLITE RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) 892 893	

SUP **890**
WARC-92

SUP **891**
WARC-92

MOD **893** In designing systems for the inter-satellite and radionavigation services
WARC-92 in the band 32 - 33 GHz, and for the space research service (deep space) in the band 31.8 - 32.3 GHz, administrations shall take all necessary measures to prevent harmful interference between these services, bearing in mind the safety aspects of the radionavigation service (see Recommendation **707 (WARC-79)**).

MOD

GHz

34.2 – 35.2

Allocation to Services		
Region 1	Region 2	Region 3
34.2 – 34.7	RADIOLOCATION SPACE RESEARCH (deep space) (Earth-to-space) 894	
34.7 – 35.2	RADIOLOCATION Space Research 896 894	

SUP **895**
WARC-92

MOD **896** **WARC-92** *Different category of service:* in Bulgaria, Cuba, Mongolia, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the allocation of the band 34.7 - 35.2 GHz to the space research service is on a primary basis (see No. **425**).

MOD

GHz

37 – 40.5

Allocation to Services		
Region 1	Region 2	Region 3
37 – 37.5	FIXED MOBILE SPACE RESEARCH (space-to-Earth)	
37.5 – 38	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (space-to-Earth) Earth Exploration-Satellite (space-to-Earth)	
38 – 39.5	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Earth Exploration-Satellite (space-to-Earth)	
39.5 – 40	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) Earth Exploration-Satellite (space-to-Earth)	
40 – 40.5	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) EARTH EXPLORATION-SATELLITE (Earth-to-space) SPACE RESEARCH (Earth-to-space) Earth Exploration-Satellite (space-to-Earth)	

SUP **899**
WARC-92

MOD

GHz

74 – 84

Allocation to Services		
Region 1	Region 2	Region 3
74 – 75.5	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Space Research (space-to-Earth)	
75.5 – 76	AMATEUR AMATEUR-SATELLITE Space Research (space-to-Earth)	
76 – 81	RADIOLOCATION Amateur Amateur-Satellite Space Research (space-to-Earth) 912	
81 – 84	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) Space Research (space-to-Earth)	

MOD

GHz

151 – 164

Allocation to Services		
Region 1	Region 2	Region 3
151 – 156	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE	
156 – 158	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE EARTH EXPLORATION-SATELLITE (passive)	
158 – 164	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE	

ARTICLE 8 *(continued)*

PART B*

Changes made to the footnotes only

MOD **446** WARC-92 *Additional allocation:* in Bulgaria, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the band 14 - 17 kHz is also allocated to the radionavigation service on a permitted basis.

MOD **447** WARC-92 The stations of services to which the bands 14 - 19.95 kHz and 20.05 - 70 kHz and in Region 1 also the bands 72 - 84 kHz and 86 - 90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Bulgaria, Mongolia, Czechoslovakia and the U.S.S.R., the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions.

MOD **449** WARC-92 *Additional allocation:* in Bulgaria, Poland, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the band 67 - 70 kHz is also allocated to the radionavigation service on a permitted basis.

MOD **457** WARC-92 *Additional allocation:* in Bulgaria, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 130 - 148.5 kHz is also allocated to the radionavigation service on a secondary basis. Within and between these countries this service shall have an equal right to operate.

SUP **464A** WARC-92

SUP **475** WARC-92

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* *Note by the General Secretariat:* The changes are presented in the following order:

- Part A – Changes made to the tables and, if appropriate, to the related footnotes.
- Part B – Changes made to the footnotes only.

SUP **481**
WARC-92

MOD **518** In Afghanistan, Argentina, Australia, Botswana, Burkina Faso, China,
WARC-92 India, Mali, Niger, Central African Republic, Chad and the U.S.S.R., in the bands 4 063 - 4 123 kHz, 4 130 - 4 133 kHz and 4 408 - 4 438 kHz, stations of limited power in the fixed service which are situated at least 600 km from the coast may operate on condition that harmful interference is not caused to the maritime mobile service.

SUP **532**
WARC-92

SUP **537**
WARC-92

SUP **543**
WARC-92

SUP **544**
WARC-92

SUP **551**
WARC-92

MOD **555** *Additional allocation:* in Angola, Cameroon, the Congo, Madagascar,
WARC-92 Mozambique, Somalia, Sudan, Tanzania and Chad, the band 47 - 68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a permitted basis.

SUP **569**
WARC-92

MOD **571** *Additional allocation:* in Bulgaria, China, Mongolia, Poland,
WARC-92 Czechoslovakia and the U.S.S.R., the bands 74.6 - 74.8 MHz and 75.2 - 75.4 MHz are also allocated to the aeronautical radionavigation service, on a primary basis, for ground-based transmitters only.

MOD **572** The frequency 75 MHz is assigned to marker beacons. Administrations
WARC-92 shall refrain from assigning frequencies close to the limits of the guardband to stations of other services which, because of their power or geographical position, might cause harmful interference or otherwise place a constraint on marker beacons.

Every effort should be made to improve further the characteristics of airborne receivers and to limit the power of transmitting stations close to the limits 74.8 MHz and 75.2 MHz.

MOD **581** WARC-92 *Additional allocation:* in the Federal Republic of Germany, France, Ireland, Israel, Italy, Liechtenstein, Monaco, the United Kingdom and Switzerland, the band 87.5 - 88 MHz is also allocated to the land mobile service on a permitted basis and subject to agreement obtained under the procedure set forth in Article **14**.

SUP **582** WARC-92

MOD **587** WARC-92 *Additional allocation:* in Bulgaria, Israel, Kenya, Lebanon, Mongolia, the German Democratic Republic, the United Kingdom, Somalia, Syria, Czechoslovakia, Turkey and the U.S.S.R., 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.

MOD **596** WARC-92 *Different category of service:* in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, Cuba, the United Arab Emirates, India, Indonesia, Iran, Iraq, Malaysia, Oman, Pakistan, Philippines, Qatar, Singapore, Sri Lanka, Thailand, Yemen and Yugoslavia, the band 137 - 138 MHz is allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis (see No. **425**).

MOD **597** WARC-92 *Different category of service:* in Israel and Jordan, the allocation of the band 137 - 138 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **425**).

MOD **598** WARC-92 *Different category of service:* in Austria, Bulgaria, Egypt, Finland, France, Greece, Hungary, the Lebanon, Mongolia, Poland, the German Democratic Republic, Romania, Syria, Czechoslovakia and the U.S.S.R., the allocation of the band 137 - 138 MHz to the aeronautical mobile (OR) service is on a primary basis (see No. **425**).

MOD **604** WARC-92 *Additional allocation:* in Ethiopia, Finland, Kenya, Malta, Somalia, Sudan, Tanzania and Yugoslavia, the band 138 - 144 MHz is also allocated to the fixed service on a primary basis.

SUP **612** WARC-92

SUP **614** WARC-92

MOD **621** *Additional allocation:* in the Federal Republic of Germany, Austria,
WARC-92 Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Malta, Monaco, Norway, the Netherlands, the United Kingdom, Sweden and Switzerland, the band 174 - 223 MHz is also allocated to the land mobile service on a permitted basis. 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.

MOD **622** *Different category of service:* in the Federal Republic of Germany,
WARC-92 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 permitted basis (see No. **425**). 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.

MOD **627** In Region 2, no new stations in the radiolocation service may be
WARC-92 authorized in the band 216 - 225 MHz. Stations authorized prior to 1 January 1990 may continue to operate on a secondary basis.

SUP **633**
WARC-92

SUP **634**
WARC-92

MOD **635** *Alternative allocation:* in Botswana, Lesotho, Malawi, Mozambique,
WARC-92 Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the bands 223 - 238 MHz and 246 - 254 MHz are allocated to the broadcasting service on a primary basis, subject to agreement obtained under the procedure set forth in Article **14**.

MOD **647** *Additional allocation:* in Afghanistan, Saudi Arabia, Bahrain, Bulgaria,
WARC-92 Colombia, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, Hungary, Indonesia, Iran, Iraq, Israel, Jordan, Kuwait, Liberia, Malaysia, Nigeria, Oman, Pakistan, the Philippines, Poland, Qatar, Syria, the German Democratic Republic, Romania, Singapore, Somalia, Sri Lanka, Czechoslovakia, Thailand, the U.S.S.R. and Yugoslavia, the band 400.05 - 401 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD **658** *Additional allocation:* in Afghanistan, Algeria, Saudi Arabia, Bahrain,
WARC-92 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.

MOD **659** *Additional allocation:* in Angola, Bulgaria, Cameroon, the Congo,
WARC-92 Djibouti, Gabon, Hungary, 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.

MOD **663** *Additional allocation:* in the French Overseas Departments in Region 2
WARC-92 and India, the band 433.75 - 434.25 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis. In France and in Brazil, the band is allocated to the same service on a secondary basis.

MOD **672** *Different category of service:* in Afghanistan, Bulgaria, China, Cuba,
WARC-92 Japan, Mongolia, Poland, Czechoslovakia and the U.S.S.R., the allocation of the band 460 - 470 MHz to the meteorological-satellite service (space-to-Earth) is on a primary basis (see No. **425**) and is subject to agreement obtained under the procedure set forth in Article **14**.

MOD **675** *Different category of service:* in Chile, Colombia, Cuba, Ecuador, the
WARC-92 United States, Guyana, Honduras, Jamaica, Mexico and Panama, the allocation of the bands 470 - 512 MHz and 614 - 806 MHz to the fixed and mobile services is on a primary basis (see No. **425**), subject to agreement obtained under the procedure set forth in Article **14**.

MOD **676** *Additional allocation:* in Burundi, Cameroon, the Congo, Ethiopia,
WARC-92 Israel, Kenya, Lebanon, Libya, Malawi, Senegal, Sudan, Syria and Yemen, the band 470 - 582 MHz is also allocated to the fixed service on a secondary basis.

MOD **678** *Additional allocation:* in Costa Rica, Cuba, El Salvador, Ecuador, the
WARC-92 United States, Guatemala, Guyana, Honduras, Jamaica, Mexico and Venezuela, the band 512 - 608 MHz is also allocated to the fixed and mobile services on a primary basis, subject to agreement obtained under the procedure set forth in Article **14**.

SUP **682**
WARC-92

MOD **697** *Additional allocation:* in the Federal Republic of Germany, Burkina
WARC-92 Faso, Cameroon, Côte d'Ivoire, Denmark, Egypt, Finland, Israel, Kenya, Libya, Liechtenstein, Monaco, Norway, the Netherlands, Portugal, Sweden, Switzerland and Yugoslavia, the band 790 - 830 MHz, and in these same countries and in Spain, France, Malta, the Gabonese Republic and Syria, the band 830 - 862 MHz, are also allocated to the mobile, except aeronautical mobile, service on a primary basis. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band.

MOD **703** In Region 1, in the band 862 - 960 MHz, stations of the broadcasting
WARC-92 service shall be operated only in the African Broadcasting Area (see Nos. **400** to **403**) excluding Algeria, Egypt, Spain, Libya and Morocco, subject to agreement obtained under the procedure set forth in Article **14**.

MOD **719** In Bulgaria, Mongolia, Poland, the German Democratic Republic,
WARC-92 Romania, Czechoslovakia and the U.S.S.R., the existing installations of the radionavigation service may continue to operate in the band 1 350 - 1 400 MHz.

MOD **724** *Different category of service:* in Afghanistan, Saudi Arabia, Bahrain,
WARC-92 Bulgaria, Cameroon, Egypt, the United Arab Emirates, France, Iran, Iraq, Israel, Kuwait, the Lebanon, Morocco, Mongolia, Oman, Poland, Qatar, Syria, the German Democratic Republic, Romania, Czechoslovakia, the U.S.S.R., Yemen and Yugoslavia, the allocation of the band 1 525 - 1 530 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **425**).

MOD **730** *Additional allocation:* in the Federal Republic of Germany, Austria,
WARC-92 Bulgaria, Cameroon, Spain, France, Guinea, Hungary, Indonesia, 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.

MOD **746** *Additional allocation:* in Bulgaria, Cuba, Mali, Mongolia, Poland, the
WARC-92 German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 1 770 - 1 790 MHz is also allocated to the meteorological-satellite service on a primary basis, subject to agreement obtained under the procedure set forth in Article **14**.

MOD **769** *Additional allocation:* in Afghanistan, Saudi Arabia, Bahrain, Bulgaria,
WARC-92 Brunei Darussalam, 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.

MOD **777** *Additional allocation:* in Bulgaria, Canada, Cuba, Mongolia, Poland,
WARC-92 the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 3 100 - 3 300 MHz is also allocated to the radionavigation service on a primary basis.

MOD **779** *Additional allocation:* in Afghanistan, Saudi Arabia, Bahrain,
WARC-92 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.

MOD **780** *Additional allocation:* in Bulgaria, Cuba, Mongolia, Poland, the
WARC-92 German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 3 300 - 3 400 MHz is also allocated to the radionavigation service on a primary basis.

SUP **782**
WARC-92

MOD **797B** *Additional allocation:* in the Federal Republic of Germany, Austria,
WARC-92 Belgium, Denmark, Spain, France, Finland, Greece, Israel, Italy, Japan, Jordan, Lebanon, Liechtenstein, Luxembourg, Malta, Morocco, Norway, Pakistan, the Netherlands, Portugal, the United Kingdom, Sweden, Switzerland, Syria and Tunisia, the band 5 150 - 5 250 MHz is also allocated to the mobile service, on a primary basis, subject to the agreement obtained under the procedure set forth in Article **14**.

MOD **798** *Additional allocation:* in Austria, Bulgaria, Libya, Mongolia, Poland,
WARC-92 the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 5 250 - 5 350 MHz is also allocated to the radionavigation service on a primary basis.

MOD **800** WARC-92 *Additional allocation:* in Afghanistan, Austria, Bulgaria, Iran, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 5 470 - 5 650 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

MOD **803** WARC-92 *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 5 650 - 5 850 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD **804** WARC-92 *Different category of service:* in Bulgaria, Cuba, Mongolia, Poland, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the allocation of the band 5 670 - 5 725 MHz to the space research service is on a primary basis (see No. **425**).

MOD **819** WARC-92 *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 8 500 - 8 750 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD **826** WARC-92 *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 9 800 - 10 000 MHz to the fixed service is on a primary basis (see No. **425**).

MOD **830** WARC-92 *Additional allocation:* in the Federal Republic of Germany, Angola, China, Ecuador, Spain, Japan, Kenya, Morocco, Nigeria, Dem. People's Rep. of Korea, Sweden, Tanzania and Thailand, the band 10.45 - 10.5 GHz is also allocated to the fixed and mobile services on a primary basis.

MOD **834** *Additional allocation:* in Saudi Arabia, Bahrain, Bulgaria, Cameroon,
WARC-92 China, Colombia, the Republic of Korea, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, Iran, Iraq, Israel, Japan, Jordan, Kuwait, the Lebanon, Mongolia, Pakistan, Poland, Qatar, the German Democratic Republic, Dem. People's Rep. of Korea, Romania, Czechoslovakia, the U.S.S.R., Yemen and Yugoslavia, the band 10.68 - 10.7 GHz 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.

MOD **850** *Additional allocation:* in Austria, Bulgaria, Hungary, the German
WARC-92 Democratic Republic, Czechoslovakia and the U.S.S.R., the band 12.5 - 12.75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service on a primary basis. However, stations in these services shall not cause harmful interference to fixed-satellite service earth stations of countries in Region 1 other than those mentioned in this footnote. Coordination of these earth stations is not required with stations of the fixed and mobile services of the countries mentioned in this footnote. The power flux-density limit at the Earth's surface given in No. **2574** for the fixed-satellite service shall apply on the territory of the countries mentioned in this footnote.

MOD **854** *Additional allocation:* in Afghanistan, Algeria, Angola, Saudi Arabia,
WARC-92 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.

MOD **855** *Additional allocation:* in Austria, Bulgaria, Hungary, Japan, Mongolia,
WARC-92 the German Democratic Republic, Romania, the United Kingdom, Czechoslovakia and the U.S.S.R., the band 13.4 - 14 GHz is also allocated to the radionavigation service on a primary basis.

MOD **857** *Additional allocation:* in Afghanistan, Algeria, Angola, Saudi Arabia,
WARC-92 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.

MOD **860** *Additional allocation:* in the Federal Republic of Germany, Austria,
WARC-92 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 allocated to the fixed service on a primary basis.

MOD **866** *Additional allocation:* in Afghanistan, Algeria, Angola, Saudi Arabia,
WARC-92 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.

MOD **868** *Additional allocation:* in Afghanistan, Algeria, the Federal Republic of
WARC-92 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. **2505** and **2508** shall apply.

MOD **885** *Different category of service:* in Bulgaria, Cuba, Mongolia, Poland, the
WARC-92 German Democratic Republic, Czechoslovakia and the U.S.S.R., the allocation of the band 31 - 31.3 GHz to the space research service is on a primary basis (see No. **425**).

MOD **889** *Different category of service:* in Bulgaria, Egypt, Mongolia, Poland, the
WARC-92 German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the allocation of the band 31.5 - 31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **425**).

MOD **894** *Additional allocation:* in Afghanistan, Saudi Arabia, Bahrain,
WARC-92 Bangladesh, Egypt, the United Arab Emirates, Spain, Finland, Gabon, Guinea, Indonesia, Iran, Iraq, Israel, Jordan, Kenya, Kuwait, the Lebanon, Libya, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Senegal, Singapore, Somalia, Sudan, Sri Lanka, Sweden, Tanzania, Thailand, Togo, Tunisia, Yemen and Zaire, the band 33.4 - 36 GHz is also allocated to the fixed and mobile services on a primary basis.

ARTICLE 11

(MOD) WARC-92

Coordination of Frequency Assignments to Stations in a Space Radiocommunication Service Except Stations in the Broadcasting-Satellite Service and to Appropriate Terrestrial Stations[1, 2, 3, 5]

NOC

Section I. Procedures for the Advance Publication of Information on Planned Satellite Networks[4]

ADD **A.11.5** WARC-92

[5] See Resolution **46 (WARC-92)**.

ARTICLE 12

(MOD) WARC-92

Notification and Recording in the Master International Frequency Register of Frequency Assignments[1] **to Terrestrial Radiocommunication Stations**[2, 3, 4, 5]

NOC

Section I. Notification of Frequency Assignments

ADD **A.12.5** WARC-92

[5] See Resolution **46 (WARC-92)**.

NOC

Sub-Section IIC. Procedure to Be Followed for Aeronautical Stations Operating in the Bands Allocated Exclusively to the Aeronautical Mobile Services Between 2 850 kHz and 22 000 kHz

NOC **1343** WARC-92 § 27. (1) Examination of Notices Concerning Frequency Assignments to Aeronautical Stations in the Aeronautical Mobile (OR) Service in the Bands Allocated Exclusively to that Service Between 3 025 kHz and 18 030 kHz (see No. **1239**).

NOC **1344** WARC-92 (2) The Board shall examine each notice covered by No. **1343** to determine whether:

MOD **1344A** WARC-92 *a)* the notice is in conformity with the provisions of No. **1240** and those contained in Part II of Appendix **26(Rev.)**;

MOD **1345** WARC-92 *b)* the assignment is in conformity with an allotment contained in Part III of Appendix **26(Rev.)**;

SUP **1346** WARC-92

SUP **1347** WARC-92

SUP **1348** WARC-92

(MOD) **1348A** WARC-92 (3) A notice which is not in conformity with the provisions of No. **1344A** shall be examined with respect to Nos. **1267** and **1268**. The date to be entered in Column 2b shall be determined in accordance with the relevant provisions of Section III of this Article.

ADD **1348B** WARC-92 (4) Any frequency assignment for which the finding is favourable with respect to Nos. **1344A** and **1345** shall be recorded in the Master Register. The date to be entered in Column 2a shall be determined in accordance with the relevant provisions of Section III of this Article.

ADD **1348C** WARC-92 (5) A notice which is in conformity with the provisions of No. **1344A**, but not with those of No. **1345**, shall be examined with respect to the allotments in Part III of Appendix **26(Rev.)**. In so doing, the Board shall apply the technical criteria specified in Part IV of Appendix **26(Rev.)**. The date to be entered in Column 2a or 2b shall be determined in accordance with the relevant provisions of Section III of this Article.

SUP **1349** WARC-92

NOC **Section III**

NOC **1406** § 45. (1) Frequency Bands Allocated Exclusively to the Aeronautical Mobile (OR) Service Between 3025 kHz and 18030 kHz.

MOD **1407** WARC-92 (2) If the finding is favourable with respect to Nos. **1344A** and **1345**, the date of 15 December 1992 shall be entered in Column 2a.

MOD **1408** WARC-92 (3) If the finding is favourable with respect to No. **1348C**, the date of 15 December 1992 shall be entered in Column 2a.

SUP **1409** WARC-92

MOD **1410** WARC-92 (4) In all other cases covered by No. **1343**, the date of 16 December 1992 shall be entered in Column 2b.

(MOD) **1411** WARC-92 (5) For assignments to stations other than aeronautical stations in the aeronautical mobile (OR) service, the relevant date shall be entered in Column 2b (see Nos. **1271** and **1272**).

ARTICLE 13

(MOD) WARC-92

Notification and Recording in the Master International Frequency Register of Frequency Assignments[1] to Radio Astronomy and Space Radiocommunication Stations Except Stations in the Broadcasting-Satellite Service[2, 3, 4, 5]

NOC

Section I. Notification of Frequency Assignments

ADD **A.13.5** WARC-92

[5] See Resolution **46 (WARC-92)**.

ARTICLE 27

Terrestrial Radiocommunication Services Sharing Frequency Bands with Space Radiocommunication Services Above 1 GHz

Section I. Choice of Sites and Frequencies

NOC **2501 to 2503**

MOD **2504** WARC-92

(3) In the frequency bands above 15 GHz there shall be no restriction[1] as to the direction of maximum radiation for stations in the fixed or mobile service, except as noted in No. **2504A**.

ADD **2504A** WARC-92 As far as practicable, sites for transmitting stations, in the fixed or mobile service, employing maximum values of equivalent isotropic radiated power (e.i.r.p.) density exceeding 24 dBW in any 1 MHz band in the frequency band 25.25 - 27.5 GHz should be selected so that the direction of maximum radiation of any antenna will be at least 1.5° away from the geostationary-satellite orbit, taking into account the effect of atmospheric refraction[1].

ADD **2504A.1** WARC-92 [1] The provisions of No. **2504A** shall apply until such time as the CCIR has made a recommendation on the e.i.r.p. density limits which should apply in the band.

Section II. Power Limits

MOD **2509** WARC-92 (5) The limits given in Nos. **2502**, **2505**, **2506** and **2507** apply in the following frequency bands allocated to the fixed-satellite service, the meteorological-satellite service, the space research service, the space operation service, the earth exploration-satellite service or the mobile-satellite service for reception by space stations, where these bands are shared with equal rights with the fixed or mobile service:

1 610 - 1 645.5 MHz	(for countries mentioned in No. **730**)
1 646.5 - 1 660 MHz	(for countries mentioned in No. **730**)
1 675 - 1 690 MHz	(for Region 2)
1 690 - 1 700 MHz	(for countries of Region 2 mentioned in No. **740**)

1 700 - 1 710 MHz	(for Region 2)
1 970 - 1 980 MHz	(for Region 2)
1 980 - 2 010 MHz	
2 025 - 2 110 MHz	
2 200 - 2 290 MHz	
2 655 - 2 670 MHz[1]	(for Region 2 and 3)
2 670 - 2 690 MHz	
5 725 - 5 755 MHz[1]	(for countries of Region 1 mentioned in Nos. **803** and **805**)
5 755 - 5 850 MHz[1]	(for countries of Region 1 mentioned in Nos. **803**, **805** and **807**)
5 850 - 7 075 MHz	
7 900 - 8 400 MHz	

ADD **2509A** WARC-92 Trans-horizon systems in the 1 700 - 1 710 MHz, 1 970 - 2 010 MHz, 2 025 - 2 110 MHz and 2 200 - 2 290 MHz bands may exceed the limits given in Nos. **2505** and **2507**, but the provisions of Nos. **2502** and **2506** should be observed. Considering the difficult sharing conditions with other services and keeping in mind the provisions of Recommendation **100 (WARC-79)**, administrations are urged to keep the number of trans-horizon systems in these bands to a minimum.

MOD **2511** WARC-92 (7) The limits given in Nos. **2505** and **2508** apply in the following frequency bands allocated to the fixed-satellite service or

the inter-satellite service for reception by space stations, where these bands are shared with equal rights with the fixed or mobile service:

17.7 - 18.4 GHz

24.45 - 24.75 GHz

24.75 - 25.25 GHz (for Region 3)

25.25 - 29.5 GHz

SUP **2511.2**
WARC-92

ARTICLE 28

Space Radiocommunication Services Sharing Frequency Bands with Terrestrial Radiocommunication Services Above 1 GHz

NOC **Section I. Choice of Sites and Frequencies**

NOC **2539**

NOC **Section II. Power Limits**

NOC **2540**
to
2548A

NOC

Section III. Minimum Angle of Elevation

NOC **2549 to 2551**

NOC

Section IV. Limits of Power Flux-Density from Space Stations

NOC **2552 to 2555**

NOC **2556** WARC-92 (2) Power flux-density limits between 1 525 MHz and 2 300 MHz.

NOC **2557**

MOD **2558** WARC-92 *b)* The limits give in No. **2557** apply in the frequency bands listed in No. **2559** which are allocated to the following space radiocommunication services:

- meteorological-satellite service (space-to-Earth);
- space research service (space-to-Earth) (space-to-space);
- space operation service (space-to-Earth) (space-to-space);
- earth exploration-satellite service (space-to-Earth) (space-to-space);

for transmission by space stations where these bands are shared with equal rights with the fixed or mobile service.

MOD **2559** WARC-92

1 525 - 1 530 MHz[1]	(for Regions 1 and 3)
1 670 - 1 690 MHz	
1 690 - 1 700 MHz	(on the territory of the countries mentioned in Nos. **740** and **741**)
1 700 - 1 710 MHz	
2 025 - 2 110 MHz	
2 200 - 2 300 MHz	

MOD **2561** WARC-92 (3) Power flux-density limits between 2 500 MHz and 2 690 MHz.

MOD **2562** WARC-92 *a)* The power flux-density at the Earth's surface produced by emissions from a space station in the broadcasting-satellite service, the fixed-satellite service, or the radiodetermination-satellite service for all conditions and for all methods of modulation shall not exceed the following values:

-152 dB(W/m^2) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-152 + 0.75(\delta - 5)$ dB(W/m^2) in any 4 kHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane;

-137 dB(W/m^2) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux-density which would be obtained under assumed free-space propagation conditions.

MOD **2563** WARC-92 *b)* The limits given in No. **2562** apply in the frequency band 2 500 - 2 690 MHz which is shared by the fixed-satellite service with the fixed or mobile service, in the frequency band 2 520 - 2 670 MHz which is shared by the broadcasting-satellite service with the fixed or mobile service; and in the frequency band 2 500 - 2 516.5 MHz (in the countries mentioned in No. **754A**) allocated to the radiodetermination-satellite service.

MOD **2564** WARC-92 *c)* The power flux-density values given in No. **2562** are derived on the basis of protecting the fixed service using line-of-sight techniques. Where a fixed service using tropospheric scatter operates in the bands mentioned in No. **2563**, and where there is insufficient frequency separation, there must be sufficient angular separation between the direction to the space station and the direction of maximum radiation of the antenna of the receiving station of the fixed service using tropospheric scatter to ensure that the interference power at the receiver input of the station of the fixed service does not exceed –168 dBW in any 4 kHz band.

MOD **2577** WARC-92 (7) Power flux-density limits between 17.7 GHz and 27.5 GHz.

NOC **2578**

MOD **2579** WARC-92 *b)* The limits given in No. **2578** apply in the frequency bands listed in No. **2580** which are allocated to the following space radiocommunication services:

- fixed-satellite service (space-to-Earth);
- earth exploration-satellite including meteorological-satellite service (space-to-Earth);
- inter-satellite service,

for transmission by space stations where this band is shared with equal rights with the fixed or mobile service.

MOD **2580** WARC-92

17.7 - 19.7 GHz[1]

22.55 - 23.55 GHz

24.45 - 24.75 GHz

25.25 - 27.5 GHz

NOC **2581**

NOC **2582**

NOC **2583**

MOD **2584** WARC-92

31.0 - 31.3 GHz

34.7 - 35.2 GHz (for space-to-Earth transmissions under No. **896** on the territory of countries mentioned in No. **894**)

37.0 - 40.5 GHz

NOC **2585**

ARTICLE 29

MOD **2613** WARC-92 § 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 resulting in unacceptable interference[1] to geostationary-satellite space systems in the fixed-satellite service operating in accordance with these Regulations.

ADD **2613A** **WARC-92** Whenever the emissions from geostationary satellites in the inter-satellite service are directed towards space stations at distances from Earth greater than that of the geostationary-satellite orbit, the boresight of the antenna mainbeam of the geostationary satellite shall not be pointed within 15° of any point on the geostationary-satellite orbit.

ARTICLE 55

NOC **Mob-87**

Certificates for Personnel of Ship Stations and Ship Earth Stations

NOC* **3860** **Mob-87** **to** **3978**

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* *Note by the General Secretariat:* No. **3873** is modified in the French text only.

ARTICLE 56

NOC Mob-87

Personnel of Stations in the Maritime Mobile and the Maritime Mobile-Satellite Service

NOC Mob-87

Sections I. and II.

NOC Mob-87

Section III. Class and Minimum Number of Personnel for Ship Stations and Ship Earth Stations Using the Frequencies and Techniques Prescribed in Chapter N IX and for Public Correspondence

NOC **3987**
Mob-87

NOC **3988**
Mob-87

MOD **3989**
WARC-92

§ 6. 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 **N IX** shall, with respect to the provisions of Article **55**, include at least:

MOD **3990**
WARC-92

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;

SUP **3991**
WARC-92

MOD **3992** WARC-92

b) for stations on board ships which sail 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.

MOD **3993** WARC-92

§ 7. 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 **N IX** shall be adequately qualified and certificated in accordance with the administration's requirements.

NOC **3994 to 4011**

NOT allocated.

ARTICLE 69

Entry into Force of the Radio Regulations

MOD **5187** WARC-92

§ 1. These Regulations, which are annexed to the International Telecommunication Convention, shall enter into force on 1 January 1982, except as specified in Nos. **5188**, **5189**, **5193**, **5194**, **5195**, **5196** and **5197**.

NOC **5188 to 5194**

MOD **5195** **WARC-92** (2) The use of the frequency bands 12 230 - 12 330 kHz, 16 360 - 16 460 kHz, 17 360 - 17 410 kHz, 18 780 - 18 900 kHz, 19 680 - 19 800 kHz, 22 720 - 22 855 kHz, 25 110 - 25 210 kHz et 26 100 - 26 175 kHz by the maritime mobile service commenced on 1 July 1991 at 0001 hours UTC under the conditions specified in Resolution **325 (Mob-87)**.

NOC **5196** **Orb-88**

NOC **5196.1** **Orb-88**

ADD **5197** **WARC-92** § 10. The partial revision of the Radio Regulations contained in the Final Acts of WARC-92 shall enter into force on 12 October 1993 at 0001 hours UTC.

MOD

APPENDIX 26
(Rev. WARC-92)

Provisions and Associated Frequency Allotment Plan for the Aeronautical Mobile (OR) Service in the Bands Allocated Exclusively to that Service Between 3 025 kHz and 18 030 kHz

(see Article **50** of the Radio Regulations)

PART I: General Provisions, Definitions

26/1 The provisions of this Appendix shall apply to the aeronautical mobile (OR) service in the following frequency bands:

3 025 - 3 155 kHz

3 900 - 3 950 kHz (Region 1 only)

4 700 - 4 750 kHz

5 680 - 5 730 kHz

6 685 - 6 765 kHz

8 965 - 9 040 kHz

11 175 - 11 275 kHz

13 200 - 13 260 kHz

15 010 - 15 100 kHz

17 970 - 18 030 kHz

26/2 For the purpose of this Appendix, the terms used comprise the following:

26/2.1 *Frequency Allotment Plan*

The Plan for the aeronautical mobile (OR) service contained in Part III of this Appendix.

26/2.2 *Allotment in the aeronautical mobile (OR) service*

A frequency allotment in the aeronautical mobile (OR) service which comprises:

- a frequency channel from the channels appearing in the channelling arrangement in No. 26/3;
- a bandwidth of up to 2.8 kHz, situated wholly within the frequency channel concerned;
- a power within the limits laid down in No. 26/4.4 and/or specified against the allotted frequency channel;
- an allotment area which is the area in which the aeronautical station can be situated and which coincides with all or part of the territory of the country, or of the geographical area, as indicated against the frequency channel concerned in the Frequency Allotment Plan.

PART II: Technical Bases Used for the Establishment of the Frequency Allotment Plan for the Aeronautical Mobile (OR) Service in the Bands Allocated Exclusively to that Service Between 3 025 kHz and 18 030 kHz

26/3 *Channelling arrangement*

26/3.1 The channelling arrangement for the frequencies to be used by aeronautical stations in the aeronautical mobile (OR) service in the bands allocated exclusively to that service between 3 025 kHz and 18 030 kHz is indicated in Table 1.

26/3.2 The frequencies indicated in No. 26/3.1 are the carrier (reference) frequencies.

TABLE 1

Frequency band 3 025 - 3 155 kHz: 43 + 1 channels

3 023[1]	3 026	3 029	3 032	3 035	3 038	3 041	3 044	3 047	3 050
3 053	3 056	3 059	3 062	3 065	3 068	3 071	3 074	3 077	3 080
3 083	3 086	3 089	3 092	3 095	3 098	3 101	3 104	3 107	3 110
3 113	3 116	3 119	3 122	3 125	3 128	3 131	3 134	3 137	3 140
3 143	3 146	3 149	3 152						

Frequency band 3 900 - 3 950 kHz (Région 1 only): 16 channels

3 900	3 903	3 906	3 909	3 912	3 915	3 918	3 921	3 924	3 927
3 930	3 933	3 936	3 939	3 942	3 945				

Frequency band 4 700 - 4 750 kHz: 16 channels

4 700	4 703	4 706	4 709	4 712	4 715	4 718	4 721	4 724	4 727
4 730	4 733	4 736	4 739	4 742	4 745				

Frequency band 5 680 - 5 730 kHz: 15 + 1 channels

5 680[1]	5 684	5 687	5 690	5 693	5 696	5 699	5 702	5 705	5 708
5 711	5 714	5 717	5 720	5 723	5 726				

Frequency band 6 685 - 6 765 kHz: 26 channels

6 685	6 688	6 691	6 694	6 697	6 700	6 703	6 706	6 709	6 712
6 715	6 718	6 721	6 724	6 727	6 730	6 733	6 736	6 739	6 742
6 745	6 748	6 751	6 754	6 757	6 760				

Frequency band 8 965 - 9 040 kHz: 25 channels

8 965	8 968	8 971	8 974	8 977	8 980	8 983	8 986	8 989	8 992
8 995	8 998	9 001	9 004	9 007	9 010	9 013	9 016	9 019	9 022
9 025	9 028	9 031	9 034	9 037					

Frequency band 11 175 - 11 275 kHz: 33 channels

11 175	11 178	11 181	11 184	11 187	11 190	11 193	11 196	11 199	11 202
11 205	11 208	11 211	11 214	11 217	11 220	11 223	11 226	11 229	11 232
11 235	11 238	11 241	11 244	11 247	11 250	11 253	11 256	11 259	11 262
11 265	11 268	11 271							

Frequency band 13 200 - 13 260 kHz: 20 channels

13 200	13 203	13 206	13 209	13 212	13 215	13 218	13 221	13 224	13 227
13 230	13 233	13 236	13 239	13 242	13 245	13 248	13 251	13 254	13 257

Frequency band 15 010 - 15 100 kHz: 30 channels

15 010	15 013	15 016	15 019	15 022	15 025	15 028	15 031	15 034	15 037
15 040	15 043	15 046	15 049	15 052	15 055	15 058	15 061	15 064	15 067
15 070	15 073	15 076	15 079	15 082	15 085	15 088	15 091	15 094	15 097

Frequency band 17 970 - 18 030 kHz: 20 channels

17 970	17 973	17 976	17 979	17 982	17 985	17 988	17 991	17 994	17 997
18 000	18 003	18 006	18 009	18 012	18 015	18 018	18 021	18 024	18 027

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[1] For use of the carrier (reference) frequencies 3 023 kHz and 5 680 kHz, see No. 26/3.4.

26/3.3 With the exception of the carrier (reference) frequencies 3 023 kHz and 5 680 kHz (see 26/3.4 below), one or more frequencies from Table 1 may be assigned to any aeronautical station and/or aircraft station, in accordance with the Frequency Allotment Plan, as contained in Part III of this Appendix.

26/3.4 The carrier (reference) frequencies 3 023 kHz and 5 680 kHz are intended for worldwide common use (see also Appendix **27 Aer2**, Nos. 27/208 to 27/214).

26/3.5 The aeronautical radiotelephone stations shall use only single-sideband emissions (J3E). The upper sideband shall be employed, and the assigned frequency (see No. **142** of the Radio Regulations) shall be 1 400 Hz higher than the carrier (reference) frequency.

26/3.6 The channelling arrangement specified in No. 26/3.1 does not prejudice the rights of Administrations to establish, and to notify assignments to stations in the aeronautical mobile (OR) service other than those using radiotelephony, provided that:

- the occupied bandwidth does not exceed 2 800 Hz and is situated wholly within one frequency channel (see also Resolution **411 (WARC-92)**);

- the limits of unwanted emission are met (see Appendix **27 Aer2**, No. 27/66C).

26/4 *Classes of emission and power*

26/4.1 In the aeronautical mobile (OR) service, in the bands governed by this Appendix, the use of the emissions listed below is permissible; additionally, the use of other emissions is also permissible, subject to compliance with No. 26/3.6.

26/4.2 *Telephony*

- J3E (single-sideband, suppressed carrier).

26/4.3 *Telegraphy (including automatic data transmission)*

- A1A, A1B, F1B;
- (A,H)2(A,B);
- (R,J)2(A,B,D);
- J(7,9)(B,D,X).

26/4.4 Unless otherwise specified in Part II of this Appendix, the following transmitter power limits (i.e., power supplied to the antenna), shall be applied:

Class of emission	Power limit values (peak envelope power supplied to the antenna)	
	Aeronautical station	Aircraft station
J3E	36 dBW (PX)	23 dBW (PX)
A1A, A1B	30 dBW (PX)	17 dBW (PX)
F1B	30 dBW (PX)	17 dBW (PX)
A2A. A2B	32 dBW (PX)	19 dBW (PX)
H2A, H2B	33 dBW (PX)	20 dBW (PX)
(R,J)2(A,B,D)	36 dBW (PX)	23 dBW (PX)
J(7,9)(B,D,X)	36 dBW (PX)	23 dBW (PX)

26/4.5 On the assumption that no antenna gain is involved, the transmitter powers specified in No. 26/4.4 above will result in a mean effective radiated power of 1 kW (for the aeronautical stations) and 50 W (for the aircraft stations), used as the basis for the establishment of the Plan contained in Part II of this Appendix.

PART III: Arrangement for the Allotment of Frequencies for the Aeronautical Mobile (OR) Service in the Exclusive Bands Between 3 025 kHz and 18 030 kHz

(to be developed by the IFRB in accordance with Resolution **410 (WARC-92)**)

PART IV: Criteria for Compatibility Assessment

26/6 For assessment of the possibilities of sharing between the allotments contained in Part III of this Appendix, and any new assignment which is not covered by an appropriate allotment, the following criteria shall be used:

26/6.1 A new station, not covered by an allotment, which uses the standardized transmission characteristics (J3E, 36 dBW PX) shall be considered compatible with the Plan, if it fulfils the criterion of being separated from any point of any allotment area, indicated in the Plan on the given channel, by the repetition half-distance, determined for the given conditions of operation (frequency band used, geographical position of the station, direction of propagation), which are given below:

Frequency band (kHz)	Repetition half-distance (in km)			
	Northern hemisphere		Southern hemisphere	
	North-South	East-West	North-South	East-West
3 025 - 3 155	550	600	550	600
3 900 - 3 950	650	650	650	650
4 700 - 4 750	725	775	725	775
5 680 - 5 730	1 175	1 325	1 150	1 300
6 685 - 6 765	1 350	1 600	1 225	1 425
8 965 - 9 040	2 525	3 525	2 225	3 075
11 175 - 11 275	3 375	5 575	2 675	3 925
13 200 - 13 260	4 550	6 650	3 475	5 625
15 010 - 15 100	5 050	7 450	4 800	7 100
17 970 - 18 030	5 750	8 250	5 675	7 475

26/6.2 The relevant value of the repetition half-distance for paths which are situated partly in the northern hemisphere and partly in the southern hemisphere shall be corrected using the linear interpolation procedure. This procedure shall be used to calculate the correction due to the azimuth of the propagation path with respect to true North.

26/6.3 The relevant value of the repetition half-distance, obtained in accordance with No. 26/6.2, shall be corrected, where necessary, to take into account the difference in the radiated power of the assignment with respect to the reference radiated power (30 dBW, mean radiated power) on the basis that a variation of 1 dB in the radiated power corresponds to a variation of 4% in the repetition distance.

PART V: Procedure for Modification and Maintenance of Part III

26/7 Part III will be updated by the Board in accordance with the following procedure:

26/7.1 *a)* when a country which has no allotment in Part III requests an allotment, the Board shall select an appropriate allotment on a priority basis and shall enter it in Part III;

26/7.2 *b)* when a request is submitted for an additional allotment, the Board shall apply the criteria of Part IV, and, where appropriate, enter the corresponding allotment in Part III;

26/7.3 *c)* when an administration informs the Board that it renounces the use of an allotment, the Board shall cancel the allotment concerned from Part III.

26/8 The Board shall maintain an up-to-date master copy of Part III, and shall periodically, but no less frequently than once a year, prepare recapitulative documents listing all amendments made to Part III.

26/9 The Secretary-General shall publish an up-to-date version of Part III in an appropriate form at least once every four years.

MOD

APPENDIX 30A
(Rev. WARC-92)

ARTICLE 7

MOD

Procedures for the Coordination, Notification and Recording in the Master International Frequency Register of Frequency Assignments to Stations in the Fixed-Satellite Service (Space-to-Earth) in Regions 1 and 3 in the Band 17.7 - 18.1 GHz and in Region 2 in the Band 17.7 - 17.8 GHz, and to Stations in the Broadcasting-Satellite Service in Region 2 in the Band 17.3 - 17.8 GHz When Frequency Assignments to Feeder Links for Broadcasting-Satellite Stations Appearing in the Regions 1 and 3 Plan or the Region 2 Plan are Involved

MOD 7.1 The provisions of Articles **11** and **13** and Appendix **29** of the Radio Regulations are applicable to transmitting space stations in the fixed-satellite service in the band 17.7 - 18.1 GHz, and the provisions of Resolution **33 (WARC-79)** of the Radio Regulations are applicable to space stations in the broadcasting-satellite service in Region 2 in the band 17.3 - 17.8 GHz together with the provisions of Annex 4 to this Appendix, except that, in relation to feeder-link stations, the relevant criteria mentioned in Appendix **29** to the Radio Regulations are replaced by those given in Section 1 of Annex 4 to this Appendix.

ANNEX 4

Criteria for Sharing Between Services

IOD 1. Threshold values for determining when coordination is required between transmitting space stations in the fixed-satellite service or the broadcasting-satellite service and a receiving space station in the feeder-link Plans in the frequency bands 17.3 - 18.1 GHz (Regions 1 and 3) and 17.3 - 17.8 GHz (Region 2).

With respect to paragraph 7.1, Article **7** of this Appendix, coordination of a transmitting space station in the fixed-satellite service or in the broadcasting-satellite service with a receiving space station in a broadcasting-satellite feeder link in the Regions 1 and 3 Plan or the Region 2 Plan is required, for inter-satellite geocentric angular separations of less than 3° or greater than 150°, when the power flux-density arriving at the receiving space station of a broadcasting-satellite feeder-link station of another administration would cause an increase in the noise temperature of the feeder-link space station which exceeds a threshold value of $\Delta T_s/T_s$ corresponding to 4%. $\Delta T_s/T_s$ is calculated in accordance with Case II of the method given in Appendix 29.

The above provision does not apply when the geocentric angular separation between a transmitting space station in the fixed-satellite service or in the broadcasting-satellite service and a receiving space station in the feeder-link Plan exceeds 150° of arc and the free-space power flux-density of the transmitting space station in the fixed-satellite service does not exceed a value of –137 dB(W/m^2/MHz) on the Earth's surface at the equatorial Earth limb.

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FINAL PROTOCOL*

At the time of signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the undersigned delegates take note of the following statements made by signatory delegations:

No. 1

Original: English

For the United Arab Emirates:

1. Further to the reservations expressed by the Delegation of the United Arab Emirates concerning frequency of operation about 50 MHz of wind profiler radar, notably at first and second reading (Document 210-E, Recommendation **621 (WARC-92)** "considering e)") such reservation being minuted (3.2) in the fifth Plenary Meeting (Document 224-E);

2. the United Arab Emirates hereby declares that it maintains its reservation and objects to the operation of such wind profiler radar at any frequency in the vicinity of 50 MHz.

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* *Note by the General Secretariat:* The texts of the Final Protocol are shown in the chronological order of their deposit. In the Table of Contents these texts are grouped in the alphabetical order of country names.

No. 2

Original: English

For Malaysia:

In signing these Final Acts, the Delegation of Malaysia hereby:

1. reserves for its Government the right to take such action as it may deem necessary to safeguard its interests should certain Members fail in any way to comply with the requirements of these Final Acts, or should the reservations by other Members jeopardize its telecommunication service;

2. declares that the signature, and possible subsequent ratification by the Government of Malaysia of the said Final Acts, is not valid with respect to the Member appearing under the name of Israel, and in no way implies its recognition.

No. 3

Original: English

For Papua New Guinea:

In signing the Final Acts of the ITU World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), and in the light of declarations and reservations deposited, the Delegation of Papua New Guinea is obliged to reserve for its Government the right to take such action as it may consider necessary to safeguard its interests should any Member fail to observe the provisions adopted by the Conference and in so doing cause harmful interference to radiocommunications systems under the jurisdiction of the Government of Papua New Guinea.

No. 4

Original: French

For the Republic of Guinea:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Republic of Guinea reserves for its Government the right to take such action as it may deem necessary to safeguard its interests should other Members of the Union fail to comply with the provisions of the Final Acts of this Conference or its Annexes, or should reservations entered by another Member country jeopardize the normal operation of its telecommunication services.

No. 5

Original: French

For the Gabonese Republic:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Gabonese Republic reserves for its Government the right:

1. to take such action as it may deem necessary to safeguard its interests should other Members fail to comply in any way whatever with the decisions taken by this Conference, or should reservations entered by any other Members be such as to jeopardize the operation of its telecommunication services;

2. to accept or reject the consequences of decisions which might directly jeopardize its sovereignty, in particular any relating to the increased use of the mobile-satellite service in the bands between 1 - 3 GHz.

No. 6

Original: French

For the Republic of Senegal:

In signing these Final Acts subject to ratification by its Government, the Delegation of the Republic of Senegal declares that its country reserves the right to take such action as it may deem necessary to safeguard its interests should other Members fail to comply with the provisions of these Final Acts or should reservations entered by other Members jeopardize the operation of its telecommunication services.

No. 7

Original: French

For the Republic of Cape Verde:

The Republic of Cape Verde reserves the right to take such action as it may deem necessary to safeguard its interests should other Members fail to comply with the provisions of these Final Acts or should reservations entered by other Members jeopardize the operation of its telecommunication services.

No. 8

Original: English

For the Republic of Kenya:

The Delegation of the Republic of Kenya herewith declares on behalf of its Government and in accordance with the powers conferred on it:

1. that it reserves the right of its Government to take any action it may consider necessary to safeguard and protect its interests should any Member fail to comply as required with the provisions contained in the Final Acts and the Annexes thereto as adopted by this Conference;

2. that the Government of the Republic of Kenya does not accept responsibility for consequences arising out of the reservations made by Members of the Union.

No. 9

Original: French

For the Republic of Mali:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Republic of Mali reserves for its Government the right to take any action it may consider necessary to protect its interests if:

a) reservations and declarations made by other administrations should jeopardize the efficient operation of its telecommunication installations;

b) other Members should fail in any way to comply with the provisions of the Convention and the Radio Regulations.

No. 10

Original: French

For the Kingdom of Morocco:

The Delegation of the Kingdom of Morocco reserves for its Administration the right to take any action it considers necessary to protect its interests if Members of the Union should fail in any way whatever to comply with the provisions of the Radio Regulations, or if reservations made by other Members should jeopardize the efficient operation of its radiocommunication services.

No. 11

Original: English

For the Republic of Uganda:

The Delegation of the Republic of Uganda to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), declares that its Administration reserves the right to take such action it may consider necessary to protect its interests in the case where a Member of the Union fails to comply with the provisions of the Radio Regulations as modified by this Conference or makes reservations that jeopardize the operations of its radiocommunication services.

No. 12

Original: French

For the Republic of Côte d'Ivoire:

In signing the Final Acts of the Conference, the Delegation of the Republic of Côte d'Ivoire reserves for its Government the right:

a) to take any action it considers necessary to safeguard its interests if Members fail in any way to comply with the provisions of the Final Acts of the Conference;

b) to refuse the consequences of any reservations formulated by other governments which jeopardize the harmonious operation of its radiocommunication services;

c) further to refuse any provisions contrary to the Constitution and Convention of the International Telecommunication Union which directly or indirectly affect the sovereign right of the Republic of Côte d'Ivoire to regulate its own telecommunications.

No. 13

Original: English

For the Republic of Zimbabwe:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Republic of Zimbabwe states the intention of its Administration to comply with the provisions of the Final Acts of the

Conference without prejudice to the Republic of Zimbabwe's sovereign right to take any measures that the Government deems necessary to safeguard and protect its telecommunication and other services in the event of harmful interference caused to the said services by any Member of the Union failing to comply with the provisions of the Radio Regulations as revised by this Conference, particularly new allocations made by this Conference on the condition of causing no harmful interference to existing services.

No. 14

Original: English

For Brunei Darussalam:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of Brunei Darussalam reserves for its Government the right to take any action that it deems necessary to safeguard its interests should any Member fail in any way to comply with the provisions of the Final Acts of the aforesaid Conference or its Annexes or the Protocol attached thereto or should any reservation by other Members which might have adverse effect to the interest of Brunei Darussalam or jeopardize the operation of its telecommunication services.

No. 15

Original: English

For the Republic of Zambia:

In accordance with the powers conferred upon it, the Delegation of the Republic of Zambia wishes to declare as follows:

that in signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation reserves the right of its Government to take any action it may consider necessary to safeguard its interests should any Member fail to comply with the provisions of this Conference.

No. 16

Original: French

For the Central African Republic:

The Delegation of the Central African Republic reserves for its Administration the right to take any action it may consider necessary to safeguard its interests, should certain Members of the Union fail to observe the provisions of the current Radio Regulations or should reservations entered by other Members jeopardize the operation of its radiocommunication services.

No. 17

Original: English

For the Sultanate of Oman:

The Delegation of the Sultanate of Oman to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), declares that its Administration reserves the right to take such action it may consider necessary to protect its interests in cases where a Member of the Union fails to comply with the provisions of the Radio Regulations as modified by this Conference or make reservations that jeopardize the operation of its radiocommunication services.

No. 18

Original: English

For the Republic of Yemen:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Republic of Yemen to this Conference, on behalf of its Government, reserves the right to take any action it deems necessary to safeguard its interests should they be affected or should any Member fail to comply with the provisions of the Convention or its Annexes, or should reservations by any other country jeopardize its telecommunication services.

No. 19

Original: English

For the Kingdom of Swaziland:

The Delegation of the Kingdom of Swaziland reserves the right of its Government to take any action it deems necessary to safeguard its interests in the event of Members failing in any way to comply with the provisions of the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), or should reservations by other countries jeopardize its telecommunication services.

No. 20

Original: French/
English/
Spanish

For Belgium, Denmark, the Federal Republic of Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, the Kingdom of the Netherlands, Portugal and the United Kingdom of Great Britain and Northern Ireland:

The Delegations of the Member States of the European Community declare that the Member States of the European Community will apply the partial revision of the Radio Regulations adopted at this Conference in accordance with their obligations under the Treaty establishing the European Economic Community.

No. 21

Original: French

For the Republic of Burundi:

The Delegation of the Republic of Burundi reserves for its Government the right to take any action it may consider necessary to protect its interests should certain Members fail in any way whatever to observe the provisions of the Radio Regulations and the Final Acts of this Conference.

No. 22

Original: English

For the Socialist People's Libyan Arab Jamahiriya:

The Socialist People's Libyan Arab Jamahiriya reserves its rights to accept or refuse to accept the consequences of any reservation made by other countries.

It also reserves its right to take any measures it deems necessary to safeguard its interests and telecommunication services should any Member fail in any way to observe the provisions of the International Telecommunication Convention or of its related Regulations.

No. 23

Original: English

For the Kingdom of Saudi Arabia:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Kingdom of Saudi Arabia to this Conference reserves its Government's right to take any measures it considers necessary to safeguard its interests should any other country fail in any way to observe the provisions laid down in the Final Acts, or should the reservations made by any other country jeopardize the radio services of the Kingdom of Saudi Arabia.

No. 24

Original: English

For the Syrian Arab Republic:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Syrian Arab Republic reserves for its Government the right to take any action it may deem necessary to safeguard its existing and planned fixed and mobile systems operating in the band 137 MHz - 3 GHz according to the Radio Regulations from interference caused by mobile-satellite services and in particular those using non-geostationary satellites, and not to accept any claim made in order to protect the above-mentioned services unless mutual agreement is set before.

No. 25

Original: English

For the Hashemite Kingdom of Jordan:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Hashemite Kingdom of Jordan reserves for its Government the right to take any action it may deem necessary to safeguard its existing and planned fixed and mobile systems operating in the band 137 MHz to 3 GHz according to the Radio Regulations from interference caused by mobile-satellite services and in particular those using non-geostationary-satellites, and not to accept any claim made in order to protect the above-mentioned services unless mutual agreement is set before.

No. 26

Original: French

For the Vatican City State:

The Delegation of the Vatican City State to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), reserves for its Administration the right to take such measures as may be necessary to meet the needs of its broadcasting service.

No. 27

Original: French

For Tunisia:

The Delegation of Tunisia reserves for its Government the right to take any action it considers necessary to protect its interests should Members of the Union fail, in any way whatever, to comply with the provisions of the Radio Regulations or should reservations by other Members jeopardize the efficient operation of its radiocommunication services.

No. 28

Original: French

For the Republic of Niger:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Republic of Niger reserves for its Government the right to take any action it considers necessary to safeguard its interests should any decisions taken at the Conference affect them or should any other country or administration fail in any way to comply with the provisions of the Final Acts or enter reservations that might affect or jeopardize the proper operation of its telecommunication services or the full exercise of its sovereign rights.

No. 29

Original: French

For the Democratic Republic of Madagascar:

The Delegation of the Democratic Republic of Madagascar reserves for its Government the right to take any action it considers necessary to safeguard its interests should Members of the Union fail in any way to comply with the provisions of the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992) or should reservations entered by other countries jeopardize the proper operation of its own telecommunication services.

No. 30

Original: French

For the Togolese Republic:

In signing the Final Acts for the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Togolese delegation reserves for its Government the right to take any action it considers necessary for safeguarding its interests should any Member like his country fail in any way to comply with the provisions, Resolutions or Recommendations contained in the Final Acts of the Conference or should reservations entered by other countries jeopardize the proper operation of its telecommunication services.

No. 31

Original: English

For the Republic of Malta:

The Delegation of the Republic of Malta to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), reserves for its Government the right to take such action as it considers necessary to safeguard its interests should any Member fail in any way to abide by the provisions of the Final Acts of the Conference.

No. 32

Original: French

For the Republic of Benin:

The Delegation of the Republic of Benin to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992) recognizes the important conclusions reached in its work. Nevertheless, it reserves for its Government the right to take any action it considers necessary to protect its interests should the interpretation and application by certain Members of the Union of the relevant decisions and provisions emerging from the Conference jeopardize Benin's radiocommunication services.

No. 33

Original: French

For Burkina Faso:

The Delegation of Burkina Faso declares that its Government reserves the right to take any action it considers necessary in accordance with its national legislation and international law to protect its interests should Members fail in any way whatever to comply with the provisions of the Final Acts of the Conference or should reservations by Members jeopardize the efficient operation of Burkina Faso's telecommunication services.

No. 34

Original: English

For the Islamic Republic of Iran:

IN THE NAME OF GOD

The Delegation of the Islamic Republic of Iran reserves for its Government the right to take any action as it may consider necessary to safeguard its interests should they be affected by decisions taken at this Conference, or by failure on the part of any other country or administration in any way to comply with the requirements of the International Telecommunication Convention (Nairobi, 1982) or its Annexes or the Protocols or the Regulations attached thereto, or these Final Acts, or should reservations or declarations by other countries or administrations jeopardize the proper and efficient operation of its telecommunication services, or infringe the full exercise of the sovereign rights of the Islamic Republic of Iran.

No. 35

Original: English

For Thailand:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of Thailand reserves the right of its Government to take any action that it deems necessary to safeguard its interests should any Member or Members of the International Telecommunication Union fail, in any way, to comply with the Final Acts of this Conference and the Annexes thereto, or should any of the declarations by other Members jeopardize its telecommunication services or threaten its national sovereignty.

No. 36

Original: English

For the Islamic Republic of Pakistan:

1. The Delegation of the Islamic Republic of Pakistan reserves its Administration's right to take effective steps to protect its interests if any administration operates any satellite, broadcasting and telecommunication services in violation of the Radio Regulations in force or of the decisions taken by the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain

Parts of the Spectrum (Malaga-Torremolinos, 1992). It further reserves the right of its Administration to take steps if reservations or declarations made by any other country or administration jeopardize the proper and efficient operation of its satellite, broadcasting and telecommunication services/systems.

2. The Administration of Pakistan cannot undertake to accept any transmission to or infringement of its territory by any means of radio transmissions of any other administration and reserves its right to take such steps as necessary should this happen.

3. The Delegation of the Islamic Republic of Pakistan declares that the decisions of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992) regarding areas falling within the territory of the disputed States of Jammu and Kashmir are without prejudice to the position recognized by the relevant Resolutions of the United Nations on the question.

No. 37

Original: French

For the Republic of Chad:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Republic of Chad reserves for its Government the right to take any action it considers necessary to protect its interests should another country or administration fail in any way whatever to comply with the provisions of the Final Acts of this Conference or should reservations by other Members jeopardize the efficient operation of its telecommunication services.

No. 38

Original: French

For the Republic of the Congo:

The Delegation of the Republic of the Congo to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992) reserves for its Government the right:

1. to accede to all or part of the provisions contained in the Final Acts of WARC-92 and in the Annexes to those Acts;

2. to take any measures it may consider necessary and consistent with the protection of its national interests.

No. 39

Original: English

For the United Arab Emirates:

1. In accordance with the International Telecommunication Convention (Nairobi, 1982) item **582**, the United Arab Emirates reserve its position for the time being regarding the following bands:

i) allocation for BSS (Sound) around the 1.5 GHz frequency band;

ii) allocation for MSS within the 2.4835 - 2.5 GHz frequency band,

and should any administration implement any of the above allocations, the power flux-density at the surface of the Earth from space stations shall not exceed values mentioned in Radio Regulation No. **2566** and subsequent revision, unless otherwise agreed by us with affected administrations.

2. The United Arab Emirates also reserves its position regarding the implementation dates for the change of present allocations at the above-mentioned bands.

No. 40

Original: English

For the United Republic of Tanzania:

The Delegation of the United Republic of Tanzania signed the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), on the understanding that all Parties to the Agreement will abide with all issues agreed at the Conference including all Resolutions, Recommendations and the revised parts of the Radio Regulations; in particular, regarding the following:

- that all administrations operating equipment/systems in the HF frequency bands below 30 MHz and in the 1 GHz to 3 GHz bands shall use frequencies which are in accordance with the agreed plan, or plans to be made in the future, and that operation of such equipment/systems shall not cause interference to equipment/systems installed within Tanzania's borders;

- that administrations operating terrestrial radiocommunication systems, geostationary-satellite systems, non-geostationary-satellite systems, LEO satellite systems and broadcasting-satellite (sound) systems in the agreed frequency bands shall ensure that their frequencies will not

cause interference to equipment/systems installed within Tanzania's borders. Tanzania expects to join other States in the Region to have a regional satellite system. Therefore, Tanzania expects that some of the agreed BSS frequency bands, the other satellite frequency bands and appropriate space locations will be available for the regional satellite project;

– that Tanzania will continue to broadcast on double-sideband (DSB) up to the agreed date of 2015. Subject to availability of cheap SSB receivers, Tanzania will replace its DSB transmitters with SSB transmitters in 2015.

In the event that some Members will not execute the Final Acts of WARC-92, the Tanzanian Government will take necessary measures to ensure proper operation of its equipment/systems within its borders and realization of their regional satellite project.

No. 41

Original: French

For the Republic of Cameroon:

The Delegation of the Republic of Cameroon to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), in signing the Final Acts of the Conference, declares that it is the practice of the Government of its country to fulfill all commitments entered into on its behalf.

Nevertheless, the Republic of Cameroon reserves the right to take any appropriate action should the failure of certain countries to comply with the decisions of the Conference interfere with the efficient operation of its radiocommunication network.

No. 42

Original: English

For the Republic of Hungary:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum, (Malaga-Torremolinos, 1992), the Delegation of the Republic of Hungary reserves the right for its Government to take such action as it may consider necessary to safeguard its

interest should any Member States of the Union fail in any way to observe or comply with the provisions of these Final Acts or should reservations by other countries jeopardize the proper operation of its radiocommunication services.

No. 43

Original: Spanish

For the Republic of Colombia:

In the absence of specific international rules governing the operation, running and licensing of telecommunication services provided by low orbit-satellite systems, the Colombian State reserves the sovereign right to regulate the legal, technical and economic conditions governing the system of classification, licensing, operation, running and interconnection throughout the national territory, including its island territories, in accordance with its internal legal system.

The Colombian State will apply ITU Recommendations in charging for traffic from or into the national territory via such media, on the basis of an equitable distribution of the accounting rate among connecting administrations.

No. 44

Original: English

For the State of Qatar:

In accordance with the ITU Convention, Nairobi 1982, No. **582**, the State of Qatar reserves its position for the time being regarding the following bands:

i) allocation for BSS (Sound) around the frequency 1.5 GHz;

ii) allocation for MSS within the band 2.4835 - 2.5 GHz.

and should any administration implement any of the above allocations, the power flux-density at the surface of the Earth from space stations shall not exceed values mentioned in RR **2566** and subsequent revisions, unless otherwise agreed by the State of Qatar.

We also reserve our position regarding the implementation dates.

No. 45

Original: English

For the People's Democratic Republic of Algeria, the Kingdom of Saudi Arabia, the State of Bahrain, the United Arab Emirates, the Hashemite Kingdom of Jordan, the State of Kuwait, the Socialist People's Libyan Arab Jamahiriya, the Islamic Republic of Mauritania, the Kingdom of Morocco, the Sultanate of Oman, the Islamic Republic of Iran, the Islamic Republic of Pakistan, the State of Qatar, the Syrian Arab Republic, Tunisia, the Republic of Yemen:

The above-mentioned Delegations to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), declare that the signature and possible ratification of their respective Governments of the Final Acts of the Conference, are not valid with respect to the Zionist-Entity appearing in the International Telecommunication Constitution and Convention (Nice, 1989) under the name of the so-called "Israel" and in no way whatsoever imply its recognition.

No. 46

Original: Spanish

For Ecuador:

In signing the Final Acts, the Delegation of Ecuador reserves for its Government the right to take whatever measures it considers necessary should Ecuador's telecommunication services suffer interference from stations or be jeopardized in any way by any action of other countries.

Similarly, until the International Telecommunication Union establishes the technical and operational rules for low-orbit satellite systems in pursuance of Resolution **70 (WARC-92)** of this Conference, it reserves the right to allow the operation of these systems in its territory under such conditions as it considers appropriate and expedient. In charging for such traffic it will apply ITU Recommendations on the basis of an equitable distribution of the accounting rate among connecting administrations.

No. 47

Original: English

For the Federal Republic of Nigeria:

The Delegation of the Federal Republic of Nigeria to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), reserves the right for the

Government of the Federal Republic of Nigeria to take any action considered necessary to safeguard its interest in the event of action(s) taken by any other administration(s) in the application of the Articles of the Radio Regulations which is/are deemed detrimental to the sovereign rights of the Nigerian nation. Furthermore, the provisions of the Final Acts and Protocols of this Conference should under no circumstances be applied by any administration(s) in any way to endanger the telecommunication services of the Federal Republic of Nigeria.

No. 48

Original: French

For the People's Democratic Republic of Algeria:

The Delegation of the People's Democratic Republic of Algeria to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992) reserves for its Government the right:

1. to take any action it may deem necessary to safeguard its interests in the event that certain Members should fail, in whatever manner, to comply with the provisions of these Final Acts, or that the reservations expressed by other countries should compromise the efficient operation of its telecommunication services or entail an increase in its contribution to the expenditure of the Union;

2. to take any measures in conformity with the Constitution and laws of the People's Democratic Republic of Algeria.

No. 49

Original: English

For Austria, Belgium, Finland, Greece, Republic of Hungary, Iceland, Republic of Malta, Republic of Poland, the United Kingdom, Sweden, Czech and Slovak Federal Republic:

The Delegations of the above-mentioned countries note that the inadequacy of the spectrum allocated to high frequency broadcasting has been proved by the unacceptable results of the HFBC Planning System, improved and tested in accordance with the decisions of the WARC HFBC-87.

The Delegations are concerned that the additional spectrum for high frequency broadcasting, made available by the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), will be insufficient to lead to a successful planning

conference and declare that their Administrations reserve the right to take such action as may be necessary, consistent with the Radio Regulations, to meet the needs of their high-frequency broadcasting services.

No. 50

Original: English

For the Republic of Singapore:

The Delegation of the Republic of Singapore reserves on behalf of its Government the right to take such action as it may consider necessary to safeguard its interest should any country fail in any way to comply with the requirements of the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992) or should any reservation by any country jeopardize its radiocommunication services.

The Delegation of the Republic of Singapore further reserves on behalf of its Government the right to make such additional reservations as may be necessary up to and including the time of ratification by the Republic of Singapore of the above-mentioned Final Acts.

No. 51

Original: Spanish

For Mexico:

On behalf of its Government, the Delegation of Mexico declares that, in signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos), it reserves the right to take the action it deems appropriate to safeguard its interests in the event that any prejudice may be caused to its telecommunication systems and services as a result of the declarations or reservations formulated by other Members of the Union, or that they fail to comply with the decisions of the Conference.

No. 52

Original: Spanish

For Cuba:

The Delegation of the Republic of Cuba to the World Administrative Radio Conference for Dealing with Frequency Allocation in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), in signing the Final Acts, reaffirms on behalf of its Government that this does not constitute a recognition of the use of radio frequencies by the Government of the United States of America at the naval base which it

occupies, against the will of the Cuban Government and people, in part of the territory of our country in the Province of Guantanamo, as already stated in Declaration No. 9 of the Final Protocol of WARC-79 (Geneva, 1979) and Declaration No. 44 of the Final Protocol of WARC Mob-87 (Geneva, 1987).

As is evident from the declaration made by the Cuban Delegation in this connection at the XIth Plenary Meeting of the Conference, the allotments bearing the symbol CUB which have not been coordinated with the Cuban Administration are to be deleted from Part III of Appendix **26(Rev.)**, which this Conference instructed the IFRB to conclude. Under Resolution No. **1** of the Radio Regulations, the IFRB must not enter in the Master Register any frequency which has not been requested by the Cuban Administration.

The use of frequencies by the United States of America at the base which it occupies in the Province of Guantanamo obstructs Cuba's radio services and encroaches upon our country's sovereignty over the radio frequency spectrum, which is a limited resource.

The Cuban Government reserves the right to take all the necessary steps to safeguard its legitimate interests.

No. 53

Original: Spanish

For the Argentine Republic:

The Delegation of the Argentine Republic reserves for its Government the right to take any action it may deem necessary to safeguard its interests, should any measure adopted by this Conference, reservation deposited on the failure by other countries to comply with this agreement jeopardize the efficient operation of its telecommunication services.

No. 54

Original: English

For the People's Republic of Bangladesh:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of Bangladesh declares that it reserves the right to take any necessary steps to protect its rights and interests should any country operate any telecommunications and broadcast services in violation of the decisions taken at the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Radio Regulations in force or the Convention.

No. 55

Original: English

For the People's Democratic Republic of Ethiopia:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of Ethiopia reserves the right of its Government to take any action that it may deem necessary to safeguard its interests should any country jeopardize the operation of the telecommunication network in Ethiopia due to reservations made or as a consequence of failure to comply with the Final Acts.

No. 56

Original: English

For the Republic of India:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Republic of India reserves for its Government the right to take such actions, as may be considered necessary, to safeguard its interests should any administration make reservations and/or not accept the provisions of the Final Acts or fail to comply with one or more provisions of the Final Acts, including those which form a part of the Radio Regulations.

No. 57

Original: English

For Turkey:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of Turkey reserves for its Government the right to take whatever action it may deem necessary to safeguard its interests on the decisions taken by the Conference in modifying, amending, deleting and adding provisions, footnotes, tables, Resolutions and Recommendations in the Radio Regulations, should any Member fail in any way to comply with the Final Acts, Annexes and the Radio Regulations thereto, in using its existing services and introducing new services for space, terrestrial and other applications or should any reservation entered by other countries jeopardize the proper operation of its telecommunication services.

Furthermore, regarding its statement made during the Conference, the Delegation of Turkey for its Government shall consider its responsibilities as binding only for the decisions of past regional broadcasting conferences on the basis of equal rights, within the provisions of the International Telecommunication Convention and the Radio Regulations.

No. 58

Original: English

For the Republic of Indonesia:

The Delegation of the Republic of Indonesia to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992):

1. reserves the right of its Government to take any action and preservation measures it deems necessary to safeguard its national interests should the Final Acts drawn up in this Conference directly or indirectly affect its sovereignty or be in contravention with the Constitution, Laws and Regulations of the Republic of Indonesia as well as with the rights of the Republic of Indonesia which exist and may result from any principles of international law. In this regard the Government of the Republic of Indonesia will recognize the legitimate interests of other countries with a view to improve the use made of the geostationary and/or non-geostationary-satellite orbit for telecommunication and broadcast services for the benefit of mankind;

2. further reserves the right of its Government to take any action and preservation measures it deems necessary to safeguard its national interests should any administration in any way fail to comply with the provisions and the requirements in the Final Acts of the Conference or should the consequences of reservations by any administration jeopardize the rights of the Republic of Indonesia under the Final Acts.

No. 59

Original: Russian

For the Russian Federation:

In connection with the additional allocation of the band 1 610 - 1 626.5 MHz to the mobile-satellite service, adopted by the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Russian Federation, in signing the Final Acts of the Conference, declares on behalf of its Government that:

According to No. **732**, the band 1 610 - 1 620.6 MHz is used by the operating and planned aeronautical radionavigation satellite system, GLONASS. Since this system is a safety system, and taking account of the fact that ICAO has recommended the GLONASS system for worldwide use, telecommunication administrations must take all measures to eliminate any possible interference in the GLONASS system.

With reference to No. **953** of the Radio Regulations, the Administration of the Russian Federation reserves the right to take any action to ensure the proper operation of the GLONASS system.

No. 60

Original: Russian

For Belarus, the Russian Federation and Ukraine:

The Delegations of Belarus, the Russian Federation and Ukraine make the following declaration:

Sovereign States, including Belarus, the Russian Federation and Ukraine have been established on the territory of the former USSR. These Delegations declare that, wherever it appears in the footnotes of the Radio Regulations, the designation USSR shall refer to Belarus, the Russian Federation and Ukraine.

Furthermore, in accordance with the mandate entrusted to the Delegation of the Russian Federation by the telecommunication Administrations of the Republic of Azerbaijan, the Republic of Armenia, the Republic of Kazakhstan, the Republic of Kyrgyzstan, the Republic of Tajikistan, the Republic of Uzbekistan and Turkmenistan, this designation applies likewise to the territories of these States.

No. 61

Original: English

For the Republic of Bulgaria:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Republic of Bulgaria reserves the right for its Government to take such actions as it may consider necessary to safeguard its national interests, if another country should in any way fail to respect the conditions specified in these Final Acts; or if the reservations made by any country should be prejudicial to the telecommunication services of the Republic of Bulgaria.

No. 62

Original: English

For the People's Republic of China:

Allocation by the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992) of certain frequency bands for the mobile-satellite service may affect the use by China of the existing services in these bands. Therefore, the Chinese Delegation declares that it reserves its right to continue the operation of the existing services in these bands without being affected by harmful interference.

No. 63

Original: English

For Canada:

The Delegation of Canada formally declares that Canada does not, by signature of these Final Acts on its behalf, accept certain decisions taken by this Conference in regard to the Table of Frequency Allocations and the associated footnotes and, therefore, Canada:

In view of the fact that the Conference had not provided the required flexibility by means of an allocation on a primary basis to the mobile-satellite service in the bands 1 545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz, states its intention to utilize these bands in the way most appropriate to satisfy its particular mobile-satellite service requirements recognizing the priority of the aeronautical mobile-satellite service communications.

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of Canada reserves for its Government the right to take any measures it might deem necessary to safeguard its interests if another country should in any way fail to respect the conditions specified in these Final Acts or if the reservations made by any country should be prejudicial to the radiocommunication services of Canada.

No. 64

Original: English

For the Federative Republic of Brazil:

The Delegation of the Federative Republic of Brazil formally declares that Brazil does not, in signing these Final Acts, accept certain decisions taken by this Conference in regard to the Table of Frequency Allocations and associated footnotes and, therefore, Brazil reserves the right to utilize the following frequency bands allocated to the mobile-satellite services in the way that is most appropriate to satisfy its particular mobile-satellite service requirements, recognizing the priority of AMSS (R) and maritime safety communication:

a) 1 492 - 1 559 MHz;

b) 1 626.5 - 1 660.5 MHz;

c) 1 675 - 1 710 MHz.

No. 65

Original: English

For the Federative Republic of Brazil:

The Delegation of the Federative Republic of Brazil formally declares that Brazil does not, in signing these Final Acts, accept certain decisions taken by this Conference in regard to the Table of Frequency Allocations and associated footnotes and, therefore, in view of the fact that the Conference has unduly restricted allocations to the broadcasting-satellite service (sound) in the frequency band 1 452 - 1 492 MHz, Brazil states its intention to utilize this band in the way that is most appropriate to satisfy its particular requirements of that service for the transmission of sound programmes and other technically compatible signals.

No. 66

Original: English

For the Socialist Federal Republic of Yugoslavia:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the Delegation of the Socialist Federal Republic of Yugoslavia reserves the right for its Government to take such actions as it may consider necessary to safeguard its interests should any station under the jurisdiction of other Member States of the Union jeopardize its existing radiocommunication services.

This is especially valid for:

- the frequency bands below 10 MHz allocated to the fixed and land mobile services;

- the frequency bands between 1 700 - 2 300 MHz allocated to the fixed service;

- the frequency band between 1 452 - 1 464.5 MHz allocated to the fixed service.

No. 67

Original: English

For the United States of America:

1. In the view of the United States of America, this Conference failed to make adequate provision for the HF needs of the broadcasting service, particularly below 10 MHz, despite an earnest effort to do so. The IFRB's Report to the Conference shows that broadcasters' requirements far outnumber the channels available in the bands between 6 and 11 MHz (where spectrum is urgently needed) and that planning will not work effectively without additional and adequate HF spectrum. Therefore, the United States of America reserves the right to take the necessary steps to meet the HF needs of its broadcasting service.

2. The United States of America, while welcoming the cessation by some administrations of willful harmful interference to HF broadcasting, remains concerned that the United States' broadcasting service continues to be subject to willful harmful interference in contravention of Article **35** of the Convention. Such interference is incompatible with the rational and equitable use of these bands. The United States of America declares that as long as any such interference exists, it reserves the right with respect to such interference to take necessary and appropriate actions to protect its broadcasting interests. In doing so, it will respect, to the maximum extent possible, the rights of administrations operating in accordance with the Convention and the Radio Regulations.

3. The United States of America declares that, in view of the fact that the Conference has unduly restricted allocations for mobile-satellite services in the bands 1 530 - 1 559 MHz and 1 631.5 - 1 660.5 MHz, it will utilize these bands in the way most appropriate to satisfy its particular mobile-satellite service requirements recognizing the priority of AMSS (R) and maritime safety communications.

4. In the view of the United States of America, this Conference has unduly delayed the availability of sufficient spectrum for the mobile-satellite service in the range 1 - 3 GHz on an international and regional basis. Therefore, the United States of America reserves its right to take any necessary steps to meet the needs of the mobile-satellite service in this band.

5. With regard to Resolution **46 (WARC-92)**, the United States of America understands that nothing in the fourth preambular paragraph and any reference to the Resolution in the Radio Regulations shall be interpreted to constitute any recognition of new rights of Members of the Union beyond those specified in the International Telecommunication Convention and the Administrative Regulations in force. In particular, sub-paragraph *b)* shall not be interpreted to constitute a recognition of claims of sovereignty over any part of outer space. Such claims, in violation of international law, cannot be recognized by this Conference.

6. The United States of America understands that nothing in Resolution **70 (WARC-92)** shall alter the category of any allocation made at this Conference and that any studies by organs of the Union on this matter shall be conducted and implemented in accordance with the International Telecommunication Convention and the Administrative Regulations.

No. 68

Original: English

For New Zealand:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the New Zealand Delegation reserves for its Government the right to take such measures as it might deem necessary to safeguard its interests if another country should in any way fail to respect the conditions specified in these Final Acts or if the reservations made by any country should be prejudicial or detrimental to radiocommunication services in New Zealand.

No. 69

Original: French

For France:

In signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), the French Delegation expresses reservations should the number and complexity of the texts adopted within a very limited time give rise to interpretations which are not in conformity with the final consensus of the Conference.

No. 70

Original: English

For the State of Israel:

1. The Declaration made by certain Delegations in No. 45 of the Final Acts being in flagrant contradiction with the principles and purposes of the International Telecommunication Union and, therefore, devoid of any legal validity, the Government of Israel wishes to put on record that it rejects these Declarations outright and will proceed on the assumption that they can have no validity with respect to the rights and duties of any Member State of the International Telecommunication Union.

Furthermore, in view of the fact that Israel and the Arab States are currently in the midst of negotiations aimed at achieving a peaceful solution of the Arab-Israeli conflict, the Delegation of the State of Israel finds these Declarations counter-productive and damaging to the cause of peace in the Middle East.

The Government of the State of Israel will, in so far as concerns the substance of the matter, adopt towards the Members whose Delegations have made the above-mentioned Declaration, an attitude of complete reciprocity.

The Delegation of the State of Israel further notes that Declaration No. 45 does not refer to the State of Israel by its full and correct name. As such it is totally inadmissible and must be repudiated as a violation of recognized rules of international behaviour.

2. Furthermore, after noting various other declarations already deposited, the Delegation of the State of Israel reserves for its Government the right to take any action it deems necessary to protect its interests and to safeguard the operation of its telecommunication services should they be affected by the decisions of this Conference or by the reservations made by other delegations.

No. 71

Original: English

For the Republic of India:

The Delegation of the Republic of India has the honour to refer to paragraph 3 of Declaration No. 36 (Document 389) made by the Delegation of the Islamic Republic of Pakistan. The Delegation of the Republic of India notes with regret this reference to the States of Jammu and Kashmir. The Delegation of India reiterates that the States of Jammu and Kashmir are an integral part of the sovereign Republic of India. The Delegation of the Republic of India, therefore, reserves the right for its Government to take appropriate measures to safeguard its interests as a result of any action on the part of the Islamic Republic of Pakistan, as a result of Declaration No. 36.

No. 72

Original: Spanish

For Cuba:

In noting Document 389 containing the statements of the Delegations signing the Final Acts, the Delegation of Cuba reserves the right to take any measures it considers appropriate to safeguard its communication services.

Specifically, having regard to section I of Statement No. 67, Cuba reserves the right to use the bands below 10 MHz in its own best interests should its services other than broadcasting in those bands be affected by the broadcasting services of the Administration in question.

No. 73

Original: English

For the Commonwealth of the Bahamas:

On behalf of its Government, the Delegation of the Commonwealth of the Bahamas declares that in signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), it reserves the right to take the action it deems appropriate to safeguard its interests in the event that any prejudice may be caused to its telecommunications systems and services as a result of the declarations or reservations formulated by other Members of the Union in Document 389 or that they fail to comply with the decisions of the Conference.

No. 74

Original: English

For Belize:

On behalf of the Government of Belize the Delegation of the Commonwealth of the Bahamas declares that in signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992) it reserves for the Government of Belize the right to take the action it deems appropriate to safeguard its interests in the event that any prejudice may be caused to its telecommunications systems and services as a result of the declarations or reservations formulated by other Members of the Union in Document 389 or that they fail to comply with the decisions of the Conference.

No. 75

Original: English

For the United Arab Emirates:

We refer to Declaration No. 39, and inform that the intent of paragraph 1, item 1(i) regarding allocation for BSS (Sound) was around the 1.5 GHz and 2.3 GHz frequency bands.

It may be noted in our reservation.

No. 76

Original: Spanish

For the Republics of Guatemala, Honduras and Nicaragua:

In light of the statements made by some Delegations to this Conference, the Delegations of the Republics of Guatemala, Honduras and Nicaragua, in signing the Final Acts of the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992), reserve for their Governments the right to take any measures they consider necessary to safeguard their interests, should any other country fail to comply with the provisions laid down in the Final Acts or should reservations entered by other countries jeopardize the proper operation of their country's telecommunication services.

No. 77

Original: Spanish

For the Republic of Panama:

The Delegation of Panama to the World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992) hereby reserves for its Government the right to take any measures it considers necessary to protect its telecommunication services and to safeguard its interests should any reservations by other Member countries in Document 389 jeopardize the proper operation of its own services and fail to comply with the decisions of the Conference.

No. 78

Original: English

For Portugal:

The Delegation of Portugal, taking note of Declaration No. 49 in Document 389, declares that it wishes to include the name of Portugal in the mentioned declaration.

No. 79

Original: English

For the United Kingdom of Great Britain and Northern Ireland and the United States of America:

Referring to statements relating to the frequency range below 3 GHz concerning mobile-satellite services, it is necessary to highlight an oversight in drafting and reading texts which could lead to a new and unnecessary burden of coordination between geostationary space stations and terrestrial services in certain frequency bands. Accordingly, the above Administrations will not accept any commitments for this form of coordination arising from omission of the term "non-geostationary" in the text of certain footnotes, e.g. Footnote Nos. 726x and 7xx, to the Table of Frequency Allocation in Article **8**. This reservation is made on behalf of all national and international organizations for whose frequency assignments the two countries are the notifying Administrations.

No. 80

Original: English

For the United States of America:

I

With reference to Statement No. 52 of the Administration of Cuba, the United States of America notes that the United States presence in Guantanamo is by virtue of a treaty in force; the United States reserves the right to meet its radiocommunication requirements there as it has in the past.

II

With reference to Statement No. 60 of Belarus, the Russian Federation, and Ukraine, the United States of America notes that the other former Republics of the former USSR referred to in that Statement are independent States, not Members of the Union at this time, whose rights and obligations cannot be asserted by the Members that filed that Statement.

No. 81

Original: English

For the Islamic Republic of Iran:

IN THE NAME OF GOD

With reference to the Declaration of Turkey in Document 389, and noting the implications of its last paragraph not consistent with the statement by the Delegation of Turkey in Committee 5 of this Conference, the Administration of the Islamic Republic of Iran is only obliged to the application of the modified RR **404** and opposes the implications of the said paragraph as far as the Islamic Republic of Iran is concerned.

(The signatures follow)

(The signatures following the Final Protocol are the same as those shown on pages 4 to 20)

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RESOLUTION No. 21 (WARC-92)

Implementation of Changes in Frequency Allocations Between 5 900 kHz and 19 020 kHz

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that parts of the frequency bands between 5 900 kHz and 19 020 kHz which were previously allocated on an exclusive or shared basis to the fixed and mobile services have been reallocated to the broadcasting service;

b) that some existing fixed and mobile assignments may need to be removed progressively from those reallocated bands to make way for the broadcasting service;

c) that the assignments to be removed, termed "displaced assignments", must be reaccommodated in other appropriate frequency bands;

d) that developing countries may require special assistance from the IFRB, as well as in application of Resolution **22 (WARC-92)**, in replacing their displaced assignments with appropriate protection;

e) that procedures already exist in Article **12** of the Radio Regulations that may be used to this effect;

recognizing

the difficulties that administrations and the IFRB might encounter during the period of transition from the previous allocations to those made by this Conference;

resolves

1. that the duration of the transition period shall be from 1 April 1992 to 1 April 2007;

2. that, as of 1 April 1992, administrations should no longer notify any frequency assignments to stations of the fixed and mobile services in the reallocated bands. Assignments notified in these bands after 1 April 1992 shall bear a symbol to indicate that the finding will be examined by the IFRB as of 1 April 2007 in accordance with the provisions of No. **1240** of the Radio Regulations;

3. that, as of 1 April 1992, the IFRB shall undertake a continuing action to review the Master International Frequency Register with the help of administrations. In this respect the IFRB shall periodically consult the administrations concerning the frequency assignments to links for which another satisfactory means of telecommunication exists, with a view to either downgrading assignments of class of operation A or deleting such assignments;

4. that administrations shall, for assignments of class of operation A in the reallocated bands, either notify the replacement frequencies to the IFRB or request the IFRB's assistance in selecting the replacement frequencies in application of No. **1218** of the Radio Regulations and Resolution **103 (WARC-79)**;

5. that the IFRB shall develop in due time a draft procedure to be used for the replacement of remaining frequency assignments and shall consult administrations in accordance with No. **1001.1** of the Radio Regulations;

6. that the IFRB should modify the draft procedures taking into account, to the extent practicable, comments received from administrations and propose replacement assignments at the latest three years before 1 April 2007. In so doing, the IFRB shall request administrations to take appropriate action to bring their assignments in conformity with the Table of Frequency Allocations by the due date;

7. that a replacement frequency assignment whose basic characteristics, with the exception of the assigned frequency, have not been modified in the above process, shall keep its original date. However, if these basic characteristics of a replacement frequency assignment are different from those of the displaced assignment, the replacement assignment shall be treated in accordance with Nos. **1376** to **1380** of the Radio Regulations;

invites administrations

when seeking reaccommodation of the displaced assignments for their fixed and mobile services in the bands between 5 900 kHz and 19 020 kHz which have been reallocated to the broadcasting service, to make every effort to find replacement assignments in the bands allocated to the fixed and mobile services concerned.

RESOLUTION No. 22 (WARC-92)

Assistance to the Developing Countries to Facilitate the Implementation of Changes in Frequency Band Allocations Which Necessitate the Transfer of Existing Assignments

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that major changes have been made in the Table of Frequency Allocations, extending bands allocated to some services and allocating bands to new services in order to facilitate the development of new technologies;

b) that these extensions of bands and new allocations require that existing frequency assignments to stations of the services in the reallocated bands be transferred;

c) that many of these assignments correspond to services which are vital to the telecommunication networks of many countries, particularly developing countries;

d) that the allocations referred to in *considering a)* cannot be used effectively until the process of transferring the existing assignments therein has been concluded;

e) that the transfer of these assignments will necessitate investments and in many cases a transfer of technology, which will require both resources and technical training;

recognizing

a) that, owing to the world economic situation, most developing countries still lack the resources needed for investment in various sectors of development;

b) that the Plenipotentiary Conference (Nice, 1989) established the Telecommunications Development Conferences and the Telecommunications Development Bureau (BDT) to discharge the Union's dual responsibility as a United Nations specialized agency and executing agency for implementing projects under the United Nations development system or other funding initiatives so as to facilitate and enhance telecommunications development by offering, organizing and coordinating technical cooperation and assistance activities;

resolves

1. to request the BDT, when formulating its immediate plans for assistance to the developing countries, to consider as a matter of priority the introduction of specific modifications in the radiocommunication networks of the developing countries, coordinating the necessary technical advisory activities with the IFRB and the CCIR;

2. that a future world development conference should, when defining the priorities of the BDT, consider the needs of developing countries and should assist them with the resources needed to implement the required modifications to their radiocommunication networks;

3. that the World Development Conference should give the BDT the necessary instructions and elements to enable it to provide technical assistance to the developing countries, and should monitor its activities in this respect;

requests the IFRB and the CCIR

to provide the BDT with their assistance in the implementation of this Resolution;

requests the Director of the BDT

to place this Resolution on the draft agenda of the next world development conference;

invites the Administrative Council

to ensure that this Resolution is placed on the agenda of the next world development conference.

RESOLUTION No. 46 (WARC-92)

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 Bands are Allocated[1]

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that in several different space radiocommunication services there is increasing interest in the use of space systems using non-geostationary-satellite networks;

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;

c) that the coordination methods for non-geostationary-satellite networks require specific criteria and calculation methods which are not yet available;

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 permanent procedure;

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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.

considering also

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;

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;

g) 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;

h) 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;

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;

recognizing

that the operation of telecommunication systems in the MSS bands must be in conformity with the International Telecommunication Convention and the Administrative Regulations in force, in particular their respective preambles and, in this respect:

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;

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;

resolves

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 this Resolution applies shall be regulated in accordance with the interim procedures and the associated provisions in the annex hereto;

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;

3. that the interim procedures annexed to this Resolution shall be applied from 4 March 1992;

invites

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;

2. all those administrations which acquire experience in the application of the annexed interim procedures to contribute to the studies of the CCIR;

instructs the IFRB

to apply these procedures and to provide the necessary assistance to administrations;

invites the CCIR

to study and develop Recommendations on the coordination methods, the necessary orbital data relating to non-geostationary-satellite systems, and the sharing criteria;

instructs the Secretary-General

to bring this Resolution, at an appropriate stage, to the attention of the Administrative Council with a view to the inclusion of this subject in the agenda of a future conference.

ANNEX TO RESOLUTION No. 46 (WARC-92)

Interim Procedures for the Coordination and Notification of Assignments of Non-Geostationary-Satellite Networks in Certain Space Services and the Other Services to Which the Bands are Allocated[1]

Section A. General Information

A.1 The assistance of the IFRB can be requested in the application of the provisions of this annex.

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 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 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.

A.3 When applying the provisions of this Resolution for non-geostationary-satellite networks, administrations should provide the following information in addition to that of Appendix **3** or Appendix **4**:

i) right ascension of the ascending node;

ii) argument of perigee;

iii) active service arc.

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[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 I. Procedures for the Advance Publication of Information on Planned Satellite Networks

Publication of Information

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 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**.

1.2 Amendments to the information sent in accordance with the provisions of paragraph 1.1 shall also be sent to the 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.

1.3 On receipt of the complete information sent under paragraphs 1.1 and 1.2, the 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 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.

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[1] See also No. **1550**.

Comments on Published Information

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**, send the administration concerned its comments on the particulars of the interference to its existing or planned satellite systems or to its existing or planned terrestrial stations. A copy of these comments shall also be sent to the 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.

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.

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.

Resolution of Difficulties

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.

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.

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.

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.

Results of Advance Publication

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 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 Board at intervals not exceeding six months prior to the commencement of coordination or the sending of the notices to the Board. The Board shall publish this information in the special section of its weekly circular.

1.7 When, upon expiry of a period of six years plus the extension provided for in No. **1550** 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**, as appropriate, the information published under paragraph 1.3 shall be cancelled after the administration concerned has been informed.

Commencement of Coordination or Notification Procedures

1.8 When communicating to the Board the information referred to in paragraph 1.1, an administration may, at the same time or at a later time, communicate:

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

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.

1.8C Such coordination or notification information, as the case may be, shall be considered as having been received by the Board not earlier than six months after the date of receipt of the information referred to in paragraph 1.1.

Section II. Coordination of Frequency Assignments to a Station of a Satellite Network

Requirement for Coordination

2.1 Before an administration (or one acting on behalf of one or more named administrations) notifies to the Board or brings into use any frequency assignment to a station of a non-geostationary-satellite network, it shall effect coordination of the assignment with any other administration whose assignment to a station in a geostationary-satellite network, or whose assignment to a station of a non-geostationary-satellite network or whose assignment to a terrestrial station might be affected.

2.2 Before an administration (or one acting on behalf of one or more named administrations) notifies to the 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 whose assignment to a station of a non-geostationary-satellite network might be affected.

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.

2.4 If a frequency assignment is brought into use before the commencement of the coordination procedure of paragraphs 2.1 or 2.2, when this coordination is required, the operation in advance of the receipt by the Board of the Appendix **3** information shall in no way afford any priority of the date.

2.5 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:

2.5.1 in conformity with No. **1503**, and

2.5.2 either recorded in the Master Register, or coordinated under the provisions of this Section or of Section II of Article **11**, or

2.5.3 included in the coordination procedure with effect from the date of receipt by the Board, in accordance with paragraph 2.6 or No. **1074** or **1074A** of Article **11**, of the relevant information as specified in Appendix **3**;

or, for terrestrial services, are:

2.5.4 recorded in the Master Register with a favourable finding with respect to No. **1240**, or

2.5.5 not notified but in use or planned to be brought into use within the next three years.

Coordination Data

2.6 The administration seeking coordination shall send to the Board the information listed in Appendix **3**.

2.7 On receipt of the complete information referred to in paragraph 2.6, the Board shall:

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;

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 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.

Examination of Coordination Data and Agreement Between Administrations

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 to the frequency assignments of its network or terrestrial stations, or caused by these assignments. 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 months from the date of the relevant weekly circular, notify the administration seeking coordination of its agreement. If, however, the administration with which coordination is sought

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[1] To help administrations identify services that may be affected, the 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.

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 the characteristics contained in Section C of Appendix **1** or Appendix **3** which have not previously been notified to the 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 Board.

2.8A Affected administrations, 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.

Results of Coordination

2.9 An administration which has initiated a coordination procedure under the provisions of paragraphs 2.1 to 2.6 shall communicate to the Board the names of the administrations with which agreement has been reached. The Board shall publish this information in the special section of its weekly circular.

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 Board any modifications to the published characteristics of their respective networks or stations that were required to reach agreement on the coordination. The 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.

Notification of Frequency Assignments in the Event of Continuing Disagreement

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 Board has been requested, defer the submission of its notice concerning the proposed assignment by eight 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 Board has been requested, the submission of the notice shall be deferred for a further three months.

Section III. Coordination of Frequency Assignments to Earth Stations of a Non-Geostationary-Satellite Network in Relation to Terrestrial Stations

Requirement for Coordination

3.1 Before an administration notifies to the 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]. 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.

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[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.

Coordination Data

3.2 For the purpose of effecting coordination, the administration requesting coordination shall send to each administration concerned under paragraph 3.1 all pertinent information concerning the proposed frequency assignment as listed in Appendix **3**, and an indication of the 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.

Acknowledgement of Receipt of Coordination Data

3.3 An administration with which coordination is sought under paragraph 3.1 shall immediately acknowledge receipt of the coordination data.

Examination of Coordination Data and Agreement Between Administrations

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:

3.4.1 interference which would affect the service rendered by its terrestrial radiocommunication stations operating in accordance with 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

3.4.2 interference which would be caused to reception at an earth station by the service rendered by its terrestrial radiocommunication stations operating in accordance with 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.

3.5 The administration with which coordination is sought shall, within four months from dispatch of the coordination data:

3.5.1 notify the administration requesting coordination of its agreement with a copy to the Board, indicating, where appropriate, the part of the allocated frequency band containing the coordinated frequency assignments; or

3.5.2 notify that administration of its disagreement.

3.6 In the case mentioned in paragraph 3.5.2, 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 which are or will be within the coordination area, together with all other relevant basic characteristics using Appendix **1** and make such suggestions as it may be able to offer with a view to a satisfactory solution of the problem.

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, a copy thereof shall also be sent to the Board.

Notification of Frequency Assignments in the Event of Continuing Disagreement

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 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 Board has been requested, the submission of the notice shall be deferred for a further three months.

Section IV. Coordination of Frequency Assignments to Terrestrial Stations for Transmission in Relation to Earth Stations of a Non-Geostationary-Satellite Network

Requirement for Coordination

4.1 Before an administration notifies to the Board, or brings into use any frequency assignment to a terrestrial station for transmission within the coordination area[1] 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:

4.1.1 which are in conformity with No. **1503**; and

4.1.2 for which coordination has been agreed under paragraph 3.5.1.

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[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.

Coordination Data

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.

Acknowledgement of Receipt of Coordination Data

4.3 An administration with which coordination is sought under paragraph 4.1 shall immediately acknowledge receipt of the coordination data.

Examination of Coordination Data and Agreement Between Administrations

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 paragraph 4.1, which are operating or are to be operated within the next three years.

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.

Notification of Frequency Assignments in the Event of Continuing Disagreement

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 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 Board has been requested, the submission of the notice shall be deferred for a further three months.

Section V. Notification of Frequency Assignments

Notification of Assignments to Space Stations and Earth Stations

5.1 An administration shall, for the purpose of notifying an assignment to the 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 Board shall:

5.1.1 in applying No. **1504**, also examine the notice with respect to its conformity with the provisions of paragraphs 2.1 or 2.2 relating to coordination of the use of the frequency assignment with the other administrations concerned;

5.1.2 in applying No. **1505**, also examine the notice with respect to its conformity with the provisions of paragraph 3.1 relating to coordination of the use of the frequency assignment with the other administrations concerned;

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;

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;

5.1.5 not apply Nos. **1515** and **1516**.

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.

Notification of Assignments to Terrestrial Stations

5.3 An administration shall, for the purpose of notifying an assignment to the Board, apply the provisions of Article **12**. When applying the provisions of Article **12** the 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.

RESOLUTION No. 70 (WARC-92)

Establishment of Standards for the Operation of Low-Orbit Satellite Systems

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that the radio-frequency spectrum is a limited natural resource, to which all ITU Members should have access on equitable conditions;

b) that the ITU is required to coordinate efforts to harmonize the development of telecommunication facilities, notably those using space techniques, with a view to taking the utmost advantage of their possibilities;

c) that one of the purposes of the ITU is to foster collaboration among its Members with a view to the establishment of rates at levels as low as possible consistent with an efficient service and with the independent and sound financial administration of telecommunications;

d) that, in the performance of its studies, each International Consultative Committee is required to pay due attention to the study of questions and to the formulation of recommendations directly connected with the establishment, development and improvement of telecommunications in developing countries at both the regional and international level;

e) that the Telecommunications Development Bureau is required to carry out studies, as necessary, on technical, economic, financial, managerial, regulatory and general policy issues in the field of telecommunications;

f) that Resolution **15** of the Plenipotentiary Conference (Nice, 1989), relating to the role of the ITU in the development of world telecommunications, establishes that the ITU should ensure that all its work reflects the position of the ITU as the authority responsible within the United Nations system for establishing in a timely manner technical and operational standards for all forms of telecommunication and for effecting the rational use of the radio-frequency spectrum;

g) that CCITT Recommendations provide for the apportionment of accounting revenues on international traffic between terminal countries, in principle on an equitable basis;

h) that CCITT and CCIR Recommendations provide technical bases for a signalling and operational interface between terrestrial and satellite radio systems and public telecommunication networks;

i) that the Radio Regulations provide for the coordination of frequency assignments utilized by mobile satellite networks and that the CCIR has been invited in Resolution **46 (WARC-92)** to study frequency sharing and coordination for the mobile-satellite service, with particular attention to low-orbit satellite systems;

recognizing

that current technological developments allow for the provision of telecommunication services through low-orbit satellite systems offering worldwide coverage, and that there are no standards governing the coordination, sharing and operation of such systems within the world telecommunication network;

bearing in mind

that only a very limited number of low-orbit satellite systems offering worldwide coverage could coexist in any given frequency band;

resolves

1. to invite the organs of the ITU within their fields of competence to carry out, as a matter of priority, technical, regulatory and operational studies to permit the establishment of standards governing the operation of low-orbit satellite systems so as to ensure equitable and standard conditions of access for all countries and to guarantee proper worldwide protection for existing services and systems in the telecommunication network;

2. to invite administrations interested in, or affected by, the introduction and operation of low-orbit satellite systems to participate in such work as the organs of the ITU may undertake in that connection.

RESOLUTION No. 93 (WARC-92)

Review of Certain Resolutions and Recommendations of the World Administrative Radio Conference (Geneva, 1979) (WARC-79); the World Administrative Radio Conference for the Mobile Services (Geneva, 1983) (Mob-83); the World Administrative Radio Conference for the Planning of the HF Bands Allocated to the Broadcasting Service (Geneva, 1987) (HFBC-87); the World Administrative Radio Conference for the Mobile Services (Geneva, 1987) (Mob-87), and the World Administrative Radio Conference on the Use of the Geostationary-Satellite Orbit and the Planning of Space Services Utilizing It (Second Session – Geneva, 1988) (Orb-88)

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

that owing to the action taken at this Conference and that resulting from decisions adopted at the above-mentioned Conferences, there is a need to review the existing Resolutions and Recommendations to ensure their appropriate consistency;

considering further

a) that the following Resolutions and Recommendations of the above-mentioned Conferences have been revised as indicated:

RESOLUTION No. 703 (Rev.WARC-92)

Calculation Methods and Interference Criteria Recommended by the CCIR for Sharing Frequency Bands Between Space Radiocommunication and Terrestrial Radiocommunication Services or Between Space Radiocommunication Services

RECOMMENDATION No. 66 (Rev.WARC-92)

Studies of the Maximum Permitted Levels of Spurious Emissions

b) that the following Resolutions and Recommendations of the above-mentioned Conferences either have been implemented or do not require any further action:

RESOLUTION No. 6 (WARC-79)

Relating to the Preparation of a Handbook to Explain and Illustrate the Procedures of the Radio Regulations

RESOLUTION No. 9 (WARC-79)

Relating to the Revision of Entries in the Master International Frequency Register in the Bands Allocated to the Fixed Service Between 3 000 kHz and 27 500 kHz

RESOLUTION No. 36 (WARC-79)

Relating to the Preparation of Explanatory Information by the International Frequency Registration Board on the Application of the New Method for Designating Emissions in Notification Procedures and the Consequential Revision of the Master International Frequency Register

RESOLUTION No. 62 (WARC-79)

Relating to the Experimental Use of Radio Waves by Ionospheric Research Satellites

RESOLUTION No. 64 (WARC-79)

Relating to CCIR Study of Lightning Protection of Radio Equipment

RESOLUTION No. 66 (WARC-79)

Relating to the Division of the World into Regions for the Purposes of Allocating Frequency Bands

RESOLUTION No. 67 (WARC-79)

Relating to Improvements in the Design and Use of Radio Equipment

RESOLUTION No. 68 (WARC-79)

Relating to the Redefinition of Certain Terms Contained in Annex 2 to the International Telecommunication Convention (Malaga-Torremolinos, 1973) and Applicable to the Radio Regulations

RESOLUTION No. 90 (Mob-83)

Relating to the Revision, Replacement and Abrogation of Resolutions and Recommendations of the World Administrative Radio Conference, Geneva, 1979

RESOLUTION No. 91 (HFBC-87)

Revision, Replacement and Abrogation of Resolutions and Recommendations of the World Administrative Radio Conference (Geneva, 1979)

RESOLUTION No. 92 (Orb-88)

Revision, Replacement and Cancellation of Resolutions of the World Administrative Radio Conference, Geneva, 1979, and the World Administrative Radio Conference on the Use of the Geostationary-Satellite Orbit and the Planning of Space Services Utilizing It (First Session – Geneva, 1985) (Orb-85)

RESOLUTION No. 108 (Orb-88)

Use of the Bands 4 500 - 4 800 MHz, 6 725 - 7 025 MHz, 10.70 - 10.95 GHz, 11.2 - 11.45 GHz and 12.75 - 13.25 GHz Prior to the Date of Entry into Force of Appendix 30B

RESOLUTION No. 324 (Mob-87)

Procedures to be Applied for the Coordination of the Use of the Frequency 518 kHz for the International NAVTEX System

RESOLUTION No. 337 (Mob-87)

Resolutions and Recommendations Which Remain in Effect Until the Provisions of the Radio Regulations as Partially Revised by WARC Mob-87 Take Effect

RESOLUTION No. 501 (WARC-79)

Relating to Examination by the IFRB of the Notices Referring to Stations in the Broadcasting Service in Region 2 in the Band 535 - 1 605 kHz During the Period Preceding the Entry into Force of the Final Acts of the Regional Administrative MF Broadcasting Conference (Region 2)

RESOLUTION No. 509 (WARC-79)

Relating to the Convening of a Regional Broadcasting Conference to Review and Revise the Provisions of the Final Acts of the African VHF/UHF Broadcasting Conference, Geneva, 1963

RESOLUTION No. 510 (WARC-79)

Relating to the Convening of a Planning Conference for Sound Broadcasting in the Band 87.5 - 108 MHz for Region 1 and Certain Countries Concerned in Region 3

RESOLUTION No. 520 (Orb-88)

Future Change in Article 8 for the Broadcasting-Satellite Service (Sound) In the Frequency Range 500 MHz to 3 000 MHz

RESOLUTION No. 521 (Orb-88)

Selection of a Frequency Band for Use by the Broadcasting-Satellite Service and Intended for Wide RF-Band High Definition Television, and of an Associated Frequency Band for HDTV Feeder Links, and the Adoption of Related Provisions by a Future Competent Conference

RESOLUTION No. 708 (Mob-87)

Criteria for Sharing between the Radiodetermination-Satellite Service and Terrestrial Services in the Bands 1 610 - 1 626.5 MHz, 2 483.5 - 2 500 MHz and 2 500 - 2 516.5 MHz

RESOLUTION No. 709 (Orb-88)

Coordination Between Feeder-Link Earth Stations and Stations of other Services in the Bands 14.5 - 14.8 GHz and 17.7 - 18.1 GHz in Regions 1 and 3

RECOMMENDATION No. 3 (WARC-79)

Relating to the Transmission of Electric Power by Radio Frequencies from a Spacecraft

RECOMMENDATION No. 12 (WARC-79)

Relating to the Convening of Future Administrative Radio Conferences to Deal with Specific Services

RECOMMENDATION No. 67 (WARC-79)

Relating to the Definitions of "Service Area" and "Coverage Area"

RECOMMENDATION No. 70 (WARC-79)

Relating to Studies of the Technical Characteristics of Equipment

RECOMMENDATION No. 101 (WARC-79)

Relating to Feeder Links for the Broadcasting-Satellite Service

RECOMMENDATION No. 102 (WARC-79)

Relating to the Study of Modulation Methods for Radio-Relay Systems in Relation to Sharing with Fixed-Satellite Service Systems

RECOMMENDATION No. 104 (Mob-87)

Provision of Frequency Bands for Feeder Links in the Fixed-Satellite Service for the Mobile-Satellite Service or for the Aeronautical, Land, or Maritime Mobile-Satellite Services in the Bands 1 530 - 1 559 MHz and 1 626.5 - 1 660.5 MHz

RECOMMENDATION No. 205 (Mob-87)

Future Public Land Mobile Telecommunication Systems

RECOMMENDATION No. 408 (Mob-87)

Development of a World-Wide System for Public Correspondence with Aircraft

RECOMMENDATION No. 504 (WARC-79)

Relating to the Preparation of a Broadcasting Plan in the Band 1 605 - 1 705 kHz in Region 2

RECOMMENDATION No. 511 (HFBC-87)

Possibility of Extending the Frequency Spectrum Allocated Exclusively to HF Broadcasting at a Future Competent World Administrative Radio Conference

RECOMMENDATION No. 602 (Rev.Mob-83)

Relating to the Planning of Frequencies in the Band 283.5 - 315 kHz Used by Maritime Radiobeacons in the European Maritime Area

RECOMMENDATION No. 708 (WARC-79)

Relating to Frequency Bands Shared Between Space Radiocommunication Services and Between Space and Terrestrial Radiocommunication Services

RECOMMENDATION No. 716 (Orb-88)

Use of Certain Frequency Bands Below 3 000 MHz by the Space Research and Space Operation Services

resolves

that the Resolutions and Recommendations of WARC-79, Mob-83, HFBC-87, Mob-87 and Orb-88 listed under

a) above shall apply as revised by this Conference and that those listed under

b) above shall be abrogated.

RESOLUTION No. 94 (WARC-92)

Review of Resolutions and Recommendations of the World Administrative Radio Conferences

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that this Conference has reviewed a number of Resolutions and Recommendations of the following Conferences: WARC-79, Mob-83, HFBC-87, Mob-87 and Orb-88;

b) the action taken under Resolution **93 (WARC-92)** adopted by this Conference;

further considering

the need to continue to review the Resolutions and Recommendations of the above Conferences and of this Conference;

invites the CCIR and the IFRB

and instructs the Secretary-General

to report to the future competent conferences referred to in *resolves* on the action taken in response to the relevant Resolutions and Recommendations;

resolves

that the Administrative Council should include in the agenda of future competent conferences the review of the relevant Resolutions and Recommendations with a view to their possible revision, replacement or abrogation.

RESOLUTION No. 112 (WARC-92)

Allocation of Frequencies to the Fixed-Satellite Service in the Band 13.75 - 14 GHz

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that this Conference has added an allocation to the fixed-satellite service in the band 13.75 - 14 GHz;

b) that this band is shared with the radiolocation and radionavigation services and certain limitations have been placed on the fixed-satellite, radiolocation and radionavigation services;

c) that the impact of the allocation to the fixed-satellite service on the space research service, the Earth exploration-satellite service and the standard frequency and time-signal satellite service needs to be studied;

d) the impact of the allocation to the fixed-satellite service on the use of the space research service and the Earth exploration-satellite service under the provisions of No. **713** of the Radio Regulations and the scientific and environmental value of the observations by active sensors;

recognizing

a) that stations in the space research service which underwent advance publication prior to 31 January 1992 shall operate on an equal basis with stations in the fixed-satellite service;

b) that provisions of No. **855B** of the Radio Regulations stipulate that until 1 January 2000, stations in the fixed-satellite service shall not cause harmful interference to non-geostationary space stations in the space research service and the Earth exploration-satellite service;

resolves to invite the CCIR

1. to conduct the necessary studies, prior to 31 January 1994, with respect to the values given in No. **855A** of the Radio Regulations relating to allocations in the band 13.75 - 14 GHz and to report the outcome at least one year before the next competent conference;

2. to conduct the necessary studies with regard to technical compatibility between the primary allocation to the fixed-satellite service (Earth-to-space) and the secondary allocations to the space research service and the Earth exploration-satellite service in the band 13.75 - 14 GHz;

also resolves

to invite administrations and organizations interested in these radiocommunication services having allocations in the band 13.75 - 14 GHz to participate in the work of the CCIR;

further resolves

to invite administrations concerned to establish bilateral coordination procedures for the introduction of new earth stations in the fixed-satellite service;

instructs the Secretary-General

to bring this Resolution to the attention of the Administrative Council and the next ordinary Plenipotentiary Conference with a view to placing the review of No. **855A** on the agenda of the next world administrative radio conference.

RESOLUTION No. 113 (WARC-92)

Adjustments to the Fixed Service as a Consequence of Changes to the Frequency Allocations Within the Range 1 - 3 GHz

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that the present Conference has allocated new frequency bands in the range 1 - 3 GHz for the mobile, mobile-satellite, broadcasting-satellite (sound) services and has identified spectrum for the future public land mobile telecommunication systems (FPLMTS);

b) that various frequency bands in the range 1 - 3 GHz are allocated to the fixed service on a primary basis;

c) that the fixed service in this range is extensively used and is likely to be used well into the future by many administrations;

d) that the terrestrial components of FPLMTS can share with the fixed service where there is adequate geographical or frequency separation (see CCIR Report to WARC-92);

e) that the fixed service has for many years satisfactorily shared the frequency bands 2 025 - 2 120 MHz and 2 200 - 2 290 MHz with the space research, space operation and Earth exploration-satellite services;

recognizing

that, although new techniques will make it possible to transfer some systems in the fixed service to higher frequency bands or to use other means of telecommunications, there are technical and economic factors that will require continued operation of systems in the range 1 - 3 GHz;

noting

that item 2.9.1 of the agenda of this Conference drew attention to the need to safeguard the interests of existing services that may be affected by changes to the Table of Frequency Allocations;

resolves

that, when administrations implement new services in the range 1 - 3 GHz, they should, to facilitate sharing, take full account of the continuing needs of the fixed service by the appropriate choice of geographical location, frequencies and timescales in coordination with the administrations whose services might be affected;

invites the CCIR

1. to continue its studies of the criteria for sharing between the fixed service and other services;

2. to prepare new radio frequency channelling arrangements, if necessary, for the fixed service in the relevant frequency bands;

urges administrations

to continue to participate actively in these studies and to make the necessary adjustments to the fixed service within the timetable adopted by this Conference for the implementation of the new frequency allocations and designations in the range 1 - 3 GHz.

RESOLUTION No. 211 (WARC-92)

Use by the Mobile Service of the Frequency Bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) the changes made by this Conference to the Table of Allocations to the space services in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz;

b) the existing co-primary allocation to the mobile service in Regions 2 and 3 and the changes in the allocations to the mobile service in Region 1;

c) the expected rapid growth of mobile systems in bands near 2 GHz;

d) that the CCIR Report on the Technical and Operational Bases for the World Administrative Radio Conference 1992 concluded that the introduction of Future Public Land Mobile Telecommunication Systems (FPLMTS) or conventional land mobile systems in the frequency bands used by the space services would cause unacceptable interference to the space services;

e) that in some countries the space services have successfully shared with low-density mobile electronic news gathering (ENG) and with aeronautical telemetry systems for many years;

f) that the introduction in Article **27** of suitable limits on the characteristics of mobile systems may be an adequate means of facilitating the expansion of mobile systems in these bands without harmful interference to the space services;

g) that the CCIR is currently studying sharing criteria and preliminary results are available;

noting

that these preliminary results indicate that low-density mobile systems (e.g., ENG) using either highly directive antennas (typically in excess of 24 dBi) or alternatively very low e.i.r.p. densities (typically below –12 dBW/MHz) can share with relevant space services in these bands;

resolves

1. to invite the CCIR to continue, as a matter of urgency, the study of appropriate provisions to protect the space services operating in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz from harmful interference from emissions by stations of the mobile service;

2. to recommend that administrations do not introduce high-density or conventional type land mobile systems in the 2 025 - 2 110 MHz and 2 200 - 2 290 MHz bands;

3. that administrations, when considering in the near future the introduction of mobile systems in the above bands, should permit only low-density mobile systems;

4. that until the CCIR develops appropriate Recommendations, the protection criteria for space services as given in CCIR Recommendation **609** (Space research), Recommendation **363** (Space operations) and Recommendation **514** (Earth exploration-satellite) be used as guidance;

5. that the next competent conference should consider reviewing Article **27** to define the conditions under which sharing between the mobile and the space services in these bands is possible;

invites the CCIR

1. to develop the appropriate provisions mentioned in *resolves* 1;

2. to report the results of its studies to the next competent conference;

instructs the Secretary-General

to bring this Resolution to the attention of the next Administrative Council with a view to including this subject in the agenda of the next competent conference.

RESOLUTION No. 212 (WARC-92)

Implementation of Future Public Land Mobile Telecommunication Systems (FPLMTS)

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that the CCIR has recommended the 1 - 3 GHz band as the most suitable for FPLMTS;

b) that the CCIR has recommended approximately 60 MHz for use by personal stations and approximately 170 MHz for use by mobile stations;

c) that the CCIR has recognized that space techniques are an integral part of FPLMTS;

d) that, in No. **746A** of the Radio Regulations, this Conference has identified bands to accommodate this future service;

considering further

e) that the CCIR has not completed its studies regarding duplexing methods, modulation techniques, channelling arrangements, signalling or communication protocols;

f) that no worldwide numbering plan currently exists that would facilitate worldwide roaming;

noting

a) that the initial implementation of the terrestrial components of FPLMTS is expected to commence by the year 2000;

b) that the implementation of the satellite component of FPLMTS in the bands 1 980 - 2 010 MHz and 2 170 - 2 200 MHz is expected to be necessary by the year 2010;

invites administrations

to give due consideration to the accommodation of other services currently operating in these bands when implementing FPLMTS;

invites the CCIR

to continue its studies with a view to developing suitable and acceptable technical characteristics for FPLMTS that will facilitate worldwide use and roaming, and ensure that FPLMTS can also meet the telecommunication needs of the developing countries and rural areas;

invites the CCITT

a) to complete its studies of signalling and communication protocols;

b) to develop a common worldwide numbering plan and associated network capabilities that will facilitate worldwide roaming;

resolves

that administrations which implement FPLMTS:

a) should make the necessary frequencies available for system development;

b) should use those frequencies when FPLMTS are implemented;

c) should use the relevant international technical characteristics, as identified by the Recommendations of the CCIR and CCITT.

RESOLUTION No. 213 (WARC-92)

Sharing Studies Concerning the Use of the Bands 1 492 - 1 525 MHz and 1 675 - 1 710 MHz in Region 2 by the Mobile-Satellite Service

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that agenda item 2.2.4 of this Conference requested the consideration, *inter alia*, of an allocation of frequency bands to the mobile-satellite service;

b) that spectrum adjacent to or near the existing mobile satellite allocations may offer opportunities for implementation;

c) that the band 1 490 - 1 525 MHz is used by the aeronautical mobile service in the countries listed in Footnote **723** and by other terrestrial services;

d) that the band 1 675 - 1 710 MHz is principally used by the meteorological-satellite and meteorological aids services;

e) that operational and technical means may be found that would allow sharing of the band 1 490 - 1 525 MHz between the services mentioned in *c)* above and the mobile-satellite service;

f) that operational and technical means may be found that would allow sharing of the band 1 675 - 1 710 MHz between the services mentioned in *d)* above and the mobile-satellite service;

g) that there is a need to determine the operational and technical means for preventing harmful interference to the services mentioned in *c)* and *d)* above;

resolves

1. that studies be undertaken by the CCIR to examine the operational and technical measures that would facilitate sharing;

2. that the World Meteorological Organization (WMO) be invited to participate in these sharing studies;

invites

1. the CCIR to study as a matter of urgency the technical and operational issues relating to the sharing of these bands between the services mentioned in *c)* and *d)* above and the mobile-satellite service;

2. administrations to participate actively in such studies by sending contributions to the CCIR relating to the aforementioned studies;

instructs the Secretary-General

to bring this Resolution to the notice of WMO.

RESOLUTION No. 338 (WARC-92)

Provisional Application of Article 56 to Ensure Harmonization with the International Convention for the Safety of Life at Sea (SOLAS) as Revised in 1988

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that provisions of Article **56** of the Radio Regulations were modified at the World Administrative Radio Conference for the Mobile Services (Geneva, 1987) (WARC Mob-87) and were supported by a majority of administrations but were not accepted by all administrations in regard to carriage of personnel certificated for maintenance of shipborne equipment for distress and safety communications;

b) that the 1988 Conference on the Global Maritime Distress and Safety System (GMDSS) of Contracting Governments to the 1974 SOLAS Convention adopted maintenance requirements to ensure equipment availability which were more flexible than those adopted by WARC Mob-87;

c) that the resulting inconsistency between the Radio Regulations and the SOLAS Convention relating to this matter of standards for maintenance and operation of shipborne GMDSS equipment has significant implications and should be reconciled;

d) that the 45th session of the Administrative Council, in accordance with Resolution **7** of the Plenipotentiary Conference (Nice, 1989), placed Articles **55** and **56** on the WARC-92 agenda in order to find an appropriate solution to this problem;

noting

that this Conference took appropriate decisions regarding Articles **55** and **56** to harmonize the provisions of the Radio Regulations with the SOLAS Convention;

recognizing

that administrations desiring to implement the GMDSS should be able to do so in compliance with the Radio Regulations and the SOLAS Convention;

resolves

that during the period preceding the date of entry into force of the partial revision of the Radio Regulations by WARC-92, administrations may apply Article **56**, as contained in the Final Acts of WARC-92, on a provisional basis;

instructs the Secretary-General

to communicate this Resolution to the International Maritime Organization (IMO).

RESOLUTION No. 410 (WARC-92)

Development of an Arrangement for the Allotment of Frequencies for the Aeronautical Mobile (OR) Service in the Exclusive Bands Between 3 025 kHz and 18 030 kHz

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that Resolution **9** of the Plenipotentiary Conference, (Nice, 1989) instructed the IFRB to undertake actions with a view to improving use by the aeronautical mobile (OR) service of the frequency bands governed by Appendix **26** to the Radio Regulations;

b) that the IFRB prepared, following consultation with administrations, a draft channelling arrangement;

c) that a revision of Article **12** and consequential amendments to Appendix **26** have been adopted by this Conference;

d) that the allotment arrangement submitted by the IFRB to this Conference will need to be further developed in accordance with this Resolution;

appreciating

the efforts made by the IFRB despite the limited resources available;

resolves

1. that the IFRB shall, in the development of Part III of Appendix **26(Rev.)**, immediately after the Conference, add to the allotment arrangement contained in its Report to the Conference and as modified during the Conference the following allotments:

a) one 3 kHz allotment, on the nearest possible channel within the same band, for each allotment contained in Appendix **26** (Part IV) which is not covered by an assignment in the Master Register;

b) one 3 kHz allotment, on the nearest possible channel within the same band, for each requirement submitted to the Conference or for which an assignment notice is received by the Board by 1 May 1992;

c) one 3 kHz allotment, on an appropriate channel in each band, for those administrations not having an allotment in the new allotment arrangement as a result of the above actions, except for those administrations which have explicitly stated that they do not require an allotment;

2. that the IFRB shall communicate the results of its above actions to administrations by 15 December 1992;

3. that in applying the above process, the IFRB shall endeavour to resolve any difficulties that may arise from the sharing of a channel by two or more allotments, in consultation with the administrations concerned;

4. that the IFRB shall distribute Part III of Appendix **26(Rev.)** to all administrations as soon as possible and in any case not later than 12 October 1993;

instructs the Secretary-General

to publish Part III of Appendix **26(Rev.)** after the IFRB has completed its tasks under *resolves* 1 to 4 above.

RESOLUTION No. 411 (WARC-92)

Implementation of the New Provisions Applicable in the Frequency Bands Allocated Exclusively to the Aeronautical Mobile (OR) Service Between 3 025 kHz and 18 030 kHz

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that the conditions for use of each of the frequency bands between 3 025 kHz and 18 030 kHz allocated exclusively to the aeronautical mobile (OR) service were modified by this Conference so as to enable a more efficient usage of the available frequency spectrum;

b) that the implementation of the modified conditions of use will entail a considerable workload for administrations, since a large number of frequency assignments to both aircraft and aeronautical stations will have to be transferred from existing frequencies to the new frequencies and channels designated by this Conference;

c) that the full implementation of the modified provisions for the frequency usage may require considerable investment for the replacement of the existing equipment;

d) that, nevertheless, the modified provisions for frequency usage should be implemented fully and as soon as possible so that the advantages of the new arrangement may be realized at the earliest opportunity;

e) that the changeover to the new conditions of operation should be effected with the least possible disruption to the service rendered by each station;

recognizing

a) that the implementation of the decisions made by the present Conference relating to the new arrangement of the frequency bands allocated exclusively to the aeronautical mobile (OR) service between 3 025 kHz and 18 030 kHz should follow an orderly procedure for the transfer of existing services from the old to the new conditions of operation;

b) that the procedures for the transfer of the existing frequency assignments in the aeronautical mobile (OR) service, in the bands allocated exclusively to that service between 3 025 kHz and 18 030 kHz, are specified in Resolution **412 (WARC-92)** adopted by this Conference;

resolves

1. that the provisions of Appendix **26(Rev.)**, as well as the relevant provisions of Article **12** of the Radio Regulations, as modified by this Conference, shall apply to any new frequency assignment, as from 0001 UTC on 12 October 1993;

2. that administrations shall take all the necessary measures to comply with the new conditions of use of the bands governed by Appendix **26(Rev.)** by not permitting the installation of new equipment whose emissions occupy a necessary bandwidth exceeding 2 800 Hz;

3. that, until 15 December 1995, administrations may continue to use their existing assignments in accordance with the characteristics recorded in the Master International Frequency Register. After that date administrations shall take all necessary measures to modify the characteristics of their assignments so as to ensure their conformity with the provisions of Appendix **26(Rev.)**;

4. that, not later than 15 December 1997, administrations shall discontinue all emissions whose bandwidth exceeds 2 800 Hz;

invites Administrations

to make every effort to eliminate incompatibilities which may occur in the transition period.

RESOLUTION No. 412 (WARC-92)

Transfer of Frequency Assignments of Aeronautical Stations Operating in the Frequency Bands Allocated Exclusively to the Aeronautical Mobile (OR) Service Between 3 025 kHz and 18 030 kHz

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that the conditions for use of each of the frequency bands between 3 025 kHz and 18 030 kHz allocated exclusively to the aeronautical mobile (OR) service were modified by this Conference so as to enable a more efficient usage of the frequency spectrum available;

b) that administrations will need to change the frequencies of their aeronautical and aircraft stations to bring them into conformity with the new Frequency Allotment Plan, as contained in Appendix **26(Rev.)**, and to notify such transfers, where appropriate, to the Board;

resolves

1. that, at an appropriate date, the Board shall send each Administration a list of assignments to stations of the aeronautical mobile (OR) service entered on its behalf in the Master Register in the bands allocated exclusively to that service between 3 025 kHz and 18 030 kHz;

2. that, in the above list, the Board shall indicate, for each frequency assignment, a replacement frequency(-ies) which fulfil(s) the provisions of Appendix **26(Rev.)** and which is(are) intended to replace the frequency of the assignment concerned;

3. that, after receipt of the above list, administrations shall take all the necessary measures to modify the characteristics of their assignments, so as to bring them into conformity with the provisions of Appendix **26(Rev.)**, as early as possible and in any event, not later than 15 December 1997; any modification which has been implemented shall be notified to the Board in accordance with No. **1214** of the Radio Regulations;

4. that the frequency assignments notified by administrations under paragraph 3 above shall be examined by the Board under the relevant provisions of Sub-Section IIC and Section III of Article **12** of the Radio Regulations, as modified by this Conference;

5. that the assignments existing in the Master Register on 15 December 1997 which are not in conformity with the provisions of Appendix **26(Rev.)** shall be treated as follows:

5.1 within 60 days from 15 December 1997, the Board shall send relevant extracts of the Master Register to the administrations concerned advising them that, under this Resolution, the assignments in question are to be modified, within a period of 90 days, so as to meet the provisions of Appendix **26(Rev.)**;

5.2 if an administration fails to notify the Board of the modifications within the prescribed period, the original entry will be retained in the Master Register for information only, without a date in Column 2, without a finding in Column 13A and with a suitable remark in the Remarks column. The administration will be advised of this action.

RESOLUTION No. 522 (WARC-92)

Further Work by the CCIR Concerning the Broadcasting-Satellite Service (Sound)

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that this Conference has made frequency allocations for the broadcasting-satellite service (sound) (BSS (sound)) down links and the complementary terrestrial service in the bands specified in Article **8**, with an interim procedure to govern the introduction of this service;

b) that further technical development is necessary for the introduction of BSS (sound);

c) that BSS (sound) systems could employ satellites in the geostationary-satellite orbit (GSO) or in non-geostationary-satellite orbits (non-GSO);

d) that the most urgent guidance required will relate to the means to be employed for coordinating and avoiding mutual harmful interference between non-GSO systems, between GSO and non-GSO systems of the broadcasting-satellite service (sound), and between BSS (sound) systems and the systems of other services;

noting

the provisions of No. **2674** of the Radio Regulations;

resolves

1. that the CCIR should study this subject as a matter of urgency;

2. that CCIR studies should focus in particular on:

i) the characteristics of GSO and non-GSO BSS (sound) systems compatible with No. **2674** of the Radio Regulations,

ii) the appropriate sharing criteria;

3. to invite administrations and the IFRB to participate in the work of the CCIR on this subject;

4. to invite administrations which introduce BSS (sound) systems to publish reports on their experience of such systems;

invites the Administrative Council

to take account of the urgent need for regulatory provisions including measures to ensure frequency sharing between the BSS (sound) and other services in the same frequency bands, and to place this matter on the agenda of the next competent administrative radio conference,

instructs the Secretary-General

to bring this Resolution to the notice of the Administrative Council.

RESOLUTION No. 523 (WARC-92)

Convening of a World Administrative Radio Conference for the Planning of HF Bands Allocated to the Broadcasting Service

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that this Conference has made new allocations to the HF broadcasting service;

b) that the use of the new bands allocated, contained in No. **521B** of the Radio Regulations, will be governed by planning procedures to be established by a competent world administrative radio conference (WARC);

c) that the use of these bands is limited to single-sideband transmissions;

d) the decision by the ITU Administrative Council at its 46th session not to convene in 1993 the HFBC Conference scheduled under Resolution **1** of the Plenipotentiary Conference (Nice, 1989);

e) that the Administrative Council's decision was based on an IFRB report stressing the difficulties encountered by administrations and the IFRB in implementing the improved HFBC planning system adopted by WARC HFBC-87;

noting

that the Administrative Council's decision was not accompanied by any guarantee that the planning conference would be held in the short or medium term;

resolves

1. that administrations are required to abide strictly by the provisions of No. **531** of the Radio Regulations adopted by WARC HFBC-87 and by those adopted by this Conference (Nos. **521C**, **528A**, **529B** and **534A** of the Radio Regulations);

2. that administrations will not bring broadcasting stations into service in the bands referred to in the above-mentioned footnotes until the planning process has been completed, in conformity with those footnotes;

resolves further

that a WARC shall be convened as soon as possible to undertake the planning process;

recommends

that the next Plenipotentiary Conference should take the necessary steps to include the convening of that planning conference in the schedule of future ITU conferences;

instructs the IFRB

to make a comprehensive report to the next competent WARC on the planning trials undertaken since WARC HFBC-84 and, on the basis of the experience acquired, to propose a flexible, simplified planning method, which could be used for the subsequent development of a planning system;

instructs the Secretary-General

to bring this Resolution to the attention of the Administrative Council.

RESOLUTION No. 524 (WARC-92)

Future Consideration of the Plans for the Broadcasting-Satellite Service in the Band 11.7 - 12.5 GHz (Region 1) and the Band 11.7 - 12.2 GHz (Region 3) in Appendix 30 and the Associated Feeder-Link Plans in Appendix 30A

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that Article **14** of Appendix **30** indicates that the broadcasting-satellite service Plan for Regions 1 and 3 in Appendix **30** meets requirements until January 1994;

b) that WARC Orb-88 in Resolution **521**, *resolves* 3, stated that "while the Plans for the 11.7 - 12.7 GHz band can already be used for certain types of high definition television, studies should be continued on the long range future suitability of these bands for HDTV without prejudice to the existing plans in this band";

c) that modernization of the Plans in Appendix **30** associated with Regions 1 and 3, which had their origins in WARC-77, would be valuable in offering the prospects of more efficient utilization of the spectrum and orbit resources by taking into account technological improvements (e.g. satellite antennas and receiver sensitivity) which could be used to increase the capacity and the flexibility of the Plan without reducing the number of current assignments to each country;

d) that improvements in the use of the 12 GHz planned band may enable countries, in particular those which have high rainfall climatic zones, to accommodate their BSS (HDTV) needs, or part of their needs, in that band;

invites the CCIR

to study, as a matter of priority, the technical possibilities for improving the efficiency and flexibility of the Plans for Regions 1 and 3 contained in Appendices **30** and **30A**, taking into account the intent of the conference referred to below, and to study the particular needs of high rainfall climatic zones for HDTV and the technical methods which could be used to implement this service in the 12 GHz band;

urges administrations

to contribute to the studies of the CCIR and, also, to consider the need for a future competent conference to review and as necessary revise the relevant parts of Appendices **30** and **30A**;

recommends the next Plenipotentiary Conference

to consider the convening of an administrative radio conference to revise those parts of the Plans in Appendices **30** and **30A** applying to Regions 1 and 3 in the light of the studies carried out by the CCIR;

resolves

1. that the future conference, in revising the Region 1 and 3 parts of Appendices **30** and **30A**, should:

a) maintain each country's assigned BSS capacity in the Plan, as a minimum;

b) provide for the needs of new countries;

c) protect notified systems which are in conformity with Appendices **30** and **30A**;

d) take account, as far as possible, of systems which have been communicated to the IFRB under Article **4** of Appendices **30** and **30A**;

2. that the future conference shall ensure that the integrity of the Region 2 Plans and their associated provisions is preserved, by providing the same protection to the assignments contained in those Plans as they now receive under the relevant provisions of the Radio Regulations and by not requiring more protection from assignments in the Region 2 Plans than that currently provided under the Radio Regulations;

instructs the Secretary-General

to bring this Resolution to the attention of the Administrative Council with a view to the convening of a conference to undertake the review and any necessary revision of the relevant parts of Appendices **30** and **30A** and associated provisions of the Radio Regulations, taking account of the latest CCIR studies.

RESOLUTION No. 525 (WARC-92)

Introduction of High-Definition Television (HDTV) Systems of the Broadcasting-Satellite Service (BSS) in the Band 21.4 - 22.0 GHz in Regions 1 and 3

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that this Conference has reallocated the band 21.4 - 22.0 GHz in Regions 1 and 3 to the broadcasting-satellite service to be implemented after 1 April 2007;

b) that until 1 April 2007 the existing services operating in the band 21.4 - 22.0 GHz in Regions 1 and 3 in accordance with the Table of Frequency Allocations are therefore entitled to continue operating without harmful interference from other services;

c) that it is nevertheless desirable to facilitate the introduction of experimental HDTV systems in this band before 1 April 2007 without affecting the continued operation of existing services;

d) that it also may be possible to introduce operational HDTV systems in this band before 1 April 2007 without affecting the continued operation of existing services;

e) that after 1 April 2007 the introduction of HDTV systems in this band must be regulated in a flexible and equitable manner until such time as a future competent world administrative radio conference has adopted definitive provisions for this purpose in accordance with Resolution **507 (WARC-79)**;

f) that procedures are required for the three sets of circumstances envisaged in *considerings c), d)* and *e)* above;

resolves

to adopt the interim procedures contained in the annex hereto with effect from 1 April 1992;

invites all administrations

to comply with the above procedures;

instructs the IFRB

to apply the above procedures.

ANNEX TO RESOLUTION No. 525 (WARC-92)

Interim Procedures for the Introduction of BSS (HDTV) Systems in the Band 21.4 - 22.0 GHz in Regions 1 and 3

Section I. General Provisions

1. It shall be understood that prior to 1 April 2007 all existing services in the band 21.4 - 22.0 GHz in Regions 1 and 3 operating in accordance with the Table of Frequency Allocations shall be entitled to continue to operate. After that date they may continue to operate, but they shall neither cause harmful interference to BSS (HDTV) systems nor be entitled to claim protection from such systems. It shall be understood that the introduction of an operational BSS (HDTV) system in the band 21.4 - 22.0 GHz in Regions 1 and 3 should be regulated by an interim procedure in a flexible and equitable manner until the date to be decided by a future competent conference.

Section II. Interim Procedure Relating to Experimental BSS (HDTV) Systems Introduced Before 1 April 2007

2. For the purpose of introducing experimental BSS (HDTV) systems in the band 21.4 - 22.0 GHz in Regions 1 and 3 before 1 April 2007 under the provisions of Article **34** of the Radio Regulations, the procedures contained in Resolution **33 (WARC-79)** shall be applied.

Section III. Interim Procedure Relating to Operational BSS (HDTV) Systems Introduced Before 1 April 2007

3. For the purpose of introducing operational BSS (HDTV) systems in the band 21.4 - 22.0 GHz in Regions 1 and 3 before 1 April 2007, the procedure contained in Resolution **33 (WARC-79)** shall be applied, if the power flux-density at the Earth's surface produced by emissions from a space station, on the territory of any other country, exceeds:

- -115 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane; or

- -105 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane; or

- values to be derived by linear interpolation between these limits for angles of arrival between 5 and 25 degrees above the horizontal plane.

These limits relate to the power flux-density which would be obtained under assumed free-space propagation conditions.

4. If the power flux-density at the Earth's surface produced by emissions from a space station does not exceed these limits, the procedure in Sections B and C of Resolution **33 (WARC-79)** only shall be applied.

Section IV. Interim Procedure Relating to BSS (HDTV) Systems Introduced After 1 April 2007

5. For the purpose of introducing and operating BSS (HDTV) systems in the band 21.4 - 22.0 GHz in Regions 1 and 3 after 1 April 2007, and before a future conference has taken decisions on definitive procedures, the procedure in Sections B and C of Resolution **33 (WARC-79)** shall be applied.

6. For the purpose of this Section, BSS (HDTV) systems introduced under provisions of Sections II and III of this Resolution shall be taken into account.

7. Administrations shall, to the maximum extent possible, seek to ensure that operational BSS (HDTV) systems introduced in the band 21.4 - 22.0 GHz in Regions 1 and 3 under Sections III or IV of this Resolution have characteristics which take into account the studies of the CCIR for the preparation of a future competent world administrative radio conference.

RESOLUTION No. 526 (WARC-92)

Future Adoption of Procedures to Ensure Flexibility in the Use of the Frequency Band Allocated to the Broadcasting-Satellite Service (BSS) for Wide RF-Band High-Definition Television (HDTV) and to the Associated Feeder Links

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that this Conference has added an allocation to the BSS in the bands 21.4 - 22.0 GHz in Regions 1 and 3 and 17.3 - 17.8 GHz in Region 2 for use by wide RF-band HDTV;

b) that considerable further technological development of wide RF-band HDTV is expected before it can be introduced for general operational use;

c) that this Conference has adopted interim provisions to be applied during the period before 1 April 2007 to regulate the introduction of experimental or operational BSS (HDTV) systems (see Resolution **525 (WARC-92)**);

d) that in the longer term regulatory provisions designed to ensure flexible and equitable use of the BSS (HDTV) and associated feeder-link allocations will be necessary to replace these interim provisions;

resolves to urge all administrations

to study the development of future regulatory provisions for BSS (HDTV) to ensure flexibility in the use of the bands 21.4 - 22.0 GHz in Regions 1 and 3 and 17.3 - 17.8 GHz in Region 2, having regard to the interests of all countries and the state of technical development of this new service;

instructs the Secretary-General

to bring this Resolution to the attention of the Administrative Council with a view to placing an appropriate item on the agenda of a future world administrative radio conference.

RESOLUTION No. 527 (WARC-92)

Terrestrial VHF Digital Sound Broadcasting

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that advances in technology have made available digital sound broadcasting systems of high quality;

b) that such digital sound broadcasting systems will offer a considerably higher sound quality as well as additional system characteristics which the present FM broadcasting system does not possess;

c) that digital sound broadcasting can, in addition to possessing the properties mentioned above, permit greater spectrum efficiency than conventional FM sound broadcasting;

d) that digital sound broadcasting systems require less effective radiated power;

e) that the bands 87.5 - 108 MHz in Region 1, 88 - 108 MHz in Region 2 and 87 - 108 MHz in Region 3 are generally widely used for high-powered FM sound broadcasting service, except in some countries;

f) that several European countries are considering the implementation of digital sound broadcasting on an interim basis in the VHF bands allocated to the broadcasting service, while ensuring the protection of assignments in the relevant broadcasting Plans in force;

resolves to invite the CCIR

in order to harmonize the implementation of terrestrial digital sound broadcasting;

1. to undertake, as a matter of urgency, the relevant technical studies associated with the introduction of terrestrial digital sound broadcasting, focusing primarily on the VHF broadcasting bands;

2. in particular, to consider the system characteristics and propagation phenomena in relation to developing compatibility criteria in the same and adjacent bands, including protection of the safety services;

invites the BDT

to include among its priorities the definition of a project relating to the study by the CCIR of exceptional severe propagation phenomena in the regions of concern to developing countries;

instructs the Secretary-General

to bring this Resolution to the attention of the Administrative Council with a view to placing on the agenda of a competent administrative radio conference the subject of terrestrial VHF digital sound broadcasting for Region 1 countries and interested countries in Region 3;

invites administrations

to contribute actively to the relevant CCIR studies.

RESOLUTION No. 528 (WARC-92)

Introduction of the Broadcasting-Satellite Service (Sound) Systems and Complementary Terrestrial Broadcasting in the Bands Allocated to these Services Within the Range 1 - 3 GHz

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that this Conference has made frequency allocations to the broadcasting-satellite service (sound) and complementary terrestrial broadcasting;

b) that it is necessary to ensure that the introduction of the broadcasting-satellite service (sound) and complementary terrestrial broadcasting proceeds in a flexible and equitable manner;

c) that efficient use of the spectrum will be enhanced by a worldwide allocation;

d) that a worldwide allocation may cause difficulties to some countries in relation to their existing services;

e) that future planning may limit the effect on other services;

resolves

1. that a competent conference should be convened, preferably not later than 1998, for the planning of the broadcasting-satellite service (sound) in the bands allocated to this service in the range 1 - 3 GHz; and the development of procedures for the coordinated use of complementary terrestrial broadcasting;

2. that this Conference should review criteria for sharing with other services;

3. that in the interim period, broadcasting-satellite systems may only be introduced within the upper 25 MHz of the appropriate band in accordance with Resolution **33 (WARC-79)**. The complementary terrestrial service may be introduced during this interim period subject to coordination with administrations whose services may be affected;

4. that the calculation methods and the interference criteria to be employed in evaluating the interference should be based upon relevant CCIR Recommendations agreed by the administrations concerned as a result of Resolution **703 (Rev.WARC-92)** or otherwise;

invites the CCIR

to conduct the necessary studies prior to the Conference;

instructs the Secretary-General

to bring this Resolution to the attention of the Administrative Council to consider including in the agenda of an administrative radio conference to be held preferably not later than the year 1998 the matters addressed above.

RESOLUTION No. 703 (Rev.WARC-92)

Calculation Methods and Interference Criteria Recommended by the CCIR for Sharing Frequency Bands Between Space Radiocommunication and Terrestrial Radiocommunication Services or Between Space Radiocommunication Services

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that, in frequency bands shared with equal rights by space radiocommunication and terrestrial radiocommunication services, it is necessary to impose certain technical limitations and coordination procedures on each of the sharing services for the purpose of limiting mutual interference;

b) that, in frequency bands shared by space stations located on geostationary satellites, it is necessary to impose coordination procedures for the purpose of limiting mutual interference;

c) that the calculation methods and interference criteria relating to coordination procedures referred to in paragraphs *a)* and *b)* above are based upon CCIR Recommendations;

d) that, in recognition of the successful sharing of the frequency bands by space radiocommunication and terrestrial radiocommunication services, and the continuing improvements in space technology and that of the Earth segment, each CCIR Plenary Assembly subsequent to the Xth Plenary Assembly (Geneva, 1963) has improved upon some of the technical criteria recommended by the preceding Plenary Assembly;

e) that CCIR Plenary Assemblies are held more frequently and with greater regularity than administrative radio conferences which are competent to modify the Radio Regulations making substantial use of CCIR Recommendations;

f) that the CCIR has adopted a procedure for approving Recommendations between Plenary Assemblies;

g) that the International Telecommunication Convention recognizes the right of Members of the Union to make special agreements on telecommunication matters; however, such agreements shall not be in conflict with the terms of the Convention or of the Regulations annexed thereto as far as harmful interference to the radio services of other countries is concerned;

is of the opinion

a) that future decisions of the CCIR are likely to make further changes in the recommended calculation methods and interference criteria;

b) that administrations should receive advance information of the drafts of the relevant CCIR Recommendations;

c) that the administrations should whenever possible apply the current CCIR Recommendations on sharing criteria when planning systems for use in frequency bands shared with equal rights between space radiocommunication and terrestrial radiocommunication services, or between space radiocommunication services;

invites Administrations

to submit contributions to the CCIR Study Groups, providing information on practical results and experience of sharing between terrestrial and space radiocommunication services or between space services, which help to bring about significant improvements in coordination procedures, calculation methods and harmful interference thresholds, and thereby to optimize the available orbit/spectrum resources;

resolves

1. that the Director of the CCIR, in consultation with Study Group Chairmen, shall prepare a list identifying the relevant parts of new or revised Recommendations approved by the CCIR affecting the calculation methods and the interference criteria and also those specific sections of the Radio Regulations to which they are applicable, relating to sharing between space radiocommunication and terrestrial radiocommunication services, or between space radiocommunication services. The Director of the CCIR shall forward this list to the IFRB within thirty days following the approval of these Recommendations;

2. that the IFRB shall forward this list and the appropriate texts to all administrations within thirty days, asking them to indicate within four months those CCIR Recommendations or specific technical criteria defined in the Recommendations referred to in paragraph 1 above to which they agree for use in the application of the pertinent provisions of the Radio Regulations;

3. that, should an administration, in its reply to the consultation conducted by the IFRB under paragraph 2 above, indicate that certain CCIR Recommendations or technical criteria defined in those Recommendations are unacceptable, the relevant calculation methods and the interference criteria defined in the Radio Regulations shall continue to apply with respect to cases involving that administration;

4. that the IFRB shall publish, for the information of all administrations, a list based on the replies to the enquiry, of the CCIR Recommendations or of the relevant calculation methods and the interference criteria defined in those Recommendations, indicating the administrations to which each of those Recommendations or relevant technical criteria are acceptable or are not and the administrations which did not reply;

5. that the administrations which do not reply within four months to the consultation conducted by the IFRB under paragraph 2 above should, however, inform the IFRB of their decision on the application of these Recommendations under the relevant provisions of the Radio Regulations at a later stage;

6. that the IFRB shall take into account:

a) the applicability of the CCIR calculation methods and interference criteria when making technical examinations with respect to cases involving only administrations to which such methods and criteria are acceptable;

b) the applicability of the calculation methods and interference criteria defined in the Radio Regulations in accordance with the list referred to in paragraph 4 above, when making technical examinations with respect to cases involving the administrations which did not accept or did not reply to the consultation conducted by the IFRB under paragraph 2 above.

RESOLUTION No. 710 (WARC-92)

Primary Service Requirements for the Meteorological-Satellite and Earth Exploration-Satellite Services in the Band 401 - 403 MHz

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that many administrations use frequencies in the bands 401 - 402 MHz and 402 - 403 MHz for reporting to satellites from airborne, land-based and maritime data collection platforms;

b) that the CCIR has conducted studies of the characteristics, requirements and sharing criteria necessary for compatibility with the services sharing the bands with these systems, the results of which are reported in CCIR Report **541** and Recommendation **514**;

c) that the meteorological-satellite and earth exploration-satellite services in the bands 401 - 402 MHz and 402 - 403 MHz are secondary to other services in these bands and that, in order for continuous reliable observations to be made, it is essential that transmission of the data be achieved without harmful interference,

resolves

that the next competent world administrative radio conference should examine the allocation to the meteorological-satellite and earth exploration-satellite services in the bands 401 - 402 MHz and 402 - 403 MHz with the intent of raising the allocation status to primary,

invites the Administrative Council

to take the necessary action to place this matter on the agenda of the next competent world administrative radio conference.

RESOLUTION No. 711 (WARC-92)

Possible Relocation of Frequency Assignments to Certain Space Missions from the 2 GHz Band to Bands above 20 GHz

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) the changes in the allocations to space services made by this Conference in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz;

b) the possibility of technical improvements in the space services concerned which might lead to more efficient usage of the spectrum;

c) the possibility that frequency assignments to some space missions could be relocated in bands above 20 GHz;

resolves

1. that it is desirable to review the present and planned use of the frequency bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz, with the intent, when practicable, of assigning frequencies to some space missions in bands above 20 GHz and possibly reducing the allocations to the space services in the 2 GHz band;

2. that the next competent world administrative radio conference should consider this matter, taking account of the results of the relevant CCIR studies, which may make it possible to revise the Radio Regulations, so that no frequency assignments would be permitted in the bands around 2 GHz after a date in the near future to be determined by that conference for those

space missions whose frequency assignments might be accommodated in the bands above 20 GHz, and so that, if appropriate, the spectrum needs of the mobile and space services might be equitably accommodated in the 2 GHz band;

invites the CCIR

1. to carry out the review mentioned in *resolves* 1 above;

2. to conduct the necessary studies on the evolution of the space research, space operations, Earth exploration-satellite and mobile services in the bands available to each service around 2 GHz and on the compatibility between these services in the 2 GHz band;

3. to report to the next competent conference the spectrum requirement of each service in the bands mentioned in *invites the CCIR* 2 and, where necessary, indicate the criteria for sharing between these services;

urges administrations

to participate actively in these studies;

instructs the Secretary-General

to bring this Resolution to the attention of the next Administrative Council with a view to including this subject in the agenda of the next competent conference.

RESOLUTION No. 712 (WARC-92)

Consideration by a Future Competent World Administrative Radio Conference of Issues Dealing with Allocations to Space Services Which Were not Placed on the Agenda of WARC-92

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that the agenda of this Conference called for the development of new Recommendations and Resolutions relating to allocations to space services which were not placed on this agenda;

b) that the allocation to the Earth exploration-satellite service at 8.025 - 8.4 GHz is complex and not uniform worldwide;

c) that Resolution **112 (WARC-92)** relating to the allocation to the fixed-satellite service in the band 13.75 - 14 GHz is liable to raise problems of compatibility with the space research and the Earth exploration-satellite services, particularly radio altimetres;

d) that the Earth exploration-satellite service has a secondary status in Regions 1 and 3 in the band 18.6 - 18.8 GHz, that this band is vital for sensing ecologically important data, and that it is being implemented on an increasing number of Earth-exploration satellites;

e) that the current allocation to the inter-satellite service at 23 GHz is insufficient to ensure full inter-operability between data-relay satellite systems;

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

g) that the CCIR has agreed to certain important technical parameters required for coordination of the space science services under Appendix **28**;

resolves

that the next competent world administrative radio conference should consider the following matters:

- use of existing allocations in the 8 - 20 GHz range to the Earth-exploration satellite and space research services, with a view to establishing common worldwide primary allocations to these services in appropriate bands;
- additional inter-satellite service requirements for up to 50 MHz of spectrum near 23 GHz;
- provision of up to 1 GHz of frequency spectrum around 35 GHz for use by space-based active Earth sensors;
- inclusion of CCIR-approved technical coordination parameters in Appendix **28** of the Radio Regulations;

invites the CCIR

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 Administrative Council at its next session with a view to including these matters in the agenda of the next competent conference.

RECOMMENDATION No. 66 (Rev.WARC-92)

Studies of the Maximum Permitted Levels of Spurious Emissions

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that Appendix **8** to the Radio Regulations specifies the maximum permitted levels of spurious emissions, in terms of the mean power level of any spurious component supplied by a transmitter to the antenna transmission line, for the frequency bands below 17.7 GHz;

b) that the principal objective of Appendix **8** is to specify the maximum permitted levels of spurious emissions that, while being achievable, provide protection against harmful interference;

c) that excessive levels of spurious emissions may give rise to harmful interference;

d) that while Appendix **8** applies only to the mean power of the transmitter and the spurious emissions, there are a variety of emissions where the interpretation of the term "mean power" and its consequential measurement are difficult;

e) that whilst the CCIR is studying this problem, it has not yet furnished adequate Recommendations pertaining to Appendix **8** for frequency bands above 960 MHz;

f) that spurious emissions from transmitters operating in space stations may cause harmful interference, particularly in regard to intermodulation components from wide-band amplifiers which cannot be adjusted after launch;

g) that spurious emissions may cause harmful interference to passive services, including the radio astronomy service in bands above 17.7 GHz;

h) that spurious emissions from earth stations also require particular study;

i) that no information is available from the CCIR regarding spurious emissions from stations employing digital modulation techniques;

j) that transmitters operating in space stations are increasingly employing spread-spectrum and other wideband digital modulation techniques that can produce out-of-band and spurious emissions at frequencies far removed from the carrier frequency;

recommends that the CCIR

1. study as a matter of urgency the question of spurious emissions resulting from space services transmissions, and, on the basis of those studies, develop Recommendations for maximum permitted levels of spurious emissions in terms of mean power of spurious components supplied by the transmitter to the antenna transmission line;

2. continue the study of spurious emission levels in all frequency bands, emphasizing the study of those frequency bands, services and modulation techniques not presently covered by Appendix **8**;

3. establish appropriate measurement techniques for spurious emissions, including the determination of reference levels for wideband transmissions as well as the applicability of reference measurement bandwidths;

4. study the categorizing of emissions and spurious emissions in terms of "mean power" and develop appropriate Recommendations to facilitate the interpretation and measurement of "mean power" as it applies to the various classes of emissions;

5. submit a report to the next competent conference on the results of its studies with a view to reviewing and including spurious and out-of-band emission limits in Appendix **8** of the Radio Regulations, principally for the protection of the radio astronomy and other passive services.

RECOMMENDATION No. 519 (WARC-92)

Introduction of Single-Sideband (SSB) Emissions and Possible Advancement of the Date for Cessation of the Use of Double-Sideband (DSB) Emissions in the HF Bands Allocated to the Broadcasting Service

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that WARC HFBC-87 in Resolution **517** called for the introduction of SSB transmissions in the HF bands allocated exclusively to the broadcasting service with the characteristics specified in Appendix **45** to the Radio Regulations;

b) that the use of SSB instead of DSB modulation techniques would lead to improved spectrum utilization;

c) that, in accordance with Recommendation **515 (HFBC-87)**, new HF broadcasting transmitters installed after 31 December 1990 should as far as possible be capable of operating either in both SSB and DSB, or in the SSB mode alone;

d) that the new extension bands allocated by WARC-92 for HF broadcasting are reserved only for SSB emissions;

e) that Resolution **517 (HFBC-87)** specifies the date of 31 December 2015 for the cessation of DSB emissions;

f) that the final date for the cessation of DSB emissions shall be periodically reviewed by competent future world administrative radio conferences in the light of the latest available complete statistics on the worldwide distribution of SSB transmitters and synchronous demodulator receivers, as stipulated in Resolution **517 (HFBC-87)**;

recommends

that the next competent world administrative radio conference should consider the possibility of advancing the date given in *considering e)* for the cessation of DSB emissions;

invites the Administrative Council

to place this Recommendation on the agenda of the next competent world administrative radio conference.

RECOMMENDATION No. 520 (WARC-92)

Elimination of HF Broadcasting on Frequencies Outside the HF Bands Allocated to the Broadcasting Service

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that there is an increasing number of HF broadcasting stations operating on frequencies outside the bands allocated to the broadcasting service;

b) that the common use of the HF bands by the broadcasting and other services, without the relevant allocations or detailed regulations, results in inefficient use of the frequency spectrum;

c) that such use has led to harmful interference;

d) that this Conference has allocated additional spectrum to the broadcasting service in the HF bands;

recommends

that administrations shall take practicable steps to eliminate HF broadcasting outside the HF bands allocated to the broadcasting service.

RECOMMENDATION No. 621 (WARC-92)

Implementation of Wind Profiler Radars at Frequencies near 50 MHz, 400 MHz and 1 000 MHz

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

having noted

a request to the ITU from the Secretary-General of the World Meteorological Organization (WMO), in May 1989, for advice and assistance in the identification of appropriate frequencies near 50 MHz, 400 MHz and 1 000 MHz in order to accommodate allocations and assignments for wind profiler radars;

considering

a) that wind profiler radars are important meteorological systems used to measure wind direction and speed as a function of altitude;

b) that in order to conduct such measurements up to a height of 30 kilometres it is necessary to allocate frequency bands for these radars in the general vicinity of 50 MHz (3 to 30 km), 400 MHz (500 m to about 10 km) and 1 000 MHz (100 m to 3 km), respectively;

c) that many administrations plan to deploy wind profiler radars in operational networks in order to improve meteorological predictions, support studies of the climate and enhance the safety of navigation;

d) that it is highly desirable to use wind profiler radars in frequency bands which have been generally agreed, preferably on a worldwide basis;

e) that the CCIR is studying various proposals for these wind profiler radars at frequencies around 50 MHz, 400 MHz and 1 000 MHz and that frequencies in the 400 MHz region may be preferred for measurements of winds at altitudes that are of the greatest general interest;

f) that it is essential in the interest of safety to protect the COSPAS-SARSAT system and other safety services from harmful interference which may be caused by wind profiler radars;

g) that studies have already shown that wind profiler radars operating in the vicinity of 400 MHz must be sufficiently separated in frequency from the COSPAS-SARSAT system centred on 406.025 MHz;

h) that in the interest of efficient spectrum utilization it is necessary to include technical characteristics and sharing criteria in future studies;

invites the CCIR

to continue as a matter of urgency its studies of the characteristics and requirements of wind profiler radars, to make Recommendations as to the technically suitable frequency bands, associated standards and frequency sharing criteria necessary for compatibility with the services that may be affected, and to submit a report to the Conference referred to in *invites the Administrative Council*;

recommends

1. that administrations authorizing experiments with or the operational use of such radars should take all necessary actions to ensure protection from harmful interference to the COSPAS-SARSAT system, particularly by avoiding assignments in the band 402 - 406 MHz, and to other services;

2. that administrations and international organizations concerned with wind profiler radars, particularly the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO), the World Meteorological Organization (WMO) and COSPAS-SARSAT, should contribute to the CCIR studies;

invites the Administrative Council

to consider including on the agenda of the next competent WARC the question of appropriate frequency allocations for the operational use of wind profiler radars;

instructs the Secretary-General

to bring this Recommendation to the attention of the ICAO, IMO and WMO.

RECOMMENDATION No. 717 (WARC-92)

Sharing Criteria in Frequency Bands Shared by the Mobile-Satellite Service and the Fixed, Mobile and Other Radio Services

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that this Conference has made frequency allocations for the mobile-satellite service shared with other radio services;

b) that provisional sharing criteria have been adopted in the bands allocated by this Conference to the mobile-satellite service;

c) that both geostationary and non-geostationary satellites may be operated in the mobile-satellite service;

recommends that the CCIR

1. study, as a matter of urgency, the appropriate criteria for sharing between the mobile-satellite service and other services in the same frequency bands, including power limits and power flux-density limits as indicated in Articles **27** and **28** of the Radio Regulations, while placing minimum restrictions on the services operating in these bands;

2. issue, as a matter of urgency, Recommendations on the subject;

recommends that administrations

send, as a matter of urgency, their contributions relating to these studies to the CCIR.

RECOMMENDATION No. 718 (WARC-92)

Alignment of Allocations in the 7 MHz Band Allocated to the Amateur Service

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that it is desirable to have exclusive worldwide allocations to the amateur and broadcasting services in the bands around 7 MHz;

b) that the sharing of frequency bands by these services is undesirable and should therefore be avoided;

c) that a number of administrations have made proposals to this Conference for the alignment of the allocations to the amateur service around 7 MHz;

d) that this Conference was able to give only limited consideration to these proposals;

recommends

that a future competent world administrative radio conference should consider the possibility of aligning the allocations to the amateur service around 7 MHz, with due regard to the requirements of other services;

invites the Administrative Council

to place this Recommendation on the agenda of the next competent world administrative radio conference.

RECOMMENDATION No. 719 (WARC-92)

Multiservice Satellite Networks Using the Geostationary-Satellite Orbit

The World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

a) that the Conference has allocated, on a primary basis, the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz in Region 2, and 20.1 - 20.2 GHz and 29.9 - 30 GHz in Regions 1 and 3 to the mobile-satellite service;

b) that these bands are also allocated to the fixed-satellite service;

c) that some administrations have expressed interest in developing multiservice satellite networks in these bands;

d) that Recommendation **715 (Orb-88)** calls for simplification of the process for bringing into use satellite networks with different classes of user terminals;

e) that the Voluntary Group of Experts (VGE), among other means of simplifying the Radio Regulations, is studying service definitions accommodating a range of services;

recognizing

that the introduction of multiservice satellite networks using, *inter alia*, mobile earth stations, may have an impact on networks operating in the fixed-satellite service;

recommends

that, as a matter of urgency, studies should be carried out on the technical characteristics, including pointing techniques of multiservice satellite networks using the geostationary-satellite networks encompassing

mobile-satellite and fixed-satellite applications, and the sharing criteria necessary for compatibility with the fixed-satellite service in the frequency bands referred to above;

invites the CCIR

to carry out these studies;

recommends administrations

to participate actively in these studies;

recommends further

a) that a future competent world administrative radio conference review the allocations of these bands, taking into account the results of the CCIR studies and the work of the VGE;

b) that a future competent world administrative radio conference consider the requirement for a single service definition encompassing mobile-satellite service and fixed-satellite service applications, and the possible need for additional frequency spectrum to accommodate the growth of these services;

invites the Administrative Council

to place this matter on the agenda of the next competent world administrative radio conference.

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