Documents of the World Administrative Radio Conference for dealing with frequency allocations in certain parts of the spectrum (WARC-92) (Malaga-Torremolinos, 1992)

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INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 201-E
21 February 1992
Original: English

WORKING GROUP 4B

Indonesia

PROPOSALS FOR THE WORK OF THE CONFERENCE

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

considering

a) all the information presented and discussed over the last two and one-half weeks with respect to the broadcasting-satellite service (Sound) (BSS (Sound)) and especially the information presented during deliberations of the ad hoc 6 to 4B meetings;

b) that there is a need to introduce the new BSS (Sound) and complementary service in the near term;

c) that a spectrum of 50 MHz (preferably 60 MHz) must be identified for this service;

d) that the frequency band around 1 500 MHz offers the best technical and economic implementation of the BSS (Sound) service,

proposes

that the frequency band 1 440 - 1 500 MHz be used to implement BSS (Sound) at the earliest practical date, provided that such implementation does not produce harmful interference to existing services in this band.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 202-E
19 February 1992
Original: English

WORKING GROUP
OF THE PLENARY

NOTE BY THE CHAIRMAN OF WORKING GROUP 4C TO THE WORKING GROUP OF THE PLENARY

Working Group 4C requests the technical advice of the Working Group of the Plenary concerning proposed modification of provision RR 2584 to be applicable to the frequency band 37 - 37.5 GHz as shown in proposal USA/12/143, in order to protect the fixed service in this band, as provided for in RR 2578.

H.G. KIMBALL
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Addendum 1 to
Document 203-E
26 February 1992
Original: French

COMMITTEE 4

Benin, Gambia, Senegal

INTRODUCTION OF LOW-EARTH ORBIT (LEO) SYSTEMS ABOVE 1 GHz

The Arusha Declaration of the first World Development Conference, 1984, endorsed the conclusions of the Independent Commission for Worldwide Telecommunications Development to bring a telephone within easy reach for all mankind by the beginning of the next century.

Since 1984, spectacular progress has been made with satellite and terrestrial mobile telecommunications technologies, including digital cellular applications.

The experiences and adaptation of low-Earth orbit (LEO) satellite applications provide opportunities to introduce with flexibility and speed person-to-person communications irrespective of location on our globe.

The above Administrations therefore favour the introduction of LEO systems for the telephone and data transmission services, the operation of which will enable rural areas to be served both efficiently and economically.

With appropriate radio frequency accommodation at WARC-92, LEOs system applications could be available in the mid-1990s, thus contributing to the achievement of the "Missing Link" objectives.

In order to safeguard national interests, however, the operation of such systems should be subject to regulatory, technical and financial agreements.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 203(Rev.1)-E
24 February 1992
Original: French

COMMITTEE 4

Benin, Gambia, Senegal

PROPOSAL FOR THE WORK OF THE CONFERENCE

Item 2.2.4c - Allocation of frequency bands to the MSS and associated feeder links in the range 1 - 3 GHz

BEN/GMB/SEN/203/1

The Republics of Benin, Gambia and Senegal are in favour of allocating the following bands worldwide to the mobile-satellite service (MSS):

- 1 610 - 1 626.5 MHz (Earth-to-space on a primary basis)
- 1 613.8 - 1 626.5 MHz (space-to-Earth on a secondary basis)
- 2 483.5 - 2 500 MHz (space-to-Earth)
- or any other appropriate band.

This proposal, which is aimed at modernization, the optimization of investment costs and the harmonious expansion of the global telecommunications network for the benefit of mankind, takes full account of the principles of sharing and effective protection for existing services.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 203-E
20 February 1992
Original: French

COMMITTEEE 4

Benin, Senegal

PROPOSALS FOR THE WORK OF THE CONFERENCE

Item 2.2.4c - Allocation of frequency bands to the MSS and associated feeder links in the range 1 - 3 GHz

BEN/SEN/203/1

The Republics of Senegal and Benin are in favour of allocating the following bands worldwide to the mobile-satellite service (MSS):

- 1 610 - 1 626.5 MHz (Earth-to-space on a primary basis)
- 1 613.8 - 1 626.5 MHz (space-to-Earth on a secondary basis)
- 2 483.5 - 2 500 MHz (space-to-Earth) on any appropriate band.

This proposal, which is aimed at modernization, the optimization of investment costs and the harmonious expansion of the global telecommunications network for the benefit of mankind, takes full account of the principles of sharing and effective protection for existing services.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 204-E
19 February 1992
Original: Spanish

COMMITTEE 4

Spain

PROPOSAL FOR THE WORK OF THE CONFERENCE

With reference to Working Document DT/77, concerning correction of the existing imbalance between the up-link and down-link spectrum allocated to the fixed-satellite service and the possibility of using the band 13.75 - 14 GHz, the Spanish Administration welcomes the proposal submitted by the Administration of Canada and wishes to submit the following points for the Committee's consideration, together with the text proposed in Annex 1 to this document.

The proposed band, 13.75 - 14 GHz, offers the best way of resolving the conflict with regard to up-link and down-link capacity in the fixed-satellite service, being adjacent to the band 14 - 14.5 GHz already allocated to this service.

The band, however, has not been studied by the CCIR, and there are therefore reasonable doubts about the best conditions for the sharing of this band by the fixed-satellite, radiolocation, space research and standard frequency and time signal-satellite services. The Spanish Administration accordingly considers that it is necessary to introduce a transitional procedure to provide safeguards for existing users of the radiolocation service, until the CCIR and a future competent conference establish the conditions for sharing by these services.

It is therefore proposed that an additional sentence should be included in Footnote 855A in Document DT/77 (see annex) to deal with this matter. Under this note any administration using the radiolocation service in this band will be able to contact another administration or other administrations to agree on transitional procedures for coordinating new transmitting earth stations intending to operate in this band which could cause harmful interference to radiolocation services.

As regards the draft Resolution in the annex to Document DT/77, the Spanish Administration suggests that the CCIR studies should be undertaken, as a matter of urgency, so that the limits given in Footnote 855A can be revised as soon as possible and modified by a future conference, the transitional procedure proposed here then being superseded.

Annex: 1

ANNEX 1

GHz
13.75 - 14

Allocation to Services		
Region 1	Region 2	Region 3
~~13.4~~13.75 - 14	RADIOLOCATION FIXED-SATELLITE (Earth-to-space) Standard Frequency and Time Signal-Satellite (Earth-to-space) Space Research 713 853 854 855 855A 855B	

E/204/1
MOD

E/204/2
ADD **855A** 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 toward the geostationary-satellite orbit shall not exceed 59 dBW. These values shall apply until they are reviewed by the CCIR and changed by a future competent World Administrative Radio Conference (see Resolution ...). The administrations concerned may, bearing in mind these limits, establish bilateral coordination procedures for the introduction of new earth stations in the fixed-satellite service.

E/204/3
ADD **855B** In the band 13.75 - 14 GHz, [geostationary and non-geostationary] space stations in the space research service [and in the earth exploration-satellite service] which have received advance publication prior to [31 January 1992,] shall operate on an equal basis with stations in the fixed-satellite service.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 205-E
19 February 1992
Original: English

COMMITTEE 4

Note from the Chairman of Working Group 4C to the Chairman of Committee 4

CONSEQUENTIAL CHANGES REQUIRED AS A RESULT OF ALLOCATION PROPOSALS ADOPTED BY WORKING GROUP 4C IN THE FREQUENCY RANGE 31.8 - 34.7 GHz

As a result of the adoption of proposals to provide primary allocations to the space research service restricted to deep space in the frequency bands 31.8 - 32.3 GHz and 34.2 - 34.7 GHz, it is necessary to remove from these frequency bands, those other service allocations and footnotes which would cause an unfeasible sharing situation with the newly-adopted allocations.

The following changes are suggested for consideration:

31.8 - 32 GHz	-	delete Space Research suppress Footnotes 890, 891
32 - 32.3 GHz	-	delete Space Research suppress Footnotes 890, 891
34.2 - 34.7 GHz	-	delete Space Research suppress Footnote 895 modify Footnote 896 (change frequency band to read 34.7 - 35.2 GHz)

The question of reaccommodation of anticipated systems of the space research service not limited to deep space should be addressed. Working Group 4C has adopted proposals to allocate the band 37 - 38 GHz to the space research service (space-to-Earth) and the band 40 - 40.5 GHz (Earth-to-space) on a primary basis. Such bands are available for any displaced anticipated systems in the bands around 32 and 34 GHz.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 206-E
18 February 1992
Original: English

Source: DT/77

COMMITTEE 4

Report from the Chairman of Drafting Group 2 presented by the Chairman of Working Group 4C to Committee 4

Agenda item 2.2.5

1. Drafting Group 2 to Working Group 4C held one meeting on 18 February 1992 and was tasked to examine the feasibility of alternative approaches, to address the imbalance between up-link and down-link spectrum, allocated to the fixed-satellite service, including the analysis of the band 13.75 - 14 GHz. A Canadian proposal, provided to the Drafting Group under Document DT/68, was utilized as a basis for drafting an alternative approach.

2. After the introductory remarks which covered the difficulties experienced by numerous administrations concerning the utilization of the band 14.5 - 14.8 GHz to address the imbalance between the up-link and down-link spectrum allocated to FSS, there was consensus that attention should be focussed on the issue of imbalance.

3. Document DT/68 was introduced and discussed extensively, reaching an agreement in principle concerning the three footnotes presented in the document.

4. There was consensus to combine Footnotes 855A and 855B into a single footnote which was modified to refer to a Resolution enclosed in this document. In addition, a maximum limit was introduced on the FSS e.i.r.p. and the radionavigation service was included in the e.i.r.p. limit.

5. The third footnote was modified to reflect the concern of one administration concerned with projects presently underway and which have not yet been subject to notification.

6. Finally, the alternative proposal was supported and the Chairman, due to lack of time, suggested that he would draft the associated Resolution.

7. The text in question is set out in Annex hereto.

H.G. KIMBALL
Chairman of Working Group 4C

Annex: 1

DRAFT RESOLUTION

Relating to the 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 present Conference has made an additional allocation to the FSS in the band 13.75 - 14 GHz;

b) that this band is shared with the RLS and certain limitations have been placed on the FSS and RLS;

c) that the impact of the FSS allocation on the SRS and EES needs to be studied,

recognizing

that stations in the space research service which were advanced published prior to 31 January 1993 shall operate on an equal basis with stations in the fixed-satellite service,

resolves

1. to invite the CCIR to conduct the necessary studies, prior to [31 January 1994,] with respect to values given in the footnotes related 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 invite administrations and other organizations interested in these radio services to participate in the work of the CCIR;

3. to invite the Secretary-General to bring this Resolution to the attention of the Administrative Council and the next full Plenipotentiary Conference with a view to including the review of the footnotes in the agenda of the first World Administrative Radio Conference.

GHz
13.75 - 14

Allocation to Services		
Region 1	Region 2	Region 3
MOD **~~13.4~~13.75 - 14**	RADIOLOCATION FIXED-SATELLITE (Earth-to-space) Standard Frequency and Time Signal-Satellite (Earth-to-space) Space Research 713 853 854 855 855A 855B	

ADD **855A** 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 toward 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 Res. ...).

ADD **855B** In the band 13.75 - 14 GHz [geostationary space stations in the space research service, [and in the earth exploration-satellite service] which have received advance publication prior to [31 January 1992,] shall operate on an equal basis with stations in the fixed-satellite service.

[Until 1 January 2000, stations in the fixed-satellite service shall not cause harmful interference to non-geostationary space stations in the SRS and EES.]

UNION INTERNATIONALE DES TELECOMMUNICATIONS

CAMR-92 **CAMR CHARGEE D'ETUDIER LES ATTRIBUTIONS DE FREQUENCES DANS CERTAINES PARTIES DU SPECTRE**

MALAGA-TORREMOLINOS, FEVRIER/MARS 1992

Corrigendum 1 au
Document 207-F/E/S
20 février 1992

COMMISSION/COMMITTEE/COMISION 4

Note du Président du Groupe de travail 4C à la Commission 4

Note from the Chairman of Working Group 4C to Committee 4

Nota del Presidente del Grupo de trabajo 4C a la Comisión 4

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Agenda item 2.2.3b - (HDTV)

Working Group 4C established SWG 4C1 to address the matters related to proposals for HDTV BSS allocations. Under the chairmanship of Mr. K. Whittingham (United Kingdom), the Sub-Working Group developed two documents DT/41(Rev.1 + Corr.1) (English) and DT/72 which provide information on the factors relating to the choice of a frequency band for the down link and for the up link. It was agreed in 4C that these could usefully be maintained as information documents for delegates in their further deliberations. The summary report of the findings of SWG 4C1 is found in Document DT/75. Tables A and B of this report reflected the position on proposals for Agenda item 2.2.3b as of 17 February 1992. During the course of discussion of the report from SWG 4C1, certain points were raised by some delegates and they requested their views be brought to the attention of Committee 4. Specifically, the United States and Canada requested the inclusion of the Mexican proposal for an up-link band at 25 GHz be included in the summary of bands given in paragraph 4 of DT/75. There not being time to amend DT/75 prior to presenting the results to Committee 4, the Chairman of 4C agreed to present their views herein. In addition, the United States noted that while they agree with the principles of SWG 4C1 as stated in paragraph 1 of DT/75, they would nevertheless be willing to accept regional solutions for down-link allocations if a worldwide allocation could not be found.

Other delegates expressed their continuing interest in trying to find a worldwide solution and drew attention to paragraph 8 of DT/75 wherein the participants of SWG 4C1 urged that the effort continue at WARC-92 to seek such a consensus.

Further, it was made clear that the CEPT proposal for BSS (HDTV) cannot be separated from the proposal in EUR/20/57 to allocate the band 24.25 - 25.25 GHz to the fixed service: It presents a package along with the time-scales for implementing HDTV as given in Document 20 . In this context it was further assumed that the issue of services affected by decisions of the Conference would be addressed as appropriate.

Working Group 4C agreed to put forward to Committee 4 a note to Committee 5, in Document DT/69, regarding a request that the CCIR 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.

Agenda item 2.2.4 - MSS feeder links

No proposals on this matter were presented to the Working Group. The sense of the meeting was that this requirement could be satisfied using the existing allocations to the FSS.

In connection with this item, the Administration of Brazil proposed suppression of three footnotes (Footnotes 782, 784, and 785) in order to provide more unhindered spectrum for the fixed-satellite service as a means of supporting feeder-link requirements. Footnote 782 applies only to the administration of Austria and that delegation agreed to the proposal of Brazil for suppression. Objections were stated by several administrations to the proposals to suppress Footnotes 784 and 785.

Agenda item 2.2.5 - FSS (14.5 - 14.8 GHz)

In recognition of the existing imbalance between up-link and down-link allocations for the fixed-satellite service in the Ku-bands, the agenda for this Conference included this item to consider modifying the allocation provisions of the band 14.5 - 14.8 GHz so that it could be used by the FSS on an unrestricted basis. Ad hoc Group 2 to WG 4C was established under the chairmanship of Mr. B. Gracie (Canada) to consider the matter. Several administrations made proposals to modify the 14.5 - 14.8 GHz band. Other administrations proposed NOC. In the process of introducing proposals it was clear that some administrations

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 207-E
19 February 1992
Original: English

COMMITTEE 4

SECOND REPORT OF WORKING GROUP 4C TO COMMITTEE 4

In this second report of Working Group 4C all of the issues within its mandate are addressed and an indication of the action taken on each issue is provided. Discussion on some matters was not completed before the time allotted to WG 4C expired. As a result, those matters are presented to Committee 4 for further consideration.

Agenda item 2.2.1 - New Space Services Above 20 GHz

The issues related to this agenda item were treated in ad hoc Group 1 to WG 4C under the chairmanship of Mr. R. Taylor (United States). The results of the work of that Group are presented in DT/64. Several items were agreed for changes to Article 8. They are:

25.25 - 27.5 GHz **INTER-SATELLITE 881A**

881A Use of the 25.25 - 27.5 GHz band by the inter-satellite service is limited to space research and earth exploration-satellite applications, and also transmission of data from industrial and medical activities in space.

25.5 - 27 GHz **Earth Exploration-Satellite (space-to-Earth)**

31.8 - 32.3 GHz **SPACE RESEARCH (Deep Space Only) (space-to-Earth) 893**

MOD 893 In designing systems for the inter-satellite and radionavigation services 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 ~~two~~ services, bearing in mind the safety aspects of the radionavigation service (see Recommendation No. 707).

34.2 - 34.7 GHz **SPACE RESEARCH (Deep Space Only) (Earth-to-space)**

37.5 - 40.5 GHz **Earth Exploration-Satellite (space-to-Earth)**

40 - 40.5 GHz **EARTH EXPLORATION-SATELLITE (Earth-to-space)**
SPACE RESEARCH (Earth-to-space)

74 - 84 GHz **Space Research (space-to-Earth)**

156 - 158 GHz **EARTH EXPLORATION-SATELLITE (passive)**

Additional changes to Article 8 were agreed provisionally pending advice from the GT-PL requested by the Chairman of 4C in Document 202. When this advice has been received in Committee 4, the additional changes will be presented for consideration by Committee 4 in an appropriate note from the Chairman of 4C.

Other matters still to be addressed under this agenda item are:

- Proposals to add the inter-satellite service to the band 21.7 - 22.0 GHz. Consideration of this proposal has been held in abeyance pending the outcome of discussions on the HDTV allocations (see item 2.2.3b below).
- Proposals to provide an allocation for a new service to be called the general satellite service. To address these proposals, Drafting Group 1 to WG 4C was established under the chairmanship of Mr. J. Connolly (United Kingdom). The report of Mr. Connolly's Group is provided in DT/74. The Group could not reach a consensus on the question of frequency allocations but did agree there were a number of options which could be considered. WG 4C discussed the various options and was also unable to reach a consensus. Some delegates questioned the requirement for such a service while others expressed their continuing support to seek an allocation. Upon the request of some delegates to keep open the opportunity for further discussion with the hope of reaching such consensus, the Chairman of 4C agreed to recommend to Committee 4 that the Committee establish an ad hoc group for this purpose.
- A proposal to accommodate the radiolocation service on a primary exclusive basis in the 25.55 - 25.65 GHz band was presented by the United States as a means of providing for radiolocation functions in this region of the spectrum, free from the safety-of-life constraints associated with the present radionavigation service allocation. The Delegation of Japan objected to the proposed deletion of the radionavigation service based on their current usage of that service. The United States said they could accept an allocation of 100 MHz anywhere in the band 24.25 - 25.25 GHz. Further discussion was deferred pending decisions on the HDTV proposals (see item 2.2.3b below).

Agenda item 2.2.3a - Feeder links for BSS (Sound)

Several proposals were presented supporting the use of the band 10.7 - 11.7 GHz for this purpose by modification of Footnote 835. Other proposals were for the use of the band 7 025 - 7 075 MHz. Still other proposals were made supporting the concept that the allocations to the FSS were generally available for feeder-link applications. While the preponderance of proposals were for the use of the 10.7 - 11.7 GHz band, the application on a worldwide basis would mean removing the current restrictive language limiting the provisions of the footnote to Region 1. Some administrations from Region 2 and Region 3 expressed objection to this approach. After further discussion, the Chairman of 4C urged delegates to continue discussion outside the meeting to seek a consensus position and be prepared to address the matter again in Committee 4.

In connection with this item, the Administration of Brazil proposed suppression of three footnotes (Footnotes 782, 784, and 785) in order to provide more unhindered spectrum for the fixed-satellite service as a means of supporting feeder-link requirements. Footnote 782 applies only to the administration of Austria and that delegation agreed to the proposal of Brazil for suppression. Objections were stated by several administrations to the proposals to suppress Footnotes 784 and 785 and thus the proposals from Brazil on those two footnotes were not accepted.

Agenda item 2.2.3b - (HDTV)

Working Group 4C established SWG 4C1 to address the matters related to proposals for HDTV BSS allocations. Under the chairmanship of Mr. K. Whittingham (United Kingdom), the Sub-Working Group developed two documents DT/41(Rev.1 + Corr.1) (English) and DT/72 which provide information on the factors relating to the choice of a frequency band for the down link and for the up link. It was agreed in 4C that these could usefully be maintained as information documents for delegates in their further deliberations. The summary report of the findings of SWG 4C1 is found in Document DT/75. Tables A and B of this report reflected the position on proposals for Agenda item 2.2.3b as of 17 February 1992. During the course of discussion of the report from SWG 4C1, certain points were raised by some delegates and they requested their views be brought to the attention of Committee 4. Specifically, the United States and Canada requested the inclusion of the Mexican proposal for an up-link band at 25 GHz be included in the summary of bands given in paragraph 4 of DT/75. There not being time to amend DT/75 prior to presenting the results to Committee 4, the Chairman of 4C agreed to present their views herein. In addition, the United States noted that while they agree with the principles of SWG 4C1 as stated in paragraph 1 of DT/75, they would nevertheless be willing to accept regional solutions for down-link allocations if a worldwide allocation could not be found.

Other delegates expressed their continuing interest in trying to find a worldwide solution and drew attention to paragraph 8 of DT/75 wherein the participants of SWG 4C1 urged that the effort continue at WARC-92 to seek such a consensus.

Further, it was made clear that the CEPT proposal for BSS (HDTV) cannot be separated from the proposal in EUR/20/57 to allocate the band 24.25 - 25.25 GHz to the fixed service: It presents a package along with the time-scales for implementing HDTV as given in Document 20 . In this context it was further assumed that the issue of services affected by decisions of the Conference would be addressed as appropriate.

Working Group 4C agreed to put forward to Committee 4 a note to Committee 5, in Document DT/69, regarding a request that the CCIR 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.

Agenda item 2.2.4 - MSS feeder links

No proposals on this matter were presented to the Working Group. The sense of the meeting was that this requirement could be satisfied using the existing allocations to the FSS.

Agenda item 2.2.5 - FSS (14.5 - 14.8 GHz)

In recognition of the existing imbalance between up-link and down-link allocations for the fixed-satellite service in the Ku-bands, the agenda for this Conference included this item to consider modifying the allocation provisions of the band 14.5 - 14.8 GHz so that it could be used by the FSS on an unrestricted basis. Ad hoc Group 2 to WG 4C was established under the chairmanship of Mr. B. Gracie (Canada) to consider the matter. Several administrations made proposals to modify the 14.5 - 14.8 GHz band. Other administrations proposed NOC. In the process of introducing proposals it was clear that some administrations

were in favour of seeking an alternative solution. To this end, Canada made a proposal to consider the band 13.75 - 14.0 GHz. The meeting of ad hoc Group 2 agreed therefore to form a Drafting Group, chaired by Mr. M. Drolet (Canada) to consider the Canadian proposal. After discussion, a revision of the Canadian proposal was developed for consideration in WG 4C. Unfortunately, WG 4C was unable to complete discussion of the matter in the time allotted and thus the issue is presented to Committee 4 for further deliberation. The current status of the Canadian proposal is presented in Document 206.

Agenda item 2.2.8 - Footnote 797B

Countries having requested to be included in this footnote and appearing in Document DT/65 were accepted. The results appear in Annex A to this Report.

Agenda item 2.6 - Amendments to the Radio Regulations

Several proposals were presented by administrations for consequential modifications to the Radio Regulations. Some of these proposals were related to matters not directly associated with the Conference agenda. One delegation expressed their concern about this matter and stated that, in principal, they objected to treating matters not on the Conference agenda. This objection was duly noted by the Chairman of WG 4C. Following this intervention, the Working Group then agreed to accept the proposals of the Democratic Peoples' Republic of Korea, the Administration of Yemen and the Administration of Hungary to modify footnotes specifically affecting the name of their Administration.

H.G. KIMBALL
Chairman

ANNEX A

J/27/58
MOD **797B** **Mob-87**

Additional allocation: in the Federal Republic of Germany, Austria, Denmark, Spain, France, Finland, Israel, Italy, Japan, Jordan, Morocco, Norway, the Netherlands, Pakistan, 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.

POR/77/1
MOD **797B** **Mob-87**

Additional allocation: in the Federal Republic of Germany, Austria, Denmark, Spain, France, Finland, Israel, Italy, Jordan, Morocco, Norway, the Netherlands, Pakistan, 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.

BEL/LUX/115/1
MOD **797B** **Mob-87**

Additional allocation: in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, France, Finland, Israel, Italy, Jordan, Luxembourg, Morocco, Norway, the Netherlands, Pakistan, 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.

GRC/130/1
MOD **797B** **Mob-87**

Additional allocation: in the Federal Republic of Germany, Austria, Denmark, Spain, France, Finland, Greece, Israel, Italy, Jordan, Morocco, Norway, the Netherlands, Pakistan, 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.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

Document 208-E
19 February 1992
Original: English

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Source: Documents 181, 182 and 185

COMMITTEE 6

FOURTH SERIES OF TEXTS FROM COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 has approved the annexed texts to be submitted to the Editorial Committee for consideration and subsequent transmission to the Plenary session:

- Resolution COM5/3;
- Resolution COM5/4;
- RR 2613.

Committee 5 is of the view that Committee 6 should ensure that this revised English text of RR 2613 conforms with the French text, which remains unchanged. Committee 5 also suggests that the word "explotados" in the second last line of the Spanish text is replaced by "operados" to more correctly align the Spanish text with the French text.

E. GEORGE
Chairman of Committee 5

DRAFT RESOLUTION COM5/3

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 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 provides for requirements until January 1994;

b) that the WARC ORB-88 in Resolution No. 521, **resolves** 3, stated that "while the Plans for the 11.7 - 12.7 GHz band can already be used for certain types of HDTV, 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 of AP30 associated with Regions 1 and 3, which had their origins in the 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,

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,

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

to the next Plenipotentiary Conference to consider the convening of a World Administrative Radio Conference intended to revise those parts of the Plans contained 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,

requests the Secretary-General

to bring this Resolution to the attention of the Administrative Council with a view to the establishment 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 COM5/4

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, 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 of Contracting Governments to the International Convention for the Safety of Life at Sea, 1974 on the Global Maritime Distress and Safety System (GMDSS) adopted maintenance requirements to ensure equipment availability which were more flexible than those adopted by the World Administrative Radio Conference for Mobile Services, Geneva, 1987;

c) that resulting inconsistency between the ITU Radio Regulations and IMO 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 No. 7 of the Plenipotentiary Conference, Nice 1989, included Articles 55 and 56 in the WARC-92 agenda 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 IMO 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 the WARC-92, on a provisional basis,

instructs the Secretary-General

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

Annex: 1

ANNEX

MOD **2613** § 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.

NOC **2613** § 2. Les stations spatiales non géostationnaires doivent cesser leurs émissions ou les réduire à un niveau négligeable, et les stations terriennes qui communiquent avec elles ne doivent plus émettre à leur intention, lorsqu'il n'y a pas une séparation angulaire suffisante entre satellites non géostationnaires et satellites géostationnaires, et que des brouillages inacceptables[1] sont causés à des systèmes spatiaux à satellites géostationnaires du service fixe par satellite fonctionnant conformément aux dispositions du présent Règlement.

NOC **2613** § 2. Las estaciones espaciales instaladas a bordo de satélites no geoestacionarios deberán cesar sus emisiones o reducirlas a un nivel despreciable, y las estaciones terrenas que comunican con ellas deberán cesar sus emisiones, cuando sea insuficiente la separación angular entre satélites no geoestacionarios y geoestacionarios y se produzcan interferencias inaceptables[1] a los sistemas espaciales de satélites geoestacionarios del servicio fijo por satélite explotados de conformidad con las disposiciones del presente Reglamento.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 209-E
20 February 1992
Original: English

COMMITTEE 5

Source: Document DT/69

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

In choosing an allocation for BSS for high-definition television, Committee 4 has formed a view that all of the candidate bands have difficulties for countries in high rainfall climatic zones because of the high attenuation, which is higher than at 12 GHz and increases with frequency in those bands.

It is considered that improvements in the utilization of the 12 GHz planned bands may enable some countries which have high rainfall climatic zones to accommodate their needs or part of their needs in that band.

Committee 4 requests that Committee 5 take note of this opinion and requests that the CCIR 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.

I. HUTCHINGS
Chairman of Committee 4

PINK PAGES

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 210-E
20 February 1992

R.1

PLENARY MEETING

FIRST SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for second reading:

Source	Document	Title
COM 6	175/B.1	Resolution GT-PLEN/1
		Recommendation No. 66 (Rev.WARC-92)
		Recommendation GT-PLEN/A

P. ABOUDARHAM
Chairman of Committee 6

Annex: 5 pages

RESOLUTION GT-PLEN/1

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 No. 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.

MOD

RECOMMENDATION No. 66 (Rev.WARC-92)

(MOD)

Studies of the Maximum Permitted Levels of Spurious Emissions

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

considering

NOC 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;

NOC 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;

NOC c) that excessive levels of spurious emissions may give rise to harmful interference;

NOC 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;

NOC 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;

NOC 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;

ADD g) that spurious emissions can cause harmful interference to passive services, including the radio astronomy service in bands above 17.7 GHz;

(MOD) h) that spurious emissions from earth stations also require particular study;

MOD i) that no information is available from the CCIR regarding spurious emissions from stations employing digital modulation techniques;

ADD 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,

SUP **noting**

recommends that the CCIR

NOC 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;

NOC 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;

NOC 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;

NOC 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;

ADD 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 GT-PLEN/A

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.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 211-E
20 February 1992
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COMMITTEE 5

Republic of the Congo

PROPOSED AMENDMENT TO DOCUMENT DT/40 CONCERNING APPENDIX 26 OF THE RADIO REGULATIONS

Document DT/40 contains allotments for the aeronautical mobile (OR) service in the bands between 3 025 kHz and 18 030 kHz.

The Administration of the Congo has noted that a number of channels (74 in all) are allotted at the same time to Angola, Cameroon, Central African Republic, Congo, Chad and Gabon, which are neighbouring countries.

These channels include:

3 035 / 3 038 / 3 047 / 3 053 / 3 140 / 4 721 / 4 724 / 13 212 / 13 215 kHz.

Having regard to sections 26/6 and 26/6.1 in Part IV of Annex 2 (Document 146), it should be pointed out that those countries' stations are already inherently incompatible.

Accordingly, the Administration of the Congo proposes that the IFRB should reconsider the situation.

BLUE PAGES

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 212-E
20 February 1992

B.4

PLENARY MEETING

FOURTH SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for first reading:

Source	Document	Title
COM 5	183	Article 1
	208	Article 29
		Resolution COM5/3
		Resolution COM5/4

Note by Committee 5

The delegations of Brazil, Canada and the Russian Federation reserved their position with regard to the modification to provision No. 24.

P. ABOUDARHAM
Chairman of Committee 6

Annex: 5 pages

CHAPTER I

Terminology

ARTICLE 1

Terms and Definitions

Section I. General Terms

NOC **3, 4, 7**

Section III. Radio Services

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

NOC **26**

NOC **36**

MOD **48** 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, 111, 112, 117**

Section VII. Frequency Sharing

NOC **163**

ARTICLE 29

MOD **2613** § 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.

RESOLUTION COM5/3

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 provides for requirements until January 1994;

b) that WARC Orb-88 in Resolution No. 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,

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,

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 a world 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 COM5/4

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 No. 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).

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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COMMITTEE 4

SECOND REPORT OF WORKING GROUP 4A TO COMMITTEE 4

Working Group 4A, after in-depth discussions on the subjects related to the extensions of the spectrum to the HF broadcasting service, came to the conclusion that several subjects are closely interrelated and that they have to be treated as a package. The package comprises the following elements:

1.1 Extensions of the bands

The proposals related to the extensions of the spectrum allocated to HF broadcasting are listed in Annex 1. These extensions are proposed under the following assumptions:

a) NOC in the conditions for use of the bands governed by RR 503 (Tropical Zone bands);

b) the extension bands will be reserved for SSB only (new Footnote RR 505A);

c) the extension bands will be subject to planning (new Footnote RR 505B);

d) the extension bands will become available for the broadcasting service on 1 April 2007 (new Footnotes RR 505C, RR 528A, RR 529B and RR 534A);

e) the extension bands will continue to be used by the existing services (i.e. the fixed services and, where appropriate, the land mobile or the mobile except aeronautical mobile (R) service) on a non-interference basis, even after 1 April 2007 (new Footnotes RR 505C, RR 528A, RR 529B and RR 534A);

f) the next competent WARC is invited to consider advancing the date for the cessation of the DSB emissions presently specified in Resolution No. 517 (new Recommendation, Annex 2);

g) the protection of the existing services will be assured also through the Recommendation procedure, as prepared by Committee 5.

1.2 Consequential changes

No changes were made to the allocations of the amateur service in the 7 MHz band. Consequently, no changes could be made to align the amateur allocations in the 7 MHz band.

S. HESS
Chairman

Annexes: 2

ANNEX 1

kHz
5 730 - 6 200

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**5 730 - ~~5 950~~5 900** FIXED LAND MOBILE	**5 730 - ~~5 950~~5 900** FIXED MOBILE except aeronautical mobile (R)	**5 730 - ~~5 950~~5 900** FIXED Mobile except aeronautical mobile (R)
MOD	**5 900 - 5 950**	BROADCASTING 505A 505B 505C	
NOC	**5 950 - 6 200**	BROADCASTING	

ADD **505A** 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 characteristics specified in Appendix 45 to the Radio Regulations.

ADD **505B** The use of 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 by the competent WARC.

ADD **505C** 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 the procedure described in Resolution No. [Document COM5]. 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 services. When using frequencies in these services, the 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.

kHz
7 100 - 8 100

	Allocation to Services		
	Region 1	Region 2	Region 3
NOC	**7 100 - 7 300** BROADCASTING	**7 100 - 7 300** AMATEUR 510 528	**7 100 - 7 300** BROADCASTING
MOD	7 300 - 7 350	BROADCASTING 505A 505B 528A	
MOD	~~7 300~~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 service on a primary basis and to the land mobile service on a secondary basis, subject to the procedure described in Resolution No. [Document COM5]. 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 services. When using frequencies in these services, the 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.

kHz
9 040 - 9 900

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	9 040 - ~~9 500~~9 400	FIXED	
MOD	9 400 - 9 500	BROADCASTING 505A 505B 529B	
NOC	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, 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 the procedure described in Resolution No. [Document COM5]. 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 services. When using frequencies in the fixed service, the 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.

kHz
11 400 - 12 230

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**11 400 - ~~11 650~~11 600**	FIXED	
MOD	**11 600 - 11 650**	BROADCASTING 505A 505B 529B	
NOC	**11 650 - 12 050**	BROADCASTING 530 531	
MOD	**12 050 - 12 100**	BROADCASTING 505A 505B 529B	
MOD	**~~12 050~~12 100 - 12 230**	FIXED	

kHz
13 410 - 14 000

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**13 410 - ~~13 600~~13 570**	FIXED Mobile except aeronautical mobile (R) 534	
MOD	**13 570 - 13 600**	BROADCASTING 505A 505B 534A	
NOC	**13 600 - 13 800**	BROADCASTING 531	
MOD	**13 800 - 13 870**	BROADCASTING 505A 505B 534A	
MOD	**~~13 800~~13 870 - 14 000**	FIXED Mobile except aeronautical mobile (R)	

ADD **534A** 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 the procedure described in Resolution No. [Document COM5]. 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 services. When using frequencies in these services, the 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.

kHz
15 100 - 16 360

	Allocation to Services		
	Region 1	Region 2	Region 3
NOC	**15 100 - 15 600**	BROADCASTING 531	
MOD	**15 600 - 15 800**	BROADCASTING 505A 505B 529B	
MOD	**~~15 600~~15 800 - 16 360**	FIXED 536	

kHz
17 410 - 17 900

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**17 410 - ~~17 550~~17 480**	FIXED	
MOD	**17 480 - 17 550**	BROADCASTING 505A 505B 529B	
NOC	**17 550 - 17 900**	BROADCASTING 531	

kHz
18 900 - 19 680

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**18 900 - 19 020**	BROADCASTING 505A 505B 529B	
MOD	**~~18 900~~19 020 - 19 680**	FIXED	

ANNEX 2

DRAFT RECOMMENDATION [SWG 4A1]

Relating to the Introduction of Single-Sideband Emissions and Possible Advancement of the Date for Cessation of the Use of Double-Sideband 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 the WARC HFBC-87 in Resolution No. 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 single-sideband (SSB) instead of double-sideband (DSB) modulation techniques would lead to improved spectrum utilization;

c) that in accordance with Recommendation No. 515 (HFBC-87) new HF broadcasting transmitters installed after 31 December 1990 should as far as possible be capable of operating either in both modes, SSB and DSB, or in the SSB mode alone;

d) that the new extension bands allocated by WARC-92 for HF broadcasting should be reserved only for SSB emissions;

e) that Resolution No. 517 (HFBC-87) specifies the date of 31 December 2015 for the cessation of DSB emissions;

f) that in accordance with Resolution No. 517 (HFBC-87) there is a need, prior to the final confirmation of the date for the cessation of DSB transmissions in the HF broadcasting service, for a competent WARC to consider the worldwide distribution of SSB transmitters and synchronous demodulator receivers,

recommends

1. that the next competent WARC should consider the possibility of advancing the date given in **considering** e) for the cessation of DSB emissions;

2. that the Administrative Council should be invited to place this Recommendation on the agenda for the next competent WARC.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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COMMITTEE 4

FOURTH AND LAST REPORT OF WORKING GROUP 4A TO COMMITTEE 4

1. The Working Group's additional proposals on the footnotes in Article 8 of the Radio Regulations are contained in Annex 1 to this Report.

2. The Working Group adopted the draft new Recommendation [SWG 4A2] as presented in Annex 2 to this Report.

S. HESS
Chairman

Annexes: 2

ANNEX 1

Proposed actions with respect to footnotes in Article 8 of the Radio Regulations

MOD **518** In Afghanistan, Argentina, Australia, Botswana, Burkina Faso, Central African Republic, China, India, Niger, Swaziland, 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**

SUP **537**

SUP **543**

SUP **544**

MOD **572** The frequency 75 MHz is assigned to aeronautical marker beacons. Administrations 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.

~~Until 31 December 1989, administrations in Regions 2 and 3 should refrain from assigning frequencies to stations of other services in the bands 74.6 - 74.8 MHz and 75.2 - 75.4 MHz.~~

~~In the future every~~ 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.

SUP **582**

ANNEX 2

EUR/20/35
ADD

RECOMMENDATION No. [SWG 4A2]

Relating to the 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 transmitters operating on frequencies outside the bands allocated to the broadcasting service;

b) that the unregulated sharing of HF bands by broadcasting and other services generally does not represent an efficient use of the frequency spectrum;

c) that such unregulated sharing has led to harmful interference;

d) that this present Conference has allocated additional spectrum for the broadcasting service in the HF bands,

recommends

that administrations should take practicable steps to eliminate HF broadcasting outside the HF bands allocated to the broadcasting service.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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COMMITTEE 6

FIRST SERIES OF TEXTS SUBMITTED TO THE EDITORIAL COMMITTEE BY COMMITTEE 4

Attached are the texts concerning modifications to Article 8 of the Radio Regulations as approved at the fifth meeting of Committee 4.

I. HUTCHINGS
Chairman

Annex: 1

ANNEX

GHz
24.25 - 31.3

Allocation to Services		
Region 1	Region 2	Region 3
25.25 - 25.5~~27~~	FIXED MOBILE INTER-SATELLITE 881A Earth Exploration-Satellite (space-to-space) Standard Frequency and Time Signal-Satellite (Earth-to-space)	
25.5 - 27	FIXED MOBILE INTER-SATELLITE 881A Earth Exploration-Satellite (space-to-space) (space-to-Earth) Standard Frequency and Time Signal-Satellite (Earth-to-space)	
27 - 27.5 FIXED MOBILE INTER-SATELLITE 881A Earth Exploration-Satellite (space-to-space)	**27 - 27.5** FIXED MOBILE FIXED-SATELLITE (Earth-to-space) INTER-SATELLITE 881A Earth Exploration-Satellite (space-to-space)	
27.5 - 28.5~~29.5~~	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 882A 882B	
~~27.5~~28.5 - 29.5	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Earth Exploration-Satellite (Earth-to-space) 882C 882B	
29.5 - 30	FIXED-SATELLITE (Earth-to-space) Mobile-Satellite (Earth-to-space) Earth Exploration-Satellite (Earth-to-space) 882C 882A 882B 882 883	

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

ADD **882A** 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 for the purpose of up-link power control.

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

ADD **882B** Additional allocation: the band 27.501 - 29.900 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions for the purpose of up-link power control.

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

GHz
31.3 - 33.4

Allocation to Services		
Region 1	Region 2	Region 3
31.8 - 32	RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) ~~Space Research~~ ~~890 891~~ 892 MOD 893	
32 - 32.3	INTER-SATELLITE RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) ~~Space Research~~ ~~890 891~~ 892 MOD 893	

SUP **890**

SUP **891**

MOD **893** In designing systems for the inter-satellite and radionavigation services 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 ~~two~~ services, bearing in mind the safety aspects of the radionavigation service (see Recommendation No. 707).

GHz
33.4 - 40.5

Allocation to Services		
Region 1	Region 2	Region 3
34.2 - ~~35.2~~34.7	RADIOLOCATION SPACE RESEARCH (deep space) (Earth-to-space) ~~Space Research 895~~ MOD 896 ~~894~~	
~~34.2~~34.7 - 35.2	RADIOLOCATION Space Research ~~895~~ MOD 896 ~~894~~	

SUP **895**

MOD **896** Different category of service: in Bulgaria, Cuba, ~~Hungary,~~ Mongolia, Poland, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the allocation of the band ~~34.2~~34.7 - 35.2 GHz to the space research service is on a primary basis (see No. 425).

GHz
33.4 - 40.5 (continued)

Allocation to Services		
Region 1	Region 2	Region 3
37 - 37.5	FIXED MOBILE SPACE RESEARCH (space-to-Earth)* ~~899~~	
37.5 - 38~~39.5~~	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (space-to-Earth)* Earth Exploration-Satellite (space-to-Earth) ~~899~~	
~~37.5~~38 - 39.5	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Earth Exploration-Satellite (space-to-Earth) ~~899~~	
39.5 - 40~~40.5~~	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) Earth Exploration-Satellite (space-to-Earth)	
~~39.5~~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**

(*) This allocation is provisional upon confirmation that the existing power flux-density limits in Article 8 should be extended to cover this band.

GHz
66 - 86

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)	

GHz
151 - 185

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

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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COMMITTEE 6

SECOND SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

Committee 4 has adopted the attached texts, which it is submitting to the Editorial Committee for consideration and subsequent transmittal to the Plenary Meeting.

I. HUTCHINGS
Chairman

Annex: 1

ANNEX

ARTICLE 8

SUP **782**

MOD **797B** **Mob-87** Additional allocation: in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, France, Finland, Greece, Israel, Italy, Japan, Jordan, Luxembourg, Morocco, Norway, the Netherlands, Pakistan, 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 **777** Additional allocation: in Bulgaria, Canada, Cuba, ~~Hungary,~~ Mongolia, Poland, the German Democratic Republic, Roumania, 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 **780** Additional allocation: in Bulgaria, Cuba, ~~Hungary,~~ Mongolia, Poland, the German Democratic Republic, Roumania, 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.

MOD **798** Additional allocation: in Austria, Bulgaria, ~~Hungary,~~ Libya, Mongolia, Poland, the German Democratic Republic, Roumania, 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** Additional allocation: in Afghanistan, Austria, Bulgaria, ~~Hungary,~~ Iran, Mongolia, Poland, the German Democratic Republic, Roumania, 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 **804** Different category of service: in Bulgaria, Cuba, ~~Hungary,~~ 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 **834** Additional allocation: in Saudi Arabia, Bahrain, Bulgaria, Cameroon, China, Colombia, the Republic of Korea, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, ~~Hungary,~~ Iran, Iraq, Israel, Japan, Kuwait, the Lebanon, Mongolia, Pakistan, Poland, Qatar, the German Democratic Republic, Dem. People's Rep. of Korea, Roumania, Czechoslovakia, the U.S.S.R. 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 **885** Different category of service: in Bulgaria, Cuba, ~~Hungary,~~ Mongolia, Poland, the 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, ~~Hungary,~~ Mongolia, Poland, the German Democratic Republic, Roumania, 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 **803** Additional allocation: in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, 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, Malta, Niger, Nigeria, Pakistan, the Philippines, Qatar, Syria, Singapore, Sri Lanka, Tanzania, Chad, Thailand, Yemen ~~(P.D.R. of)~~ and Dem. People's Rep. of Korea, the band 5 650 - 5 850 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD **826** Different category of service: in Afghanistan, Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, 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, Pakistan, Qatar, Singapore, Somalia, Sudan, Sri Lanka, Sweden, Thailand, Trinidad and Tobago, and Yemen ~~(P.D.R. of)~~, the allocation of the band 9 800 - 10 000 MHz to the fixed service is on a primary basis (see No. 425).

MOD **857** Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Australia, Bahrain, Bangladesh, Botswana, Cameroon, China, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Kenya, Kuwait, Lesotho, the Lebanon, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Niger, Pakistan, the Philippines, Qatar, Syria, Senegal, Singapore, Somalia, Sudan, Sri Lanka, Swaziland, Tanzania, Chad, Thailand and Yemen ~~(P.D.R. of)~~, and Dem. People's Rep. of Korea, the band 14 - 14.3 GHz is also allocated to the fixed service on a primary basis.

MOD **866** Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Cameroon, Costa Rica, Egypt, El Salvador, the United Arab Emirates, Finland, Guatemala, India, Indonesia, Iran, Kuwait, Libya, Malaysia, Malawi, Malta, Morocco, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan, Sri Lanka, Sweden, Tanzania, Chad, Thailand, Yemen ~~(P.D.R. of)~~ and Yugoslavia, the band 15.7 - 17.3 GHz is also allocated to the fixed and mobile services on a primary basis.

MOD **779** Additional allocation: in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, China, the Congo, the United Arab Emirates, India, Indonesia, Iran, Iraq, Israel, Japan, Kuwait, the Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Dem. People's Rep. of Korea, Syria, Singapore, Sri Lanka and Thailand, 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 **819** Additional allocation: in Saudi Arabia, Bahrain, Bangladesh, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guinea, Guyana, Indonesia, Iran, Iraq, Israel, Jamaica, Kuwait, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, Qatar, Syria, Senegal, Singapore, Somalia, Sri Lanka, Tanzania, Chad, Thailand, Dem. People's Rep. of Korea, Togo and Tunisia, the band 8 500 - 8 750 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD **830** 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.

INTERNATIONAL TELECOMMUNICATION UNION

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COMMITTEE 4
COMMITTEE 5

Note from the Chairman of the Working Group to the Plenary
to the Chairman of Committees 4 and 5

PFD LIMITS APPLICABLE TO THE BAND 37-37.5 GHz

At the request of the Chairman of Working Group 4C (see Document 202), the Working Group to the Plenary has examined the proposed modification of RR 2584 to be applicable to the frequency band 37-37.5 GHz as shown in proposal USA/12/143 and confirms that the proposed modification is adequate to protect the fixed service in this band, as provided for in RR 2578.

M. MUROTANI
Chairman of the Working Group to the Plenary

INTERNATIONAL TELECOMMUNICATION UNION

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COMMITTEE 5

Note from the Chairman of the Working Group to the Plenary
to the Chairman of Committee 5

1. The Working Group to the Plenary has reviewed the two proposals contained in USA/12/144.

2. With respect to the first proposal of USA/12/144, the 120° limit on angular separation between communicating geostationary satellites would unnecessarily limit the length of inter-satellite links and restrict the flexibility of satellite system implementation. As an alternative, the 120° value could be considered as a coordination trigger value. That is, coordination would be required with other geostationary data relay satellite space stations which may be affected operating in the inter-satellite service whenever the angular separation is greater than 120°.

3. With respect to the second proposal of USA/12/144, the 15° pointing restriction in relation to the orbit appears sufficient to protect geostationary satellites.

4. The limits in both proposals should be considered provisional until such time as the CCIR has made a Recommendation.

M. MUROTANI
Chairman of the Working Group
to the Plenary

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

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COMMITTEE 5

Note from the Chairman of the Working Group to the Plenary
to the Chairman of Committee 5

COORDINATION OF GEOSTATIONARY SATELLITE SYSTEMS WITH GEOSTATIONARY SPACE STATIONS IN THE INTER-SATELLITE SERVICE ABOVE 20 GHz

1. The Working Group to the Plenary has reviewed the two proposals contained in USA/12/144.

2. With respect to the first proposal of USA/12/144, the 120° limit on angular separation between communicating geostationary satellites would unnecessarily limit the length of inter-satellite links and restrict the flexibility of satellite system implementation. As an alternative, the 120° value could be considered as a coordination trigger value. That is, coordination would be required with other systems which may be affected operating in the inter-satellite service whenever the angular separation is greater than 120°.

3. With respect to the second proposal of USA/12/144, the 15° pointing restriction in relation to the orbit appears sufficient to protect geostationary satellites.

4. The limits in both proposals should be considered provisional until such time as the CCIR has made a Recommendation.

M. MUROTANI
Chairman of the Working Group
to the Plenary

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

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COMMITTEE 5

Note from the Chairman of the Working Group to the Plenary
to the Chairman of Committee 5

THE MAXIMUM ALLOWABLE INCLINATION ANGLE OF SATELLITE NETWORKS USING SLIGHTLY INCLINED GEOSTATIONARY-SATELLITE ORBITS

1. Introduction

At the request of the Chairman of Working Group 5C, the Working Group to the Plenary has examined the maximum allowable inclination angle of satellite networks using slightly inclined geostationary-satellite orbits mainly on the basis of recent CCIR studies.

2. From the viewpoint of interference between satellite networks in the fixed-satellite service

Attachment I shows draft new Recommendation [Doc. 4/6] contained in Document 4/BL/32 (the first three pages only. A complete text is available from the Chairman of the Working Group to the Plenary).

The status of this text is as follows:

- the text was unanimously approved by CCIR Study Group 4 in November 1991;
- the text has been sent to administrations seeking for approval in accordance with CCIR Resolution 97;
- it will become an official CCIR Recommendation on 7 March 1992.

The attention is drawn to recommends 1 and 2.

3. From the viewpoint of interference between terrestrial systems and satellite networks in the fixed-satellite service

CCIR Working Party 4-9S (joint Working Party of Study Groups 4 and 9) has been studying this issue, but has not been able to arrive at a conclusion.

June 1991 meeting of Working Party 4-9S was able to produce a preliminary draft Recommendation (a working document within Working Party) as presented in Attachment II. The main difficulty is that there are two views expressed in recommends 1. The concerns raised at June 1991 meeting of Working Party 4-9S were primarily related to the effect of increasing inclination on the number of radio-relay stations in the fixed service being interfered with.

4. Summary

From the technical standpoint, the following may be pointed out:

- in frequency bands which are not shared with terrestrial systems, "geostationary satellites" can operate until the natural inclination limit without causing significant interference to other satellite networks;

- in frequency bands shared with terrestrial systems, the maximum inclination angle is yet to be defined.

Therefore, from the technical standpoint, a geostationary satellite using slightly inclined orbits may be characterized as follows:

- geosynchronous orbit

- circular orbit

- inclination angle not exceeding the natural limit of 15 degrees. However, for situations involving sharing with the fixed service, the natural limit may not be acceptable.

M. MUROTANI
Chairman of the Working Group
to the Plenary

ATTACHMENT I

Documents
CCIR Study Groups
Period 1990-1994

Document 4/BL/32-E
7 November 1991

Reference: Doc. 4/6

Study Group 4

DRAFT NEW RECOMMENDATION [Doc. 4/6]

THE COORDINATION OF SATELLITE NETWORKS USING SLIGHTLY INCLINED GEOSTATIONARY-SATELLITE ORBITS AND BETWEEN SUCH NETWORKS AND SATELLITE NETWORKS USING NON-INCLINED GSO SATELLITES

(Question 51/4)

The CCIR,

considering

(a) that the definition of a geostationary satellite in the Radio Regulations (RR 181) has no indication for a maximum value of the angle of inclination of the orbit of a geostationary satellite;

(b) that station-keeping fuel on geostationary space stations constitutes an appreciable portion of in-orbit mass and tends to be the limiting factor of a geostationary space station's life;

(c) that north-south station-keeping consumes up to 90% of the total fuel;

(d) that in the absence of north-south station-keeping a geostationary-satellite orbit is subject to no more than about 0.9 degrees of orbit change per year, and the inclination will never exceed the natural limit of 15 degrees;

(e) that, on the other hand, the absence of north-south station-keeping may require additional equipments at the earth stations, such as angular tracking, polarization tracking and for digital transmissions also larger size elastic buffers and more complex synchronization methods.

(f) that WARC ORB-88 considered the matter of coordinating slightly inclined geostationary satellite networks, and referred action to the IFRB and the CCIR;

(g) that the IFRB requested the CCIR to study the related problems:

- the technical aspects of coordination between geostationary satellites and those in inclined geostationary orbits;
- the technical aspects of coordination between satellites in inclined geostationary orbits;

(h) that there appears to be no intrinsic limitation on the coordination of satellite networks using slightly inclined geostationary orbits;

(j) that the data required by Appendices 3 and 4 (WARC ORB-88) of the Radio Regulations include the effects of using slightly inclined geostationary-satellite orbits,

noting that

i) under co-coverage conditions, the isolation between geostationary-satellite networks with one using a slightly inclined orbit, will be equal to or greater than that between two geostationary-satellite networks (near 0° inclination);

ii) under co-coverage conditions, the isolation between two geostationary-satellite networks using slightly inclined orbit may be either less, or greater than, between two geostationary-satellite networks near 0° inclination, depending on the relative nodal phase;

iii) under co-coverage conditions the isolation between two closely spaced geostationary-satellite networks with frequency re-use by dual linear orthogonal polarization, one or both of which use slightly inclined orbit, may be less than two geostationary-satellite networks, depending on the relative nodal phase;

iv) under non co-coverage conditions, between two geostationary-satellite networks, one or both of which use slightly inclined orbits, the isolation may be less, or greater than, between two geostationary-satellite networks, depending on a number of factors, in addition to the relative nodal phase,

recommends

1. that the coordination of geostationary-satellite networks using slightly inclined geostationary-satellite orbits be performed in accordance with the Radio Regulations that apply to geostationary-satellite networks based upon the minimum separation between the satellites concerned;

2. that in bands shared with terrestrial services the inclination limit for the application of § 1 may need to be determined by the inter-service sharing considerations; in other bands § 1 may be applied up to the natural inclination limit for satellites launched initially into a geostationary or near-geostationary orbit if N/S station-keeping manoeuvres are not undertaken;

3. that for interference considerations involving the coordination of geostationary-satellite networks using slightly inclined geostationary orbits, the information given in Annex I to this Recommendation should be utilized;

4. that, the relative nodal phase between the orbits be adjusted if practicable, and/or other measures should be used to minimize any deleterious effects.

ANNEX I

1. Introduction

The information contained in this annex should be used in connection with the coordination of satellite networks using slightly inclined geostationary-satellite orbits and between such networks and other satellite networks using non inclined GSO satellites.

During slightly inclined geostationary-satellite orbit operation, there are basically three factors which affect the interference between two satellite networks. These are:

- the exocentric angular separation between the coverage areas of the networks as seen from either satellite;
- the exocentric angular width of the coverage areas as seen from either satellite;
- the topocentric angular spacing between the satellites as seen from an earth station of either network.

These factors cause the net antenna discrimination (earth station and satellite antenna) between the two networks to vary in time. In cases where satellite networks have a common service area (co-coverage networks), the earth-station antenna is the basic element providing discrimination between the networks. Where satellite networks have separated service areas (non co-coverage networks), both the earth station and satellite antenna contribute to the discrimination between the networks.

2. Geometric considerations

The geocentric angle, φ_g, between two slightly inclined geostationary satellites with latitudes (γ_1 and γ_2) and longitudes (φ_1) and (φ_2) may be determined by:

$$\cos \varphi_g = \cos \gamma_1 \cos \gamma_2 \cos(\varphi_1 - \varphi_2) + \sin \gamma_1 \sin \gamma_2 \quad (1)$$

The latitude φ and longitude excursions Dj of a satellite as a function of the orbit inclination angle i and the satellite phase angle position in the orbit Dg as measured from the ascending node are:

$$\gamma = \sin^{-1} (\sin i \sin \Delta\gamma) \quad (2)$$

$$\Delta\varphi = \tan^{-1} (\cos i \tan \Delta\gamma) - \Delta\gamma \quad (3)$$

With small angle approximations for sin i and cos i, equations (2) and (3) become:

$$\gamma = i \sin \Delta\gamma \quad \text{radians} \quad (4)$$

$$\Delta\varphi = -0.25\, i^2 \sin 2\Delta\gamma \quad \text{radians} \quad (5)$$

The longitudinal excursions of a satellite in a circular geostationary orbit can be determined from the above equations. Figure 1 shows a plot of the maximum excursions as a function of inclination.

For two satellites having inclinations i_1 and i_2, designating $\Delta\gamma_0$ as the phase angle difference between the satellite orbit positions ($0 \leq \Delta\gamma_0 \leq 2\pi$) and φ_s as the angle between the ascending nodes, the minimum value of the geocentric angular separation φ_g may be derived from the preceding equations and is closely approximated by:

$$(\varphi_g)_{min} = 0.5\, i_1\, i_2 \sin \Delta\gamma_0 + \varphi_s \quad \text{radians} \quad (6)$$

ATTACHMENT II

Documents
CCIR Study Groups
Period 1990-1994

Document 4-9S/TEMP/14-E
Kobe, 21 June 1991
English only

Source: Documents 4-9S/2, 12, 13
Report 1142

Sub-Working Group 4-9S-2

PRELIMINARY DRAFT NEW RECOMMENDATION

POSSIBLE INCLINATION OF THE GEOSTATIONARY ORBIT USED BY SATELLITES IN THE FIXED SATELLITE SERVICE IN BANDS SHARED WITH THE FIXED SERVICE

The CCIR,

CONSIDERING

(a) that the use of inclined orbit is attractive for operations in the fixed satellite service for prolonging the useful life of satellites;

(b) that inclined orbit usage may be designed at the planning stages of satellite systems;

(c) that nominally geostationary satellites have a "natural" drift of approximately $\pm 15^{o}$ at the rate of about 0.9^{o} per year;

(d) that systems in inclined orbit operating with the power flux density limits given in Recommendation 358 could cause interference to terrestrial systems by exposing a larger number of terrestrial stations to direct interference;

(e) that while the end to end performance of terrestrial systems might not be affected by the degree of inclination, the probability of individual hops being affected could increase with the amount of inclination;

(f) that it might therefore be desirable to limit the amount of permissible inclination, while taking into account the needs of the FSS;

(g) that the FSS operations themselves impose constraints which would in most cases limit the amount of inclination which would be used by the network to values considerably less than the natural limit described in considering (c);

(h) that the existing terrestrial networks in most bands currently shared with the FSS are in a mature state and operate on the basis of assuming satellites are located at their nominal GSO locations;

(j) that the impact of terrestrial stations currently observing the limits in Recommendation 406 on satellites in inclined orbit depends upon the amount of inclination, but is minimal at small inclinations;

(k) the sharing studies included in the Annex I,

RECOMMENDS

1. that FSS geostationary space stations may be operated on satellites in orbit inclined with respect to the equatorial plane without additional constraints beyond those employed for operational purposes within the FSS itself;

or

1. that FSS geostationary space stations be operated on satellites in orbit inclined by no more than X degrees with respect to the equatorial plane;

2. that FSS space stations continue to observe Recommendation 358 from all positions within their orbit;

3. that FS systems continue to observe Recommendation 406;

4. that the following notes may be considered part of this Recommendation.

Note 1 - It is understood that in the large majority of cases the operational constraints referred to in Recommends 1 include, inter alia:

- the amount of inclination is restricted by the absence of tracking capability in most earth stations, and

- satellite beam-pointing shall remain within a reasonable tolerance of the original beam direction.

Note 2 - It is understood that earth stations would be coordinated or re-coordinated, taking into account the degree of tracking used to accommodate the use of inclined orbit.

Note 3 - Recommendations 358 and 406 have values similar to those in Articles 28 and 27 respectively, and the Radio Regulations have precedence.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 220-E
20 February 1992
Original: English

Source: Document 198

COMMITTEE 6

THIRD SERIES OF TEXTS SUBMITTED TO THE EDITORIAL COMMITTEE BY COMMITTEE 4

Attached are the texts for modification of Article 8 of the Radio Regulations, as approved at the sixth meeting of Committee 4.

Within the Committee there was no disagreement of substance on the modifications and they should therefore be considered by the Plenary. Committee 4 agrees to request the Plenary to decide in principle whether such footnotes, which may not be on the agenda of the Conference, should be amended.

I. HUTCHINGS
Chairman of Committee 4

Annex: 1

ANNEX

MOD **446** Additional allocation: in Bulgaria, ~~Hungary,~~ Poland, 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** 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, ~~Hungary,~~ Mongolia, Poland, 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** Additional allocation: in Bulgaria, ~~Hungary,~~ 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** Additional allocation: in Bulgaria, ~~Hungary,~~ Mongolia, Poland, the German Democratic Republic, Roumania, 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**

SUP **481**

SUP **551**

MOD **555** Additional allocation: in Angola, Cameroon, the Congo, Madagascar, Mozambique, Somalia, Sudan, Tanzania~~,~~ and Chad ~~and Yemen (P.D.R. of)~~, the band 47 - 68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a permitted basis.

SUP **569**

MOD **571** Additional allocation: in Bulgaria, China, ~~Hungary,~~ Mongolia, Poland, 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 **581** Additional allocation: in the Federal Republic of Germany, ~~Spain~~, France, Ireland, Italy, Liechtenstein, Monaco, the United Kingdom~~,~~ and Switzerland ~~and Yemen (P.D.R.)~~, 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.

MOD **587** **Mob-87** Additional allocation: in ~~Austria,~~ Bulgaria, ~~Hungary,~~ Israel, Kenya, Mongolia, ~~Poland,~~ Syria, the German Democratic Republic, the United Kingdom, Somalia, 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.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 221-E
20 February 1992
Original: English

COMMITTEE 4

Canada

PROPOSALS FOR THE WORK OF THE CONFERENCE

SPECTRUM FOR MOBILE-SATELLITE SERVICE (MSS) AROUND 1.6 GHz

Introduction

Canada in its proposals to the Conference stated its need to allocate additional spectrum to the mobile-satellite service to meet its future requirements. It was also clear that there was an urgent need to allocate some of this additional spectrum near or preferably adjacent to the existing MSS allocations. Based on the Conference discussions that have taken place thus far, many of the adjacent bands are used by other services and an exclusive allocation would be difficult to achieve. Therefore some additional shareable spectrum must be found.

Canada would like to propose the band 1 670 - 1 700 MHz as an appropriate band for the allocation of the MSS in the Earth-to-space direction. It is virtually adjacent to the existing MSS allocation, and Canada believes it can be shared with the existing meteorological services operating in this band.

Discussion

The band 1 670 - 1 700 MHz is presently allocated as follows:

1 670 - 1 690 MHz	METEOROLOGICAL AIDS
	FIXED
	METEOROLOGICAL-SATELLITE (space-to-Earth)
	MOBILE except aeronautical mobile
1 690 - 1 700 MHz	METEOROLOGICAL AIDS
	METEOROLOGICAL-SATELLITE (space-to-Earth)
	Fixed (Region 1 only)
	Mobile except aeronautical mobile (Region 1 only)

It is Canada's understanding that the main uses of the band 1 670 - 1 700 MHz are by the meteorological-satellite service (space-to-Earth) and meteorological aids services, both of which can be shared with the MSS.

With regard to the usage by METSAT services, it would be possible to carry out coordination between the MSS earth station transmitters (MES) and the METSAT receivers using the procedures in Article 11 and the coordination distance calculations in Appendix 28. An INMARSAT contribution to the CCIR JIWP meeting for WARC-92, indicated separation distances between 140 km to 220 km would be required to protect METSAT receivers from MSS earth station transmitters. In the special case of receive only METSAT stations which are not operating at fixed locations, appropriate measures can be taken to ensure the receive frequencies for such stations will not be used by MSS earth station transmitters in that region or country. Satellite-to-satellite interference i.e., from METSAT satellite transmissions into the MSS space station receivers can be coordinated through the present procedures as given in Articles 11 and 13.

With regard to the sharing between the MSS and the meteorological aids service, sharing difficulties may arise in those portions of the band which contain radiosonde operations. However, it is expected that these radiosonde operations will be gradually migrating to other bands or will be replaced by wind profiler radar systems.

Proposal

CAN/221/1

Based on the INMARSAT sharing studies and similar technical studies carried out in Canada, it would be feasible to share the MSS (Earth-to-space) with the existing meteorological services. Therefore, it is proposed that the band 1 670 - 1 700 MHz* be allocated on a co-primary basis to the MSS (Earth to space), with an appropriate footnote to protect the meteorological services operating in this band.

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* The proposal in EUR/20/78 and by other administrations for terrestrial aeronautical public correspondence (TAPC) in the band 1 670 - 1 675 MHz is noted and the amount of spectrum for MSS in each region would depend on the outcome of this proposal.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

Document 222-E
20 February 1992
Original: English

MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

COMMITTEE 6

Source: Documents DT/79 (Rev. 1) and DT/46 + Corr. 2

THIRD SERIES OF TEXTS FROM THE WORKING GROUP TO THE PLENARY TO THE EDITORIAL COMMITTEE

The Working Group to the Plenary has approved the annexed texts to be submitted to the Editorial Committee for consideration and subsequent transmission to the Plenary Session:

- Resolution GT-PLEN/2
- Resolution 703 (WARC-92)

The Delegations of the Kingdom of Morocco and of Senegal reserved their position with respect to the text of Resolution 703 (WARC-92).

M. MUROTANI
Chairman of the Working Group
to the Plenary

RESOLUTION GT-PLEN/2

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

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

considering

a) that this present Conference has made frequency allocations for the BSS (Sound) down links and associated complementary terrestrial services in the band [(as specified in Article 8)], with an associated interim procedure to govern the introduction of this service;

b) that further technical development is necessary for the introduction of BSS (Sound) in the frequency band mentioned above;

c) that systems in the broadcasting-satellite (sound) service could employ satellites in the geostationary-satellite orbit (GSO) or in other, non-geostationary 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, and between GSO and non-GSO systems of the broadcasting-satellite (sound) service, and between BSS (Sound) systems and other services,

noting

the provisions of No. 2674 in the Radio Regulations,

resolves

1. that the CCIR 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,

   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 broadcasting satellite (sound) systems to publish reports on their experience of such systems;

5. to invite the Secretary-General to bring this Resolution to the notice of the Administrative Council to ensure that the results of CCIR studies are taken into account when establishing the regulatory provisions that may be required for the BSS (Sound).

MOD

RESOLUTION No. 703 (Rev.WARC-92)

Relating to the 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[1]

SUP

~~1 Replaces Resolution No. Spa2-6 of the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971.~~

MOD

The World Administrative Radio Conference ~~(Geneva, 1979)~~ for Dealing with Frequency Allocations in Certain Parts of the Spectrum (Malaga-Torremolinos, 1992),

considering

NOC

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;

NOC

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;

NOC

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;

MOD

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;

MOD

e) that CCIR Plenary Assemblies are held ~~triennially, whereas~~ more frequently and with greater regularity than administrative radio conferences which are competent to modify the Radio Regulations making substantial use of CCIR Recommendations~~, are in practice held less frequently and with much less regularity~~;

ADD

f) that the CCIR has adopted a procedure for approving Recommendations between Plenary Assemblies;

MOD

~~f)~~g) that the International Telecommunication Convention ~~(Malaga-Torremolinos, 1973)~~ 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,

NOC **is of the opinion**

MOD a) that subsequent ~~Plenary Assemblies~~ decisions of the CCIR are likely to make further changes in the recommended calculation methods and interference criteria;

NOC b) that administrations should receive advance information of the drafts of the relevant CCIR Recommendations;

NOC 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;

ADD **invites**

a) the 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;

NOC **resolves that**

ADD 1. the Director of the CCIR, in consultation with Study Group Chairmen, should 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 should forward this list to the IFRB within thirty days following the approval of these Recommendations;

MOD 2. the ~~Secretary-General~~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;

MOD 3. should an administration, in its reply to the ~~Secretary-General~~IFRB's consultation, indicate that a given CCIR Recommendation or technical criterion defined in those Recommendations is unacceptable, ~~or should an administration not reply to the Secretary-General's consultation as in paragraph 3 above,~~ the relevant calculation methods and the interference criteria defined in the Radio Regulations shall continue to apply with respect to cases involving that administration;

MOD 4. the ~~Secretary-General~~IFRB shall publish, for the information of all administrations, a list, ~~prepared by the IFRB~~ on the basis of 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;

MOD 5. The administrations which do not reply to the ~~Secretary General~~IFRB's consultation within four months should inform the IFRB of their decision on the application of these Recommendations under the relevant provisions of the Radio Regulations at a later stage;

MOD 6. the IFRB shall take into account:

a) the applicability of the CCIR calculation methods and the 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 the 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;

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

Corrigendum 1 to
Document 223-E
25 February 1992
Original: English

MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

COMMITTEE 4

Note by the Chairman of the Working Group to the Plenary
to the Chairman of Committee 4

SHARING BETWEEN SERVICES

Please replace item 6 with the following:

"6. Sharing studies to protect existing services in these bands are referenced in CCIR Report to the WARC-92 (Table XI-III). The parameters in this Table include such numbers as -158.5 (W/m²/4 kHz) for Space Research. The report also states that for the METSAT service, under the conditions described in the Table, sharing with LEO systems is feasible. To ensure protection of existing services in the 137-138 MHz and 400.15-401 MHz bands it is necessary to have discussions with concerned Administrations prior to a decision to use these allocations by MSS systems, taking into account CCIR Recommendations and provisions of note No. 598 for aeronautical mobile (OR) service."

M. MUROTANI
Chairman, Working Group to the Plenary

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

Document 223-E
21 February 1992
Original: English

MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

COMMITTEE 4

Note by the Chairman of the Working Group to the Plenary
to the Chairman of Committee 4

SHARING BETWEEN SERVICES

1. The Working Group to the Plenary carried out a quick study in response to a request to WG PL from WG 4B, seeking advice on the questions raised in the attached GT-PLEN/A4 and its Addendum.

2. Where mobile satellite services were added as a primary service, the Working Group to the Plenary considered criteria needed to protect the operation of existing primary service systems. A proposed power flux density limit of -125 dB(W/m²/4kHz) at the Earth's surface was considered to be satisfactory for downlink allocations.

3. In the case where administrations have systems operating in secondary service allocations, the secondary services will and can be protected in the same context in which they are being protected at present. The situation of secondary services will not change if the mobile satellite services do not have the potential for causing any more interference than other existing primary services in the band. For example METSAT produces PFD's of the same order at the surface of the Earth. It is however noted that secondary services are defined in RR 420.

4. Noting the above, and the advice provided by the Chairman of WG 4B to the Chairman of WG Plenary (Doc. GT-PLEN/A4 Add. 1), the Working Group to the Plenary revised footnotes 599A, 647X, 608X, 608Y which may be found in the annex. The Working Group to the Plenary took into account the Indian proposal included in IND/34/5.

5. The Working Group to the Plenary proposes that the following footnote be added to the PFD limits quoted in 599A and 647X:

"The provisions of No. 599A (or 647X) shall apply until such time as the CCIR has made a Recommendation on the maximum allowable power flux-density at the Earth's surface."

6. During discussions one Administration pointed out the necessity of establishing different limits for protecting various services.

M. MUROTANI
Chairman, Working Group to the Plenary

ANNEX

ADD **599A** Coordination of mobile satellite systems will be in accordance with the provisions [of Resolution]. The power flux density of the mobile-satellite service will not exceed -125 dB(W/m²/4 kHz) at the surface of the Earth [unless otherwise agreed by the affected administrations]. In making assignments to the space stations in the mobile satellite service in the 137 - 138 MHz band, administrations shall take all practicable steps to protect the radioastronomy service in the 150.05 - 153 MHz band from harmful interference from unwanted emissions. (RR 2904 applies.)

ADD **647X** Coordination of mobile satellite systems will be in accordance with the provisions [of Resolution]. The power flux density of the mobile-satellite service will not exceed -125 dB(W/m²/4 kHz) at the surface of the Earth [unless otherwise agreed by the affected administrations]. In making assignments to the space stations in the mobile satellite service in the 400.15 - 401 MHz band, administrations shall take all practicable steps to protect the radioastronomy service in the 406.1 - 410 MHz band from harmful interference from unwanted emissions. (RR 2904 applies.)

ADD **608X** The mobile-satellite service shall not constrain the development and use of fixed, mobile and space operations services in this allocation. MSS mobile earth station transmitters will not cause a power flux density in excess of -150 dB(W/m²/4 kHz) outside of national boundaries.

ADD **608Y** The mobile-satellite service shall not constrain the development and use of the band 149.9 - 150.05 MHz by the radionavigation-satellite service. MSS mobile earth station transmitters will not cause a power flux density in excess of -150 dB(W/m²/4 kHz) outside of national boundaries.

ATTACHMENT I

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

Document GT-PLEN/A4-E
19 February 1992
Original: English

MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Request to WG PL from WG 4B

Subject of the Study:

Sharing between services

Working Group 4B is addressing proposals to add the Mobile-satellite service on either a primary or secondary basis, to the bands 137-138 MHz and 400.15-401 MHz for space-to-Earth links, and to the band 148-149.9 MHz for Earth-to-space links. Some associated footnotes are also proposed. The detailed proposals are contained in Document DT/71 (Rev. 1). The application is likely to be low-earth-orbit satellites.

Advice sought

Working Group 4B seeks the advice of the Working Group to the Plenary on the following questions:

1. The mobile-satellite services were added as a primary service. What criteria would be needed to protect the operation of existing primary service systems?

2. Noting that many administrations have systems operating in secondary service allocations, such as fixed and mobile, how can protection be guaranteed to these secondary systems from harmful interference caused by the mobile-satellite service systems?

3. Would you please review, revise or advise on the appropriateness of the related proposed footnotes in Document DT/71 (Rev. 1) i.e. 599A, 647X, 608X and 608Y. Concerning protection of the radioastronomy service in from unwanted emissions from the mobile-satellite service in nearby bands, you may wish to take into account a proposal from India of which you are aware.

Time

Advice on these matters by Friday morning of 21/1/92 would assist our considerations.

G.F. Jenkinson
Chairman, Working Group 4B
19/2/92

ATTACHMENT II

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

Addendum 1 to
Document GT-PLEN/A4-E
20 February 1992
Original: English

MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Request to WG PL from WG 4B

To: Chairman WG Plenary
From: Chariman WG4B

Subject: Further Clarification of Working Group 4B Request for Advice on Sharing Between Services

DT 71 Rev 1

The Administration proposing to protect RA in the 150.05 - 153.0 and 406.1 - 410 MHz bands at a level of -223 dB(W/m2/4 kHz) stated in COM 4B that they accepted the attached text for these footnotes. Therefore it is unecessary to address the -223 dB(W/m2/4 kHz) in FN 599A and 647X.

FN 599A, 647X and 608X. Also, the Administrations that proposed to allow the PFD to be exceeded for 1 % of the time agreed to remove that requirement. Therefore it is unecessary to address the percent of time expressed in FN 599A, 647X and 608X.

G.F. Jenkinson
Chairman, WG4B

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 224-E
21 February 1992
Original: English

COMMITTEE 4

Source: Documents 165 and DT/71(Rev.1)

First Report of the Chairman of Working Group 4B to Committee 4

Working Group 4B submits the following texts on modifications of Article 8 for approval by Committee 4.

MOD **635** Alternative allocation: in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, ~~and~~ 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.

MHz
410 - 420

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

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

MHz
400.15 - 401

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**400.15 - 401**	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) 647A Space Operation (space-to-Earth) 647	

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

MHz
942 - 960

MOD

Allocation to Services		
Region 1	Region 2	Region 3
942 - 960	942 - 960	942 - 960
FIXED	FIXED	FIXED
MOBILE except aeronautical mobile	~~Mobile~~ MOBILE	MOBILE
BROADCASTING 703		BROADCASTING
704	~~708~~	701

SUP 708

MOD 596 Different category of service: in Afghanistan, Saudi Arabia, Bahrain, Brunei, China, the United Arab Emirates, India, Indonesia, Iran, Iraq, ~~Kuwait,~~ Malaysia, Oman, Pakistan, Philippines, Qatar, Singapore~~,~~ and Thailand, ~~Yemen A.R. and Yemen (P.D.R. of),~~ the allocation of the band 137 - 138 MHz to the fixed and mobile, except aeronautical mobile (R), services is on a primary basis (see No. 425).

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

SUP 614

MOD 621 Mob-87 Additional allocation: in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Monaco, Norway, the Netherlands, the United Kingdom, Sweden~~,~~ and Switzerland ~~and Yemen (P.D.R. of)~~, 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, nor 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, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Luxembourg, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Sweden~~,~~ and Switzerland ~~and Yemen (P.D.R. of)~~, 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, nor claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote.

SUP **633**

SUP **634**

MOD **675** Different category of service: in Chile, Colombia, Ecuador, the United States, Guyana ~~and~~, Jamaica and Mexico, 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, Israel, Kenya, Libya, Senegal, Sudan, and Syria ~~, and Yemen (P.D.R. of)~~, the band 470 - 582 MHz is also allocated to the fixed service on a secondary basis.

MOD **678** Additional allocation: in Costa Rica, El Salvador, Ecuador, the 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**

MOD **659** Additional allocation: in Angola, Bulgaria, Cameroon, the Congo, Gabon, Hungary, Mali, Mongolia, Niger, 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 **627** In Region 2, ~~the band 216 - 225 MHz is allocated to~~no new stations in the radiolocation service ~~on a primary basis until 1 January 1990~~may be authorized in the band 216 - 225 MHz. ~~On and after 1 January 1990, no new stations in that service may be authorized.~~ Stations authorized prior to 1 January 1990 may continue to operate on a secondary basis.

MOD **703** In Region 1, in the band 862 - 960 MHz, stations of the broadcasting 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. ~~Such operations shall be in accordance with the Final Acts of the African VHF/UHF Broadcasting Conference, Geneva, 1963.~~

MOD **672** Different category of service: in Afghanistan, Bulgaria, China, Cuba, ~~Hungary,~~ 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.

G.F. JENKINSON
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 225-E
21 February 1992
Original: English

COMMITTEE 4

Indonesia

PROPOSALS FOR THE WORK OF THE CONFERENCE

SELECTION HDTV DOWN LINK

Advantage of lower bands

It is the wish of the majority of, if not all, developing countries to be able to access new services and technologies in an economical way.

In the case of HDTV the selection of lower band spectrum will be an advantage in avoiding high attenuation. For tropical countries the difference between the down-link band of 21 GHz and 17 GHz could vary between 6 dB and 10 dB for 1% of the worst month.

Even in temperate zones like in Spain and many European countries during heavy rains, attenuation could be so high that the quality of the picture will be impaired.

Selection of global allocation

During the Conference four (4) down-link bands have been discussed, i.e. 12 GHz, 17 GHz, 21 GHz and 25 GHz. We propose the following:

First phase: to develop the 12 GHz band as the initial stage;

Long term: to allocate 17.3 - 17.8 GHz as the long-term plan (say 15-20 years) on a global basis.

This implies that the fixed services have to be exempted on a phased basis, and to move to higher bands with not too great a sacrifice when planned in a timely and phased manner. However, for tropical countries this would be much better, instead of possessing an HDTV service where most of the people cannot receive it because they have to pay a high price for an expensive receiver. A high-powered satellite, besides being expensive could also cause interference to other systems or services. It would be better to solve it at present instead of deferring it until it is too expensive to reverse, as the future will not be too far away.

For most developed and industrial countries in the temperate zone, although they will not be directly impacted by selecting a higher band, say 21 GHz or 25 GHz; their broadcasters' interest and industry would in the long run be deprived of selling their broadcast services and equipment to most developing countries especially potential tropical countries.

Regional allocation

We object strongly to this idea, which will not be of benefit towards the information age and will be detrimental even to the countries who imagine to reach benefits by isolating themselves.

Conclusion

We propose that this Conference recommends the bands 12 GHz and 17.3 - 17.8 GHz for HDTV down-link global allocation, and the band 25 GHz for a limited (temperate zone) or global allocation pending CCIR studies to be decided by the next conference.

LECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 226-E
22 February 1992
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COMMITTEE 2

SECOND REPORT OF WORKING GROUP 2A TO COMMITTEE 2

1. The Working Group of Committee 2 (Credentials) held a second meeting on 21 February 1992, at which it examined the credentials of the following delegations:

Algeria (People's Democratic Republic of)
Botswana (Republic of)
Burundi (Republic of)
United Arab Emirates
Greece
Guinea (Republic of)
Kuwait (State of)
Libya (Socialist People's Libyan Arab Jamahiriya)
Nigeria (Federal Republic of)
Syrian Arab Republic
Czech and Slovak Federal Republic
Uruguay (Eastern Republic of)

All the above credentials were in order.

2. The Working Group also declared that the instrument for the transfer of powers from Belize to the delegation of the Commonwealth of the Bahamas was in order (see Document 155).

J.A. PADILLA LONGORIA
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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26 February 1992
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COMMITTEE 4

Botswana, Cameroon, Central African Republic, Côte d'Ivoire, Ghana, Guinea, India, Malawi, Mozambique, Tanzania, Tonga, Uganda, Zambia, Zimbabwe

PROPOSALS FOR THE WORK OF THE CONFERENCE

INTRODUCTION OF LOW-EARTH ORBIT (LEO) SYSTEMS ABOVE 1 GHz

The Arusha Declaration of the first World Development Conference, 1984, endorsed the conclusions of the Independent Commission for Worldwide Telecommunications Development to bring a telephone within easy reach for all mankind by the beginning of the next century.

Since 1984, spectacular progress has been made with satellite and terrestrial mobile radiocommunications technologies, including digital cellular applications.

The experiences and adaptation of low-Earth orbit (LEO) satellite applications provide opportunities to introduce with flexibility and speed person-to-person communications irrespective of location on our globe. LEOs provide opportunities for service applications to remote areas of both developed and developing countries, not presently served, or insufficiently served through existing telecommunication applications and thus serve as a stimulator towards enhanced social and economic development.

With appropriate radio frequency accommodation at WARC-92, LEOs system applications could be available in the mid-1990s with more rapid progress towards the achievement of the "Missing Link" objectives.

The above Administrations support proposals for radio spectrum allocation for voice and data LEOs systems including appropriate sharing arrangements with other services. The operation of any such service in/or from the territory of any country would be subject to national law and agreed financial, technical and operating arrangements.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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Cameroon, Côte d'Ivoire, Ghana, Guinea, India, Mozambique, Tanzania, Tonga, Uganda, Zambia, Zimbabwe

PROPOSALS FOR THE WORK OF THE CONFERENCE

INTRODUCTION OF LOW-EARTH ORBIT (LEO) SYSTEMS ABOVE 1 GHz

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INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 228-E
21 February 1992
Original: French

Republic of Guinea

PROPOSAL FOR THE WORK OF THE CONFERENCE

IMPLEMENTATION OF LOW-ORBIT SATELLITE SYSTEMS IN THE FREQUENCY BANDS ABOVE 1 GHz

The Republic of Guinea favours the allocation of frequencies to low-Earth orbit satellite systems on a worldwide basis in the bands:

- 1 610 - 1 626.5 MHz (Earth-to-space on a primary basis);
- 1 613.8 - 1 626.5 MHz (space-to-Earth on a secondary basis);
- 2 483.5 - 2 500 MHz (space-to-Earth) or an appropriate band.

This proposal, which is in keeping with the modernization of the world telecommunication network and the need to optimize investment costs, takes into account measures for reducing the risk of interference with existing services in and around the bands in question.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

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MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

COMMITTEE 5

Note from the Chairman of the Working Group to the Plenary
to the Chairman of Committee 5

EIRP LIMITS OF THE TERRESTRIAL SYSTEMS TO PROTECT THE INTER-SATELLITE SERVICE ABOVE 20 GHz

1. The Working Group to the Plenary has reviewed the two proposals contained in USA/12/138 (ADD 2512) and EUR/46/18 (ADD 2512) concerning EIRP limits of the terrestrial systems to protect the inter-satellite service above 20 GHz.

2. A draft text for e.i.r.p. limits in the bands is attached.

Note 1 - The CCIR Recommendation referred to in 2512.2 is expected to become an official CCIR Recommendation on 6 May 1992 in accordance with CCIR Resolution 97.

Note 2 - The attention of Committee 5 is drawn to the desirability of replacing "Report 393" in RR 2502.1 and RR 2506.1 also by "Recommendation [4/53-9/84]".

M. MUROTANI
Chairman of the Working Group to the Plenary

ARTICLE 27

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

MOD **2504** (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. 2512.

MOD **2511** (7) The limits given in Nos 2505 and 2508 apply in the following frequency bands allocated to the fixed-satellite service and 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 - 18.1 GHz
[25.25 –29.5 GHz
~~27.0 - 27.5 GHz[2]~~ ~~(for Regions 2 and 3)~~
~~27.5 - 29.5 GHz~~]

SUP **2511.2**

ADD **2512** A 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[1,2].

ADD **2512.1** [1] The provisions of No. 2512 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.

ADD **2512.2** [2] Information on this subject is given in the most recent version of CCIR Recommendation [4/53-9/84].

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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21 February 1992
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Source: Document 214

COMMITTEE 4

Note by the Chairman of Committee 4

DRAFT NEW RECOMMENDATION [COM4/A2]

RELATING TO THE 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 transmitters 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 present Conference has allocated additional spectrum for the broadcasting service in the HF bands,

recommends

that administrations should take practicable steps to eliminate HF broadcasting outside the HF bands allocated to the broadcasting service.

I. HUTCHINGS
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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COMMITTEE 6

FOURTH SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

Committee 4, at its seventh meeting, adopted the following texts:

1) Modifications to Article 8 of the Radio Regulations as contained in Annex 1 to Document 213.
2) Modifications to Article 8 of the Radio Regulations as contained in Annex 1 to Document 213, with an amendment to RR 518 (deletion of SWZ).
3) Recommendation COM4/A (Annex 2 to Document 213), with amendments.

The above texts are submitted to the Editorial Committee for consideration and subsequent transmittal to the Plenary Meeting.

I. HUTCHINGS
Chairman

Annexes: 3

ANNEX 1

kHz
5 730 - 6 200

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**5 730 - ~~5 950~~5 900** FIXED LAND MOBILE	**5 730 - ~~5 950~~5 900** FIXED MOBILE except aeronautical mobile (R)	**5 730 - ~~5 950~~5 900** FIXED Mobile except aeronautical mobile (R)
MOD	**5 900 - 5 950**	BROADCASTING 505A 505B 505C	
NOC	**5 950 - 6 200**	BROADCASTING	

ADD **505A** 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 characteristics specified in Appendix 45 to the Radio Regulations.

ADD **505B** The use of 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 by the competent WARC.

ADD **505C** 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 the procedure described in Resolution No. [Document COM5]. 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 services. When using frequencies in these services, the 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.

kHz
7 300 - 8 100

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	7 300 - 7 350	BROADCASTING 505A 505B 528A	
MOD	~~7 300~~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 service on a primary basis and to the land mobile service on a secondary basis, subject to the procedure described in Resolution No. [Document COM5]. 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 services. When using frequencies in these services, the 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.

kHz
9 040 - 9 900

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	9 040 - ~~9 500~~9 400	FIXED	
MOD	9 400 - 9 500	BROADCASTING 505A 505B 529B	
NOC	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, 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 the procedure described in Resolution No. [Document COM5]. 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 services. When using frequencies in the fixed service, the 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.

kHz
11 400 - 12 230

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	11 400 - ~~11 650~~11 600	FIXED	
MOD	11 600 - 11 650	BROADCASTING 505A 505B 529B	
NOC	11 650 - 12 050	BROADCASTING 530 531	
MOD	12 050 - 12 100	BROADCASTING 505A 505B 529B	
MOD	~~12 050~~12 100 - 12 230	FIXED	

kHz
13 410 - 14 000

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	13 410 - ~~13 600~~13 570	FIXED Mobile except aeronautical mobile (R) 534	
MOD	13 570 - 13 600	BROADCASTING 505A 505B 534A	
NOC	13 600 - 13 800	BROADCASTING 531	
MOD	13 800 - 13 870	BROADCASTING 505A 505B 534A	
MOD	~~13 800~~13 870 - 14 000	FIXED Mobile except aeronautical mobile (R)	

ADD **534A** 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 the procedure described in Resolution No. [Document COM5]. 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 services. When using frequencies in these services, the 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.

kHz
15 100 - 16 360

	Allocation to Services		
	Region 1	Region 2	Region 3
NOC	**15 100 - 15 600**	BROADCASTING 531	
MOD	**15 600 - 15 800**	BROADCASTING 505A 505B 529B	
MOD	**~~15 600~~15 800 - 16 360**	FIXED 536	

kHz
17 410 - 17 900

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**17 410 - ~~17 550~~17 480**	FIXED	
MOD	**17 480 - 17 550**	BROADCASTING 505A 505B 529B	
NOC	**17 550 - 17 900**	BROADCASTING 531	

kHz
18 900 - 19 680

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**18 900 - 19 020**	BROADCASTING 505A 505B 529B	
MOD	**~~18 900~~19 020 - 19 680**	FIXED	

ANNEX 2

Proposed actions with respect to footnotes in Article 8 of the Radio Regulations

MOD **518** In Afghanistan, Argentina, Australia, Botswana, Burkina Faso, Central African Republic, China, India, Niger, ~~Swaziland,~~ 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**

SUP **537**

SUP **543**

SUP **544**

MOD **572** The frequency 75 MHz is assigned to earonautical marker beacons. Administrations 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.

~~Until 31 December 1989, administrations in Regions 2 and 3 should refrain from assigning frequencies to stations of other services in the bands 74.6 - 74.8 MHz and 75.2 - 75.4 MHz.~~

~~In the future every~~ 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.

SUP **582**

ANNEX 3

RECOMMENDATION [COM4/A]

Relating to the Introduction of Single-Sideband Emissions and Possible Advancement of the Date for Cessation of the Use of Double-Sideband 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 the WARC HFBC-87 in Resolution No. 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 single-sideband (SSB) instead of double-sideband (DSB) modulation techniques would lead to improved spectrum utilization;

c) that in accordance with Recommendation No. 515 (HFBC-87) new HF broadcasting transmitters installed after 31 December 1990 should as far as possible be capable of operating either in both modes, 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 No. 517 (HFBC-87) specifies the date of 31 December 2015 for the cessation of DSB emissions;

f) that, prior to the final confirmation of the date for the cessation of DSB transmissions in the HF broadcasting service, there is a need for periodical reviews, by competent world administrative radio conferences, of the complete statistics on the worldwide distribution of SSB transmitters and synchronous demodulator receivers, as stipulated in Resolution No. 517 (HFBC-87),

recommends

that the next competent WARC 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.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

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COMMITTEE 5

Note by the Chairman of the Working Group to the Plenary
to the Chairman of Committee 5

ADDITIONAL ORBITAL CHARACTERISTICS TO BE PROVIDED WITH THE DATA ALREADY LISTED IN APPENDICES 3 AND 4 TO ALLOW THE EVALUATION OF INTERFERENCE TO AND FROM NON-GEOSTATIONARY SATELLITE NETWORKS

At the request of the Chairman of Sub-Working Group 5B3, the Working Group to the Plenary offers the following comments.

1. Five parameters are necessary to technically describe a non-geostationary orbit:

- apogee and perigee already required by Appendices 3 and 4,
- inclination already required by Appendices 3 and 4,
- right ascension,
- argument of perigee.

A sixth parameter (e.g. time of the perigee) would be needed to know the position of the satellite in the orbit at a given time, but it is not practical to provide this information prior to the launch of a satellite. It should be noted that definitions of these additional terms will be needed if they are to be required in Appendices 3 and 4.

2. The values of these parameters change over time in a complex manner, and initially notified values for these parameters may not accurately describe the orbit after several years of operation.

3. The provision of additional orbital parameters beyond that specified in Appendices 3 and 4 may be of use in the initial assessment of interference and coordination of non-geostationary systems involving a few satellites, but the additional information for non-geostationary systems involving large numbers of satellites providing continuous global coverage is likely to be voluminous and of less utility in the initial coordination of such systems.

4. The technical criteria needed for coordination of non-geostationary satellite systems are not well established at this time, and it is not practical to specify all necessary parameters at this time. Thus, some flexibility is needed in the provision of additional technical information in Appendices 3 and 4 until additional CCIR studies are completed.

M. MUROTANI
Chairman of the Working Group to the Plenary

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

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COMMITTEE 4

Note from the Chairman of the Working Group to the Plenary
to the Chairman of Committee 4

At the request of the Chairman of Working Group 4C (see Document 177), the Working Group to the Plenary examined proposal J/27/65 (ADD 881B). After consideration, the Japanese delegation informed the Working Group to the Plenary that they will withdraw the proposal. Therefore, no action is required on the proposal J/27/65.

M. MUROTANI
Chairman of the Working Group to the Plenary

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 234-E
21 February 1992
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COMMITTEE 4

Australia, Brazil, Chile, the United States, India, Indonesia, Lebanon, Morocco, Mexico, Nigeria, Venezuela

PROPOSAL FOR THE WORK OF THE CONFERENCE

148 - 149.9 MHz

Allocation to Services		
Region 1	Region 2	Region 3
148 - 149.9	**148 - 149.9**	
FIXED	FIXED	
MOBILE except aeronautical mobile (R)	MOBILE	
	MOBILE-SATELLITE (Earth-to-space)	
MOBILE-SATELLITE (Earth-to-space)		
608 608X 608Z	608 608X	

ADD **608X** (See Document DT/71(Rev.1))

ADD **608Z** Stations of the mobile-satellite service shall not cause harmful interference to, or claim protection from, fixed or mobile stations in countries [XXX, YYY, ZZZ] that operate in accordance with the Table.

Reasons: To accommodate the desire of certain administrations to allocate the low-Earth orbit mobile-satellite service up link at 148 - 149.9 MHz on a non-interference basis within their borders, while preserving the ability to obtain the resources necessary to construct the required satellite networks by maintaining a worldwide primary allocation in this band.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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Source: Document 206

COMMITTEE 4

REPORT FROM THE CHAIRMAN OF AD HOC GROUP 2 TO THE CHAIRMAN OF COMMITTEE 4

Agenda item 2.2.5

1. Ad hoc Group 2 to Committee 4 held one meeting on 21 February 1992 to consider the matter of an alternative approach to address the imbalance between the up-link and down-link spectrum allocated to the fixed-satellite service in the bands between 10 - 17 GHz. The ad hoc Group was tasked with this effort by Committee 4 on the basis of the report of Working Group 4C which was unable to fully resolve the matter.

2. Ad hoc Group 2 used, as a basis for its discussion, Documents 204 and 206. Document 206 contained, as an Annex, a proposed modification to the 13.75 - 14.0 GHz portion of the spectrum in Article 8 together with two new footnotes and a Resolution relating to the allocation of frequencies in the band 13.75 - 14.0 GHz.

3. Following an active discussion of the implications of Document 206 and the incorporation of ideas presented by the Administration of Spain in Document 204, ad hoc Group 2 was able to agree to a proposed revision of Article 8 and to a proposed draft Resolution. The texts of those agreements are annexed to this report.

4. There are two parts of the Annex which appear in square brackets. One part is **resolves** 5 of the Resolution. This **resolves** was proposed by the representative of the Netherlands but there was not enough time to fully discuss its implications. It is recommended that Committee 4 should hold such a discussion.

5. The second part of the Annex in square brackets is the whole of the modification to Article 8. These square brackets represent the concern of the Russian Federation as to the competency of the ad hoc Group to address this matter. The delegate of the Russian Federation stated that his Administration would address this matter at the Committee level.

H.G. KIMBALL
Chairman

Annex: 1

ANNEX

DRAFT RESOLUTION

Relating to the 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 present Conference has made an additional allocation to the FSS 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 FSS and RLS;

c) that the impact of the FSS allocation on the SRSS and EESS needs to be studied;

[d) the impact of the additional FSS allocation in the use of SRSS and EESS under the provisions of Footnote 713 and the scientific and environmental value of the observations by active sensors,]

recognizing

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

[b) Until 1 January 2000, stations in the fixed-satellite service shall not cause harmful interference to non-geostationary space stations in the SRSS and EESS,]

resolves

1. to invite the CCIR to conduct the necessary studies, prior to 31 January 1994, with respect to values given in the footnotes related 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 invite administrations and other organizations interested in these radio services to participate in the work of the CCIR;

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

4. to invite the Secretary-General to bring this Resolution to the attention of the Administrative Council and the next full Plenipotentiary Conference with a view to including the review of the footnotes in the agenda of the first World Administrative Radio Conference;

[5. to invite the CCIR to conduct the necessary studies with regard to sharing between SRSS and EESS and the FSS (Earth-to-space) in the band 13.75 - 14 GHz.]

GHz
13.75 - 14

Allocation to Services		
Region 1	Region 2	Region 3
MOD ~~13.4~~13.75 - 14	RADIOLOCATION FIXED-SATELLITE (Earth-to-space) Standard Frequency and Time Signal-Satellite (Earth-to-space) Space Research 713 853 854 855 855A 855B	

ADD **855A** 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 toward 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 Res. ...).

ADD **855B** In the band 13.75 - 14 GHz geostationary space stations in the space research satellite service, and in the earth exploration-satellite service which have received advance publication prior to 31 January 1992, shall operate on an equal basis with stations in the fixed-satellite service.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Addendum 2 to
Document 236-E
25 February 1992
Original: English

COMMITTEE 4

Source: Document 236 + Add.1

Note from the Chairman of Committee 4

Further to the discussions on the subject treated in Document 236, attached are the texts related to the allocations in the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz.

I. HUTCHINGS
Chairman of Committee 4

GHz
19.7 - 20.2

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

MOD **873** Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Brazil, Cameroon, China, the Congo, the Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Kenya, Kuwait, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, 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 [and mobile-satellite] service[s].

ADD **873A** 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] [sensitive] 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 bands 20.1 - 20.2 GHz and 29.9 - 30 GHz in Regions 1 and 3, networks in the fixed-satellite service and in the mobile-satellite service may accommodate links between earth stations at specified or unspecified points or while in motion, through one or more satellites for point-to-point and multi-point communications.

ADD **873C** In the bands 19.7 - 20.2 GHz and 29.5 - 30 GHz, the provisions of No. 953 do not apply.

ADD **873D** Administrations operating systems in the mobile-satellite service in the band 20.1 - 20.2 GHz are urged to take all practicable measures to ensure the continued availability of these bands for administrations operating fixed and mobile systems in accordance with the provisions of RR 873.

GHz
29.5 - 30

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

MOD **883** Additional allocation: in Afghanistan, Algeria, Saudi Arabia, Bahrain, Cameroon, China, the Republic of Korea, the United Arab Emirates, Ethiopia, India, Indonesia, Iran, Iraq, Israel, Japan, Kenya, Kuwait, the Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, 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.

[DRAFT RECOMMENDATION COM4/]

Relating to 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 on a primary basis;

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 No. 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 evaluating service definitions accommodating a range of services,

recognizes

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 made of the technical characteristics, including pointing techniques, of multiservice satellites and the sharing criteria necessary for compatibility with the fixed-satellite service in the frequency bands recommended above,

requests the CCIR

to carry out 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 and fixed-satellite applications and the possible need for additional frequency spectrum to accommodate the growth of these services.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Addendum 1 to
Document 236-E
24 February 1992
Original: English

COMMITTEE 4

NOTE FROM THE CHAIRMAN OF AD-HOC GROUP 3 TO COMMITTEE 4

Attached are the proposed modifications to Article 8.

R.M. TAYLOR

Chairman of Ad-hoc 3 to Committee 4

Annex

ANNEX 1

GENERAL SATELLITE SERVICE (GSS)

GHz
18.8 - 22.5

Allocation to Services		
Region 1	Region 2	Region 3
19.7 - ~~20.2~~ 20.1 FIXED-SATELLITE (space-to-Earth) Mobile-satellite (space-to-Earth) 873	**19.7 - ~~20.2~~ 20.1** FIXED-SATELLITE (space-to-Earth) GENERAL-SATELLITE (space-to-Earth) Mobile-satellite (space-to-Earth) 873	**19.7 - ~~20.2~~ 20.1** FIXED-SATELLITE (space-to-Earth) Mobile-satellite (space-to-Earth) 873
20.1 - 20.2 FIXED-SATELLITE (space-to-Earth) GENERAL-SATELLITE (space-to-Earth) Mobile-satllite (space-to-Earth) 873 873A		

873A In making assignments to mobile earth stations in Region 2, administrations are urged to consider the use of the bands 20.1 - 20.2 GHz and 29.9 - 30.0 GHz in order to facilitate inter-regional sharing in the remainder of the band.

GHz
24.25 - 31.3

Allocation to Services		
Region 1	Region 2	Region 3
29.5 - ~~30.0~~ 29.9 FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) Earth-exploration satellite (Earth-to-space) 882C, 882A, 882B, 882, 883	**29.5 - ~~30.0~~ 29.9** FIXED-SATELLITE (Earth-to-space) GENERAL-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) Earth-exploration satellite (Earth-to-space) 882C, 882A, 882B, 882, 883	**29.5 - ~~30.0~~ 29.9** FIXED-SATELLITE (Earth-to-space) Mobile-satellite (Earth-to-space) Earth-exploration satellite (Earth-to-space) 882C, 882A, 882B, 882, 883
29.9 - 30.0 FIXED-SATELLITE (Earth-to-space) GENERAL-SATELLITE (Earth-to-space) Mobile-satllite (Earth-to-space) Earth-exploration satellite (Earth-to-space) 873A, 882A, 882B, 882, 883		

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 236-E
21 February 1992
Original: English

COMMITTEE 4

Report from the Chairman of ad hoc Group 3 to Committee 4
to the Chairman of Committee 4

GENERAL-SATELLITE SERVICE

1. Ad hoc Group 3 to Committee 4 met to consider allocation alternatives for the general-satellite service. The agenda is in Document Ad hoc 3/C4-1(Rev.1). The meeting was attended by delegates from Russia, the United States, Mexico, France, the United Kingdom, Mali, Australia, Japan, Italy, Singapore, Sweden, Canada, Nigeria, Niger, China, Spain, the Netherlands, Israel, El Salvador and representatives from INTELSAT and EUTELSAT.

2. Terms of reference were agreed as follows: "To identify, from options contained within Document DT/74, a single option to put forward to Committee 4 which meets the requirements of the proposing administrations and addresses the concerns of affected administrations. Due account should be taken of the report of the Chairman of Working Group 4C to the Chairman of Committee 4 (Document 207)".

3. The status of the options in Document DT/74 was reviewed.

4. Option a) from Document DT/74 was offered by the Chair for support. Three Administrations (the United States, Mexico, Canada) supported discussion of this option.

Option b) from Document DT/74 was offered for support. Nine administrations agreed that this option, together with elements of option c), provided good grounds for discussion which could lead to a compromise solution.

5. The compromise solution to be considered in detailed discussion was agreed as follows:

An allocation to the general-satellite service, with primary status, on a worldwide basis in a portion of the frequency bands 19.7 - 20.2 GHz (space-to-Earth) and 29.5 - 30.0 GHz (Earth-to-space), as well as consideration of the allocation of up to 500 MHz, allocated with the same status within Region 2. The FSS primary allocation would be retained worldwide in 19.7 - 20.2 GHz and 29.5 - 30.0 GHz.

6. Discussion

Of the nine administrations supporting this discussion, six expressed the importance of protecting existing allocations and several indicated specific concern about the sharing situation with planned implementation of VSATs in the fixed-satellite service (FSS).

The delegate of Japan suggested that an allocation to the GSS should be placed in square brackets for the time being.

In response to a question from the Chair, INTELSAT indicated that the organization has plans to introduce FSS systems into these bands for VSAT, SNG and other applications. On further questioning, INTELSAT stated that its sharing studies, vis-à-vis FSS systems and foreseen GSS type systems, show that sharing between large bandwidth carriers (such as FM TV) in the FSS and low-power personal communications represented the worst-case example of inhomogeneity between such systems. Further, provided that FSS and GSS allocations were on a co-equal basis and that GSS were not allocated to the whole band, then such concerns could be addressed in the coordination process. Additionally, INTELSAT stated that there is probably a wide range of applications where interoperability between GSS and FSS systems would be successful but that further studies of these sharing concerns are required within the CCIR.

The Netherlands expressed concern, with support from the United Kingdom, about the terminology used to define the general-satellite service and suggested that upgrading the mobile-satellite service allocation in these bands would be preferable.

The United Kingdom stated that it might have been easier to address this need in some frequency bands other than those allocated exclusively to the FSS.

In response to a question from the Chair, INTELSAT offered the opinion that the sharing situation, particularly interregional sharing, would be more difficult with MSS systems, particularly noting that the safety aspects of the MSS service would pose a problem. Further discussion within the Group clarified that a MSS upgrade is not equivalent to a GSS allocation.

Questions regarding sharing situations, interregional, regional and domestic, together with concerns about orbit/spectrum resource utilization dominated much of the discussion. Results of worst-case inhomogeneity and best-case homogeneity studies were presented by the United States and Canada in response to specific questions. In regard to the safety issue, it was stated that a simple exclusion along the lines of RR 753A could be used.

The mood of the delegates appears to represent a spirit of accommodation and a willingness to find a compromise solution.

The questions remaining to be addressed are three:

1. How much bandwidth per region should be allocated?
2. Where specifically in the 19.7 - 20.2 GHz and 29.5 - 30.0 GHz bands should the allocations be placed?
3. Are any regulatory provisions (e.g. footnotes) required to protect existing allocations?

In response to these questions, after much discussion, it was agreed to recommend for consideration by Committee 4 the following allocations to the general-satellite service on a primary co-equal basis with the fixed-satellite service:

Region 1: 20.1 - 20.2 GHz (space-to-Earth) and 29.9 - 30.0 GHz (Earth-to-space);

Region 2: 19.7 - 20.2 GHz (space-to-Earth) and 29.5 - 30.0 GHz (Earth-to-space);

Region 3: [20.1 - 20.2 GHz] (space-to-Earth) and [29.9 - 30.0 GHz] (Earth-to-space).

Note - The square brackets around the Region 3 allocation indicates that one administration is not entirely satisfied that as much as 100 MHz is needed to meet this requirement.

Committee 4 is requested to consider the applicability of RR 2613 and RR 953 to these allocations.

Committee 4 is requested to consider adding a footnote to RR Article 8 along the following lines:

"In making assignments to mobile earth stations in Region 2, administrations are urged to consider the use of the bands 20.1 - 20.2 GHz and 29.9 - 30.0 GHz" in order to facilitate inter-regional sharing in the remainder of the band."

Committee 4 is also requested to consider the allocation of the band 29.9 - 30.0 GHz to the fixed-satellite service for uplink power control beacons as it may affect these allocations to the general-satellite service.

A draft Recommendation should be prepared inviting the CCIR to study as a matter of urgency the technical characteristics of the GSS and sharing criteria necessary for compatibility with other services which may be affected by its implementation. A draft Recommendation is attached [text to be provided].

The United Kingdom, speaking for a number of CEPT member Administrations, expressed strong reservations concerning the specific language used in the formulation of the definition of the service. This issue may be raised in discussions in Committee 5.

R.M. TAYLOR
Chairman

Annex: 1

ANNEX

[DRAFT RECOMMENDATION [ ]

Relating to Sharing Frequency Bands Between the Fixed-Satellite Service and 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 [GSS];

b) that these bands are already allocated to the FSS;

c) that some administrations have expressed interest in developing multiserivce satellite networks in these bands;

d) that Recommendation No. 715 (Orb-88) calls for simplification of the process for bringing into use satellite networks with different classes of user terminals,

recognizes

that the introduction of multiservice satellite networks using inter-alia mobile earth stations may have an impact on networks operating in the FSS,

recommends

that, as a matter of urgency, studies should be made of the technical characteristics of multiservice satellites and the sharing criteria necessary for compatibility with the FSS in the frequency bands recommended above,

requests the CCIR

to carry out these studies,

recommends further

that a future competent world administrative conference review the allocations of these bands, taking into account the results of the CCIR studies.]

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CAMR-92 CAMR CHARGÉE D'ÉTUDIER LES ATTRIBUTIONS DE FRÉQUENCES DANS CERTAINES PARTIES DU SPECTRE

MÁLAGA-TORREMOLINOS, FÉVRIER/MARS 1992

Addendum 1 au
Document 237-F/E/S
24 février 1992

B.5

SEANCE PLENIERE

CINQUIEME SERIE DE TEXTES SOUMISE PAR LA COMMISSION DE REDACTION
A LA SEANCE PLENIERE

Ajouter la page 11 ci-jointe au document.

No change in the English document.

No hay cambios en el documento español.

MOD 885 Catégorie de service différente: dans les pays suivants: Bulgarie, Cuba, Mongolie, Pologne, République démocratique allemande, Tchécoslovaquie et URSS, dans la bande 31 - 31,3 GHz, l'attribution au service de recherche spatiale est à titre primaire (voir le numéro 425).

MOD 889 Catégorie de service différente: dans les pays suivants: Bulgarie, Egypte, Mongolie, Pologne, République démocratique allemande, Roumanie, Tchécoslovaquie et URSS, dans la bande 31,5 - 31,8 GHz, l'attribution aux services fixe et mobile, sauf mobile aéronautique, est à titre primaire (voir le numéro 425).

BLUE PAGES

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

Document 237-E
22 February 1992

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

B.5

PLENARY MEETING

FIFTH SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for first reading:

Source	Document	Title
COM4	215	Article 8
	220 (page B.5/6)*	
	216	

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* Note by Committee 5

Within the Committee there was no disagreement of substance on the modifications and they should therefore be considered by the Plenary. Committee 4 agrees to request the Plenary to decide in principle whether such footnotes, which may not be on the agenda of the Conference, should be amended.

P. ABOUDARHAM
Chairman of Committee 6

Annex: 11 pages

ARTICLE 8

MOD

GHz

24.25 - 31.3

Allocation to Services		
Region 1	Region 2	Region 3
25.25 - 25.5	FIXED MOBILE INTER-SATELLITE 881A Earth Exploration-Satellite (space-to-space) Standard Frequency and Time Signal-Satellite (Earth-to-space)	
25.5 - 27	FIXED MOBILE INTER-SATELLITE 881A Earth Exploration-Satellite (space-to-space) (space-to-Earth) Standard Frequency and Time Signal-Satellite (Earth-to-space)	
27 - 27.5 FIXED MOBILE INTER-SATELLITE 881A Earth Exploration-Satellite (space-to-space)	**27 - 27.5** FIXED MOBILE FIXED-SATELLITE (Earth-to-space) INTER-SATELLITE 881A Earth Exploration-Satellite (space-to-space)	
27.5 - 28.5	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 882A 882B	
28.5 - 29.5	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Earth Exploration-Satellite (Earth-to-space) 882C 882B	
29.5 - 30	FIXED-SATELLITE (Earth-to-space) Mobile-Satellite (Earth-to-space) Earth Exploration-Satellite (Earth-to-space) 882C 882 882A 882B 883	

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

ADD **882A** 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 uplink power control.

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

ADD **882B** Additional allocation: the band 27.501 - 29.900 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions intended for uplink power control.

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

MOD

GHz
31.3 - 33.4

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**

SUP **891**

MOD **893**

In designing systems for the inter-satellite and radionavigation services 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).

MOD

GHz
33.4 - 40.5

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

SUP **895**

MOD **896**

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 34.7 - 35.2 GHz to the space research service is on a primary basis (see No. 425).

MOD

GHz

33.4 - 40.5 (continued)

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**

(*) This allocation is provisional pending confirmation that the existing power flux-density limits in Article 28 should be extended to cover this band.

MOD

GHz
66 - 86

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 - 185

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	

MOD **446** Additional allocation: in Bulgaria, Poland, 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** 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, Poland, 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** 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** Additional allocation: in Bulgaria, Mongolia, Poland, the German Democratic Republic, Roumania, 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**

SUP **481**

SUP **551**

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

SUP **569**

MOD **571** Additional allocation: in Bulgaria, China, Mongolia, Poland, 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 **581** Additional allocation: in the Federal Republic of Germany, France, Ireland, 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.

MOD **587**
Mob-87 Additional allocation: in Bulgaria, Israel, Kenya, Mongolia, Syria, the German Democratic Republic, the United Kingdom, Somalia, 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 **777** Additional allocation: in Bulgaria, Canada, Cuba, Mongolia, Poland, the German Democratic Republic, Roumania, 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, Bangladesh, China, the Congo, the United Arab Emirates, India, Indonesia, Iran, Iraq, Israel, Japan, Kuwait, the Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Dem. People's Rep. of Korea, Syria, Singapore, Sri Lanka and Thailand, 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 German Democratic Republic, Roumania, 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**

MOD **797B**
Mob-87 Additional allocation: in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, France, Finland, Greece, Israel, Italy, Japan, Jordan, Luxembourg, Morocco, Norway, the Netherlands, Pakistan, 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, the German Democratic Republic, Roumania, 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** Additional allocation: in Afghanistan, Austria, Bulgaria, Iran, Mongolia, Poland, the German Democratic Republic, Roumania, 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** Additional allocation: in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, 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, Malta, Niger, Nigeria, Pakistan, the Philippines, Qatar, Dem. People's Rep. of Korea, Syria, Singapore, Sri Lanka, 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** 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** Additional allocation: in Saudi Arabia, Bahrain, Bangladesh, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guinea, Guyana, Indonesia, Iran, Iraq, Israel, Jamaica, Kuwait, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, Qatar, Dem. People's Rep. of Korea, Syria, Senegal, Singapore, Somalia, Sri Lanka, Tanzania, Chad, Thailand, Togo and Tunisia, the band 8 500 - 8 750 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD **826** Different category of service: in Afghanistan, Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, 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, 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** 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, China, Colombia, the Republic of Korea, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, Iran, Iraq, Israel, Japan, Kuwait, the Lebanon, Mongolia, Pakistan, Poland, Qatar, the German Democratic Republic, Dem. People's Rep. of Korea, Roumania, Czechoslovakia, the U.S.S.R. 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 **857** Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Australia, Bahrain, Bangladesh, Botswana, Cameroon, China, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Kenya, Kuwait, Lesotho, the Lebanon, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Niger, 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 **866** Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Cameroon, Costa Rica, Egypt, El Salvador, the United Arab Emirates, Finland, Guatemala, India, Indonesia, Iran, Kuwait, Libya, Malaysia, Malawi, Malta, Morocco, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan, Sri Lanka, Sweden, 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 **885** 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 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 German Democratic Republic, Roumania, 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).

BLUE PAGES

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 238-E
22 February 1992

B.6

PLENARY MEETING

SIXTH SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary meeting for first reading:

Source	Document	Title
COM4	231	Article 8
WG PL	222	Resolution No. 703 (Rev.WARC-92)* Resolution GT-PLEN/2
COM4	231	Recommendation COM4/A

* Note by the Working Group to the Plenary - The delegations of the Kingdom of Morocco and of Senegal reserved their position with respect to the text of Resolution No. 703 (WARC-92).

P. ABOUDARHAM
Chairman of Committee 6

Annex: 11 pages

ARTICLE 8

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** 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** 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** 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 [COM5/Document 192, Annex 1]. 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 for these services, the 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 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 [COM5/Document 192, Annex 1]. 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, the 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	
NOC **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, 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 [COM5/Document 192, Annex 1]. 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, the 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** 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 [COM5/Document 192, Annex 1]. 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, the 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 **518** In Afghanistan, Argentina, Australia, Botswana, Burkina Faso, China, India, 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**

SUP **537**

SUP **543**

SUP **544**

MOD **572** The frequency 75 MHz is assigned to marker beacons. Administrations 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.

SUP **582**

MOD

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

SUP

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

considering

NOC 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;

NOC 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;

NOC 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;

MOD 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;

MOD 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;

ADD f) that the CCIR has adopted a procedure for approving Recommendations between Plenary Assemblies;

MOD 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,

NOC **is of the opinion**

MOD a) that future decisions of the CCIR are likely to make further changes in the recommended calculation methods and interference criteria;

NOC b) that administrations should receive advance information of the drafts of the relevant CCIR Recommendations;

NOC 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;

SUP **invites the CCIR**

a) and b)

ADD **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;

(MOD) **resolves**

ADD 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;

MOD 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;

MOD 3. that, should an administration, in its reply to the IFRB's consultation, 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;

MOD 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;

MOD 5. that the administrations which do not reply to theIFRB's consultation within four months 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;

MOD 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.

RESOLUTION GT-PLEN/2

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)) downlinks and the complementary terrestrial service in the band [(as 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) in the frequency band mentioned above;

c) that systems in the BSS (Sound) 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 for avoiding mutual harmful interference between non-GSO systems, and between GSO and non-GSO systems of the broadcasting-satellite service(Sound), and between BSS (Sound) systems and other services,

noting

the provisions of No. 2674 in the Radio Regulations,

resolves

1. that the CCIR 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,

   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.

instructs the Secretary-General

to bring this Resolution to the notice of the Administrative Council to ensure that the results of CCIR studies are taken into account when establishing the regulatory provisions that may be required for the BSS (Sound).

RECOMMENDATION COM4/A

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 No. 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 No. 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 No. 517 (HFBC-87) specifies the date of 31 December 2015 for the cessation of DSB emissions;

f) that, prior to the final confirmation of the date for the cessation of DSB transmissions in the HF broadcasting service, there is a need for periodical reviews, by competent world administrative radio conferences, of the complete statistics on the worldwide distribution of SSB transmitters and synchronous demodulator receivers, as stipulated in Resolution No. 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.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 239-E
22 February 1992
Original: English

Source: Document DL/35

PLENARY MEETING

REPORT BY THE CHAIRMAN OF AD HOC 1 OF THE PLENARY

1. Ad hoc 1 of the Plenary met on 20 and 21 February 1992. The meetings were attended by delegates from F, MEX, MRC, NIG, NZL, SNG, SYR and USA.

2. According to the terms of reference (see Document DT/89) the ad hoc Group considered possible solutions for the 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 and associated provisions in Article 12 and Appendix 26.

The ad hoc Group came to the following conclusions:

a) The channelling arrangement as prepared by the IFRB is satisfactory.

b) this Conference is not a planning conference and not authorized to revise the Plan contained in Part IV of Appendix 26.

c) The allotment arrangement to be developed by the IFRB shall be based on the following principles:

- Each existing allotment will be transferred to a new allotment in the same band in the new allotment arrangement.
- Allotments will be included in the new allotment arrangement for those administrations having no allotment in the present Plan.
- Allotments will be included for those assignments which are not covered by an allotment according to the two steps indicated above.
- The IFRB will 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.
- The IFRB will propose to each administration concerned single-sideband carrier frequencies to be included in the allotment arrangement.

d) A procedure for modification and maintenance of the allotment arrangement will be provided, so that any future requirements for allotments may be met.

3. Taking into account the conclusions of section 2 above and the texts prepared by Committee 5, the ad hoc Group submits the following texts for consideration by the Plenary:

a) a draft Resolution, Relating to the 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 (Annex 1);

b) draft modifications to Article 12 (Annex 2);

c) draft modifications to Appendix 26, later to be known as Appendix 26(Rev.), with the exclusion of Part III relating to the allotment arrangement (Annex 3);

d) two further draft Resolutions associated with the issue (Annex 4).

It should be noted that the texts referred to in b), c) and d) do contain only minor amendments compared to the corresponding source texts from Committee 5 as contained in Document 180 (B.2), whereas the text referred to in a) is a complete new draft.

It should be noted further that all texts have been approved in the Group by consensus.

E. GEORGE
Chairman

Annexes: 4

ANNEX 1

RESOLUTION [PLEN/AH-1]

Relating to the 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 No. 9 of the Plenipotentiary Conference, Nice, 1989 instructed the IFRB to undertake actions relating to the improvement of 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 which was adopted by the Conference as Part II of Appendix 26(Rev.);

c) that Article 12 and Appendix 26 have been revised by this Conference;

d) that an updated version of Part IV of Appendix 26 is to be derived from the allotments appearing in that Part to be complemented by allotments derived from assignments recorded in the Master Register, which will be included as Part III in Appendix 26(Rev.);

e) that there may be a need for additional allotments,

appreciating

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

resolves

1. that the IFRB shall apply in the order described below, immediately after the Conference the following method to develop Part III of Appendix 26(Rev.):

1.1 to transfer every allotment of Part IV of Appendix 26 to a 3 kHz allotment to the nearest possible channel in the same band;

1.2 to include in appropriate bands for those administrations having no allotments in Part IV of Appendix 26:

a) a 3 kHz allotment in the band concerned on the nearest possible channel corresponding to the assignment notified to the IFRB before 3 February 1992;

b) a 3 kHz allotment in the band concerned for each of the requirements received by the IFRB before 3 February 1992 from an administration having no assignments in the Master Register;

1.3 the action under 1.1 and 1.2 above shall be terminated before 15 December 1992 and administrations to which new allotments have been indicated shall be informed that these allotments are indicated on a provisional basis until such time as the IFRB has completed the process; the comments received from administrations shall be taken into account in the following steps;

1.4 to include an additional 3 kHz allotment on the nearest possible channel in the same band for every assignment recorded in the Master Register not covered under 1.1 and 1.2 above;

1.5 to propose to each administration concerned single-sideband carrier frequencies intended to be included in the allotment arrangement;

1.6 in applying the above process, to 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;

1.7 to distribute to all administrations Part III of Appendix 26(Rev.) as soon as possible;

1.8 the IFRB shall delete from the Master Register the allotments appearing in Part IV of Appendix 26 and record the allotments appearing in Part III of Appendix 26(Rev.) three months after the date on which the IFRB distributes Part III of Appendix 26(Rev.) to all administrations in accordance with **resolves** 1.7 above;

2. that the IFRB shall include in Part III of Appendix 26(Rev.) such additional allotments in accordance with Part V of Appendix 26(Rev.) for which requirements have been submitted by administrations to the Conference;

3. to request the Secretary-General to publish Part III of Appendix 26(Rev.) after the IFRB has completed its tasks under **resolves** 1 and 2.

ANNEX 2

ARTICLE 12

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 § 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 (2) The Board shall examine each notice covered by No. 1343 to determine whether:

MOD 1344A Mob-87 (a) the notice is in conformity with the provisions of No. 1240 and those contained in Part II of Appendix 26(Rev.);

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

SUP 1346 - 1348

(MOD) 1348A Mob-87 (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 (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 (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 Mob-87

NOC

Section III

NOC 1406 § 45. (1) Frequency Bands Allocated Exclusively to the Aeronautical Mobile (OR) Service Between 3 025 kHz and 18 030 kHz.

MOD 1407 (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 (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

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

(MOD) 1411 (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).

ANNEX 3

APPENDIX 26(Rev.)
to the WARC-92 Radio Regulations

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 below:

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 (Region 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					

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

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

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

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 COM5/1);
- 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 PLEN/AH-1)

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.

ANNEX 4

RESOLUTION COM5/1

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 COM5/2 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 [the date of entry into force of the Final Acts of this present Conference];

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 COM5/2

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.

UNION INTERNACIONAL DE TELECOMUNICACIONES

CAMR-92 **CAMR PARA EXAMINAR LA ATRIBUCION DE FRECUENCIAS EN CIERTAS PARTES DEL ESPECTRO**

MALAGA-TORREMOLINOS, FEBRERO/MARZO 1992

Document 240-FES
24 février 1992
Original: anglais
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espagnol

COMMISSION 4
COMMITTEE 4
COMISION 4

Note du Président de la Commission 4
Note by the Chairman of Committee 4
Nota del Presidente de la Comisión 4

ATTRIBUTION DES DOCUMENTS / ALLOCATION OF DOCUMENTS / ATRIBUCION DE LOS DOCUMENTOS

Les propositions des administrations (jusqu'au Document 234) sont réparties comme suit entre les Groupes de travail 4A, 4B et 4C:

The administration's proposals (up to Document 234) are distributed to Working Groups 4A, 4B and 4C, as follows:

Las propuestas de las administraciones (hasta el Documento 234) se reparten como sigue entre los Grupos de Trabajo 4A, 4B y 4C:

WG 4A GT 4A	3, 4, 7(+Corr.), 8, 9, 11*, 12(+Add.), 13, 14, 15, 16, 17, 20(+Corr.), 22, 23, 25, 26, 27, 30, 31, 33, 34, 37, 39(Rev.), 40, 41(Rev.), 44, 45, 48, 49(+Add.2), 52, 55, 56, 57, 59(+Corr.), 61, 62, 63, 65, 74, 75, 78, 85*, 91, 95, 98, 99, 101, 109(Rev.), 110, 126(+Corr.), 131, 140, 144, 160, 173(+Corr.), 186, 191.
WG 4B GT 4B	3, 4, 6, 7(+Corr.), 8, 9, 10*, 11*, 12(+Add.), 13(+Add.), 15, 16, 20(+Corr.), 22, 23, 25, 26, 27(+Add.+Corr.), 28, 29, 30(+Add.), 31(+Add.), 34(+Add.), 36, 37, 38*. 39(Rev.), 40, 41(Rev.), 44, 45, 48, 49, 51(+Add.), 52, 53, 55, 56, 57, 61(+Corr.), 62(+Add.), 63(+Add.), 64, 65, 72, 73, 74, 75(+Corr.), 83*, 84*, 85*, 86*, 88*, 89*, 91, 94, 98(+Add.), 99, 101, 119, 126(+Corr.), 129*, 131(+Add.), 133, 135, 140, 142, 143, 144, 154, 159, 160, 184, 187, 188, 190, 201, 203, 221, 227, 228, 234.
WG 4C GT 4C	3, 4, 7(+Corr.), 8, 9(+Add.), 10*, 12(+Add.), 13, 15, 16, 20(+Corr.), 22, 23, 25, 26, 27(+Corr.), 30, 31(+Add.), 34, 39(Rev.), 40, 41(Rev.), 44, 45, 46, 49(+Add.+Corr.), 51(+Add.), 52, 54, 56, 61(+Corr.), 62, 63(+Add.), 64(+Corr.), 65, 74, 75, 77, 84*, 88*, 89*, 91, 98(+Add.), 99, 101, 111, 115, 126, 128, 130, 131(+Add.), 140, 144, 160, 204, 225**.

*) seulement pour information
for information only
solamente para información

**) ad hoc 1 to C4
ad hoc 1 de la C4

I. HUTCHINGS
Président de la Commission 4
Chairman of Committee 4
Presidente de la Comisión 4

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 241-E
22 February 1992
Original: Spanish

COMMITTEE 4

Mexico

PROPOSAL FOR THE WORK OF THE CONFERENCE

MEX/241/1
ADD

DRAFT RECOMMENDATION

The 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 worldwide exclusive allocations for the amateur and broadcasting services in band 7;

b) that the sharing of frequency bands by these services is undesirable and should be avoided;

c) that a number of administrations have made proposals to the Conference for the alignment of the allocations to the amateur service around 7 MHz;

d) that the Conference was able to give only limited consideration to these proposals,

recommends

that a future competent WARC 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 Secretary-General

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

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 242-E
22 February 1992
Original: English

Source: Documents DT/85, DT/88

COMMITTEE 5

SIXTH REPORT OF WORKING GROUP 5B TO COMMITTEE 5

1. Working Group 5B submits the following texts for approval by Committee 5:
   - Draft Resolution COM5/[5],
   - Draft Resolution COM5/[6],

concerning interim and future procedures for BSS (HDTV).

2. Indications

Concerning frequency bands (which may differ for different regions), dates, footnotes and power flux-density limits, which are provisional and are currently in square brackets, need to be reviewed once the decisions of Committee 4 are known.

J.P. LUCIANI
Chairman

Annexes: 2

ANNEX 1

DRAFT RESOLUTION COM5/[5]

Relating to the Introduction of HDTV Systems of the Broadcasting-Satellite Service (BSS) in the Band [21.4 - 22.0] GHz

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

considering

a) that this present Conference has reallocated the band [21.4 - 22.0] GHz to the broadcasting-satellite service to be implemented after [1 April 2005] and that by [ADD 873A] it is intended for use by the BSS for wide RF-band high-definition television (HDTV);

b) that until [1 April 2005] the existing services operating in the band [21.4 - 22.0] GHz in accordance with the Table of Frequency Allocations are therefore entitled to continue in operation without harmful interference from other services;

c) that nevertheless it is desirable to facilitate the introduction of experimental HDTV systems into this band before the year [2005] without affecting the continued operation of existing services;

d) that it also may be possible to introduce operational HDTV systems into this band before the year [2005] without affecting the continued operation of existing services;

e) that after [1 April 2005] the introduction of HDTV systems into this band must be regulated in a flexible and equitable manner until such time as a future competent WARC has adopted definitive provisions for this purpose in accordance with Resolution No. 507;

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 COM5/[5]

Interim Procedures for the Introduction of BSS (HDTV) Systems in the Band [21.4 - 22.0] GHz

Section I. General Provisions

1. It shall be understood that prior to [1 April 2005] all existing services in the band [21.4 - 22.0] GHz 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 only on the basis of [No. 873A] of the Radio Regulations; 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 into the band [21.4 - 22.0] GHz 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 2005]

2. For the purpose of introducing experimental BSS (HDTV) systems in the band [21.4 - 22.0] GHz before [1 April 2005] under the provisions of Article 34 of the Radio Regulations, the procedures contained in Resolution No. 33 shall be applied.

Section III. Interim Procedure Relating to Operational BSS (HDTV) Systems Introduced Before [1 April 2005]

3. For the purpose of introducing operational BSS (HDTV) systems in the band [21.4 - 22.0] GHz before [1 April 2005] the procedure contained in Resolution No. 33 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 No. 33 only shall be applied.

Section IV. Interim Procedure Relating to BSS (HDTV) Systems Introduced After [1 April 2005]

5. For the purpose of introducing and operating BSS (HDTV) systems in the band [21.4 - 22.0] GHz after [1 April 2005], and before a future Conference has taken decisions on definitive procedures, the procedure in Sections B and C of Resolution No. 33 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 into the band [21.4 - 22.0] GHz 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 WARC.

ANNEX 2

DRAFT RESOLUTION COM5/[6]

Relating to the Future Adoption of Procedures to Ensure Flexibility in the Use of the Frequency Band Allocated to the Broadcasting-Satellite Service for Wide RF-Band High-Definition Television and of 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 present Conference has added an allocation to the broadcasting-satellite service in the band [ ] GHz for use by wide RF-band high-definition television (HDTV);

b) that considerable further technological development of wide RF-band HDTV is expected before such services can be introduced for general operational use;

c) that this Conference has made interim provisions to be applied during the period before the year [2005] to regulate the introduction of BSS (HDTV) systems of an experimental and operational character;

d) that in the longer term regulatory provisions designed to ensure a 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 design of future regulatory provisions for BSS (HDTV) to ensure flexibility in the use of the [ ] GHz band, 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 the inclusion of an appropriate item in the agenda of a future world administrative radio conference.

INTERNATIONALE TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

Document 243-E
24 February 1992
Original: English

MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

COMMITTEE 6

Source: Doc. DT/101

FIFTH SERIES OF TEXTS FROM COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 has reviewed the text of Resolution COM5/3 (currently appearing in Document 212), as a result of the request of the Chairman of Committee 4, contained in Document 209. In consequence, additional text to be included in that Resolution was approved by Committee 5.

The changes are as follows:

1. Add new **considering** d)

"d) that improvements in the utilization 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,"

2. Modify **invites the CCIR** as follows:

... below, "and to study the particular needs of high rainfall rate climatic zones for HDTV and the technical methods which could be used to implement this service in the 12 GHz band,"

E. George
Chairman of Committee 5

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 244-E
24 February 1992
Original: French

PLENARY MEETING

MINUTES

OF THE

FIFTH PLENARY MEETING

Friday, 21 February 1992, at 1140 hours

Chairman: Mr. J. BARRIONUEVO PEÑA (Spain)

Subjects discussed:		Documents:
1.	Approval of the minutes of the second and third Plenary Meetings	112, 164
2.	Third series of texts submitted by the Editorial Committee for first reading (B.3)	199
3.	First series of texts submitted by the Editorial Committee for second reading (R.1)	210
4.	Reports by the Committee Chairmen and the Chairman of the Working Group of the Plenary	172
5.	Draft Preamble to the Final Acts	DT/84(Rev.1)
6.	Statement by the delegate of Yemen	-

1. Approval of the minutes of the second and third Plenary Meetings (Documents 112 and 164)

1.1 The minutes of the second Plenary Meeting (Document 112) were approved.

1.2 The Chairman of Committee 5 read out amendments to be made to the minutes of the third Plenary Meeting, which he undertook to submit to the Secretariat in writing.

1.3 Subject to those amendments, the minutes of the third Plenary Meeting (Document 164) were approved.

2. Third series of texts submitted by the Editorial Committee for first reading (B.3) (Document 199)

2.1 The Chairman of Committee 6 drew attention to a minor amendment on page B.3/1 of Document 199, concerning the French version only.

2.2 With regard to the amendments to Article 56, on page B.3/2, the observer for the International Transport Workers' Federation (ITF) said that his organization's members regretted the premature revision of Article 56, which tacitly approved the use of non-certificated personnel for maintenance of GMDSS equipment, and would lead to the almost certain loss of certificated dedicated communicators during the introduction of a new and scarcely tested system. The members of the ITF considered that the measure had not been adopted to improve safety but rather as a political means of extricating IMO from an embarrassing situation it had brought upon itself by ignoring the decisions of WARC-87. It also relieved those who had expressed reservations with regard to Articles 55 and 56 at WARC-87, reservations which had been described by some legal authorities as unsafe, unwise and even imprudent. It would have been preferable to review the situation after a sufficiently large body of data had been collected from what might then be a worldwide system.

2.3 Subject to the amendment referred to by the Chairman of Committee 6, the third series of texts (B.3) (Document 199) was approved on first reading.

3. First series of texts submitted by the Editorial Committee for second reading (R.1) (Document 210)

3.1 The Chairman of Committee 6 reminded the meeting that amendments indicated with a MOD in brackets were amendments solely of form; an example of this could be found in the French text of Recommendation No. 66(Rev. WARC-92), where under **considering** e) the word "Avis" was replaced by "Recommendations".

3.2 Referring to Recommendation GT-PLEN/A, the delegate of the United Arab Emirates maintained his reservations concerning the use of wind profiler radar at frequencies around 50 MHz.

3.3 The first series of texts (R.1) (Document 210) was approved on second reading.

4. Reports by the Committee Chairmen and the Chairman of the Working Group of the Plenary (Document 172)

4.1 The Chairman of Committee 2 reported that Committee 2 and its Working Group had not met since the last Plenary Meeting but that a meeting was scheduled for later that day.

4.2 The Vice-Chairman of Committee 3 reported that the second meeting of Committee 3 had been held on Wednesday, 19 February. It had studied the budget of the WARC-92 Conference, adjusted at 1 February 1992, a statement of the accounts of the Conference at 17 February 1992 and the draft report of the Budget Control Committee to the Plenary Meeting. As had been stated at the first meeting of the Committee, the costs set out in Annex C to Document 171 had been updated to take account of additional expenses resulting from the conditions of service in force in the common system on 1 February 1992. As at

17 February 1992, estimated expenditure was unchanged in relation to that provided for in the budget approved by the Administrative Council. The situation could change, however. To enable Committee 3 to report to the Plenary Meeting, a note had been sent to the Chairmen of Committees 4 and 5, requesting them to indicate the financial implications of their decisions by 25 February at the latest.

4.3 The Chairman of Committee 4 reported that Working Group 4A had completed its work and adopted two new Recommendations. Working Group 4C had also finished its work, apart from three issues which had been entrusted to ad hoc Groups. Working Group 4B, on the other hand, had not yet completed the task entrusted to it. A number of decisions had been taken, but there were still problems of substance to be settled, and the Group would be meeting throughout the following day. The Working Groups would thus be completing their work one or two days behind schedule.

4.4 The Chairman of Committee 5 said that the progress made was satisfactory and that the Committee expected to finish its work as planned. Working Groups 5A and 5C had already finished their work. All the texts produced by Working Group 5A had been approved by Committee 5, as had some of those prepared by Working Group 5C. The work of Working Group 5B was difficult, but he hoped that it would be completed by the following Monday. Ad hoc Group 1, set up by the Plenary to consider Appendix 26 and Article 12 had been able to adopt a text unanimously thanks to the spirit of compromise that had prevailed in its work.

4.5 The Chairman of the Working Group of the Plenary said that the Group had finished its work by the appointed time and approved all the documents to be transmitted to Committees 4, 5 and 6. The work had sometimes been arduous, making it necessary for the Committee to hold late meetings. The Group was nevertheless ready to answer any other questions that might be addressed to it by Committees 4 and 5. With regard to the review of existing Resolutions and Recommendations (Document 172, section 5) and texts that could be deleted, he asked the Plenary to confirm that such reviewing work was within the terms of reference of his Group, since otherwise it would pursue it no further.

4.6 The Chairman invited delegates to take a decision on the question raised by the Chairman of the Working Group of the Plenary.

4.7 The delegate of Spain said he fully agreed with the Chairman of the Working Group of the Plenary, which had found that more than 30 texts could be deleted without causing any inconvenience, because that would facilitate the work of the experts responsible for simplifying the Radio Regulations.

4.8 The Chairman said he took it that the Plenary agreed that reviewing existing Resolutions and Recommendations was within the Working Group's terms of reference and that the Working Group was authorized to submit a draft Resolution proposing the abrogation of certain existing Resolutions and Recommendations.

4.9 It was so agreed.

4.10 The delegate of Indonesia said that the spirit of compromise which had prevailed during the work had enabled the Working Group to make satisfactory progress. His delegation was satisfied with the results, which showed that the requirements of all parties had been taken into consideration. He would urge the Conference to take account of the needs of developing countries, which wanted to be able to use new technologies and new services, such as low-Earth orbit mobile-satellite services, the broadcasting-satellite service (sound) and HDTV, particularly in tropical regions.

5. Draft Preamble to the Final Acts (Document DT/84(Rev.1))

5.1 The Secretary-General said that the draft Preamble to the Final Acts had been prepared by the Secretariat. It was a traditional text, which gave the background information on the scope of the Conference. It was being submitted to the Plenary for approval and would then be passed to the Editorial Committee; the square brackets would be deleted later, when the dates of entry into force had been agreed.

5.2 The delegate of Japan proposed that in the second line of the sixth paragraph of the draft Preamble the words "a Member of the Union" should be replaced by "an Administration", previous WARCs having referred to administrations rather than Members of the Union.

5.3 The delegate of the United Kingdom, supported by the delegate of the Russian Federation, proposed that the text of the first paragraph should be simplified to read "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 Conference ...", without giving the exact title of all the Resolutions.

5.4 The delegate of Spain said he could accept the United Kingdom delegate's proposal, but considered that a sentence or phrase should be added stating that WARC-92 itself had to take the Resolutions and Recommendations in question into account.

5.5 The delegate of Senegal asked the Secretary-General if he could say anything about the date of entry into force, which was in square brackets in the fifth paragraph.

5.6 The Secretary-General said he had no difficulties to the proposals as formulated. As far as the question raised by the delegate of Senegal was concerned, it was still too early to specify the date of entry into force. That was a question which was the subject of ongoing discussions in the different Committees and Working Groups.

5.7 The Chairman said that the next version of the draft Preamble would be drafted in the light of the proposals just made.

6. Statement by the delegate of Yemen

6.1 The delegate of Yemen made the statement reproduced in annex.

The meeting rose at 1250 hours.

The Secretary-General:
P. TARJANNE

The Chairman:
J. BARRIONUEVO PEÑA

Annex: 1

ANNEX

Declaration by the delegate of Yemen

Chairman of the Conference,
Secretary-General,
Heads and members of delegations and representatives of
regional and international organizations,

Mr. Chairman,

It is with very great pleasure that I take this opportunity of expressing, on behalf of the delegation of the Republic of Yemen, my most sincere congratulations on your election as Chairman of this Conference which has wide-ranging and difficult tasks to perform. No one doubts that you will carry out this mission with wisdom and assurance and that you will guide the Conference to the final success to which we all look forward. Congratulations are also due to ourselves, Mr. Chairman, for having chosen you to undertake the responsibility for this important mission. Through you I should also like to congratulate the Vice-Chairmen, as well as the Chairmen and Vice-Chairmen of the committees and working groups on having the privilege of conducting the debates of this Conference and on the confidence which has been shown in their ability to discharge these responsibilities thanks to their skill and experience in this field.

I should also like, Mr. Chairman, to express to you my most sincere appreciation and esteem to this country, its King, its Government and its people for the warmth of their welcome and for the opportunity given to us to discover Spain and the land of Andalusia, with its grandiose history which has seen the interaction of different cultures and civilizations and which has been the privileged scene of intellectual and scientific endeavour, geometry, medicine and literature. I should also like, Mr. Chairman, to express my thanks for the wholehearted generosity and hospitality of the Spanish Administration. All the arrangements which have been made and the many services and facilities which have been made available to participants have created an atmosphere in which everyone feels at home, among friends, and this cannot fail to have a substantial impact on the outcome of this Conference.

I should also like to express through you my thanks and my esteem to Dr. Pekka Tarjanne, Secretary-General of the ITU, and to all the officials of the Union for the great efforts they have made in preparing for this Conference, particularly the officials of the International Radio Consultative Committee (CCIR), the International Frequency Registration Board (IFRB), and the Secretariat, as well as the translators and other officials who remain in the background but who play an equally important role in contributing to the success of the Conference.

The Administration of Yemen, viewing with great satisfaction the part played by the ITU in strengthening international technical cooperation and coordination between the Member Administrations of the Union, is inspired by the hope that ever greater progress will be made towards the attainment of the ambitious goals which have been set, an objective which can only be reached through the synergy of increasing efforts made to ensure the necessary material and moral support.

We hope that the work of the High Level Committee (HLC), which was entrusted with the task of reviewing the present structure of the Union, will produce results along these lines.

Mr. Chairman,

We are living through a period of great joy in Yemen because, thanks to God and the will of our Yemeni people, we have translated into reality a dream which has sustained us during the long years of our separation. The two parts of the country were joined together when the two political commands met at Aden on 22 May 1990 following a series of meetings of the committees for union. Sanaa has been proclaimed the capital of the young Republic while Aden has become the economic and commercial capital and a free zone for Arab and foreign investment. For us, Mr. Chairman, this Conference is of special significance: it is the first international radio conference to which Yemen has been able to send a single delegation. On this occasion we should like to express to the German delegation and, through it, to the German people, our friends, a sense of shared joy in having recovered national and political unity.

Mr. Chairman,

The multiplicity of new services which have emerged thanks to the application of modern radio techniques, such as the low orbit satellite services (LOSS) and high-definition television (HDTV), have opened up wide horizons. Given the radio spectrum requirements of these services, it is important that this Conference should not create obstacles to technological progress. On the other hand, it must not be the source of difficulties for current services. We must therefore look for ways and means of arriving at appropriate solutions, in the light of the considerations which have been submitted, with a view to meeting the requirements of the new services without jeopardizing those services which already exist. The equation is a difficult and complex one but it must be solved. Spectrum sharing between services and a reasonable transitional period offer possible ways of dealing with a situation which is causing concern at the present Conference.

Mr. Chairman,

The Republic of Yemen attaches particular importance to the communications sector because we are fully aware of its importance and the key role it plays in economic and social development. For this reason, in our development plans, we have laid stress on communication projects and improvements in productivity and performance, so as to be able to attain our objective of extending the telephone services as well as television to the most remote regions of the Republic.

The Administration of Yemen has submitted Document No. 41 to the Conference. Among the points made, there are proposals for the deletion of the name of Yemen from certain footnotes in the Radio Regulations where we consider it is no longer necessary. Another point concerns the use, as from 22 May 1990, of the correct name of the Republic of Yemen, the new name after unification, to replace the old names of the People's Democratic Republic of Yemen and the Yemen Arab Republic.

Mr. Chairman,

The Administration of Yemen is one of the administrations which have only been able to send a small delegation to this Conference; this of course makes it difficult for it to follow all the debates taking place at the meetings of committees and working groups. We would ask the Conference to bear this in mind and we count on the forbearance of participants if it sometimes happens that the delegation of Yemen raises questions which have already been discussed at meetings of working groups or committees.

Mr. Chairman,

I am fully aware of the time pressure you are under and I do not wish to take up too much of your precious time. I should only like, in conclusion, to express once again my sincere appreciation to the Administration of Spain for the warmth and generosity of its welcome and for the facilities which have been made available. It is our sincerest wish and hope that this Conference will have a successful outcome and achieve the results we hope for. We have no doubt that, with the help of the participants, you will be able to overcome all obstacles.

I should like to apologize to all for the length of my address and to thank you for your kind attention.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 245-E
21 February 1992
Original: French

COMMITTEE 4

SUMMARY RECORD

OF THE

SEVENTH MEETING OF COMMITTEE 4

(FREQUENCY ALLOCATION)

Friday, 21 February 1992, at 0930 hours

Chairman: Mr. I.R. HUTCHINGS (New Zealand)

Subjects discussed		Documents
1.	Second report of Working Group 4A	213
2.	Fourth and last report of Working Group 4A	214

1. Second report of Working Group 4A (Document 213)

1.1 The Chairman of Working Group 4A introduced Document 213 reflecting the outcome of the work of his Group in an attempt to reach a comprise solution. He called particular attention to the fact that the compromise reached was a package made up of several elements, the removal of any one of which would undermine the stability of the whole. Reviewing the different elements relating to the extension of bands, he said that it had been impossible to alter the amateur service allocations in the 7 MHz band. He thanked all the participants in his Group for the spirit of cooperation and conciliation they had displayed.

1.2 The delegate of Ecuador congratulated the Chairman of Working Group 4A on the spirit of conciliation he had inspired within his Group, and said he hoped that Document 213 would be approved as submitted.

1.3 The delegates of Cuba and Tanzania supported those sentiments, as did the delegate of Algeria who said he accepted the minimum compromise as a package, although he hoped that the allocations to the amateur service in the 7 MHz band would be harmonized at a future conference.

1.4 The Chairman invited the meeting to consider Document 213.

Section 1.1

1.5 The delegate of Saudi Arabia proposed that the word "even" should be deleted from the third line of sub-section e) since it would in any case be impossible to change the use of the bands by the services in question before 1 April 2007.

1.6 The Chairman and the delegate of Argentina considered that the term "even" was important in view of the possible continued use of those bands.

1.7 The delegate of Tunisia proposed for the sake of clarity that the words "with respect to the broadcasting services" be inserted after "on a non-interference basis".

1.8 The Chairman pointed out that there was no need for amendments of substance since the text itself would not appear in the Regulations, but only the details in the Table and the footnotes, and the task of clarifying the point would be better left to the Editorial Committee. He therefore suggested that the wording of sub-section e) be left as it appeared in Document 213.

1.9 It was so agreed.

1.10 Turning to sub-section g), the delegate of the United Kingdom noted that the idea was to protect existing services which were to be transferred. In that case, it would be better to add the words "to be transferred" after "existing services".

1.11 That addition was approved.

1.12 The Chairman noted an error in the English version of sub-section g), which should be aligned with the other texts.

Section 1.2

1.13 The delegate of Switzerland, while accepting the compromise, said it was regrettable that the situation should be prejudicial to all the services concerned.

1.14 The delegates of Malaysia and Sri Lanka supported the previous speaker, adding that the amateur service was not a luxury; on the contrary, it provided administrations with an inexpensive source of qualified personnel. It also played a major role in disaster situations, which was an important consideration, since the fixed and mobile services were themselves likely to be affected by such disasters.

1.15 The delegate of Mexico, supported by the delegate of Indonesia, agreed with the delegate of Malaysia and called for a Recommendation to be drafted so that the matter could be dealt with by another conference. In his view, the present Conference was qualified to take a decision on the issue.

1.16 The Chairman said that unless there were major changes to the broadcasting service in the bands used by the amateur service in other Regions, the Conference could not unilaterally modify the amateur service. Moreover, the amateur service as such did not fall within the terms of reference of the Conference. However, the Committee could return to the matter if it wished once the consideration of Documents 213 and 214 had been completed.

1.17 Subject to those comments and amendments, the first page of the report was approved.

ANNEX 1

Table 5 730 - 6 200 kHz, ADD 505A, ADD 505B, ADD 505C, Table 7 100 - 8 100 kHz, ADD 528A, Table 9 040 - 9 900 kHz, ADD 529B, Table 11 400 - 12 230 kHz

1.18 Approved without comment.

Table 13 410 - 14 000 kHz

1.19 The delegate of Spain remarked that the Spanish version should be aligned with the English and French.

1.20 Subject to that comment, the extension was approved.

ADD 534A, Table 15 100 - 16 360 kHz, Table 17 410 - 17 900 kHz, Table 18 900 - 19 680 kHz.

1.21 Approved without comment.

ANNEX 2: Draft Recommendation [SWG 4A1]

1.22 Referring to **considering** d), the delegate of the United Kingdom suggested for the sake of consistency that the words "should be reserved" should be replaced by "are reserved".

1.23 It was so agreed.

1.24 Referring to **considering** f), the delegate of Cuba pointed out that it contained a reference to Resolution No. 517 (HFBC-87), the wording in **resolves** 2 of which was more specific. He therefore proposed adopting that wording, which would mean replacing the last part of the sentence in **considering** f) with: "by competent future conferences in the light of the latest available complete statistics on the worldwide distribution of SSB transmitters and synchronous demodulator receivers".

1.25 The delegate of Mexico endorsed that proposal, which was approved.

1.26 The Chairman suggested replacing **recommends** 2 with a new paragraph containing a direct invitation to the Administrative Council to place the Recommendation on the agenda of the next competent WARC.

1.27 It was so agreed.

1.28 Subject to the agreed amendments, draft Recommendation [SWG 4A1] was approved.

2. Fourth and last report of Working Group 4A to Committee 4 (Document 214)

2.1 The Chairman of Working Group 4A introduced his Group's final report to the Committee (Document 214).

Annex 1: Proposed actions with respect to footnotes in Article 8 of the Radio Regulations

2.2 The Chairman recalled the position of the delegation of the Russian Federation, who did not wish to enter into a substantive discussion concerning the footnotes, but feared that some modifications might in fact exceed the scope of the Conference.

MOD 518

2.3 The delegate of Swaziland asked for his country to be deleted from the footnote, since no part of its territory was situated at least 600 km from the coast.

2.4 With that deletion, MOD 518 was approved.

SUP 532, SUP 537, SUP 543, SUP 544, MOD 572, SUP 582

2.5 Approved without comment.

Annex 2: Recommendation No. [SWG 4A2]

2.6 The delegate of Malaysia said he had the impression that some delegations had questioned the Recommendation, which implied that the administrations were not in control of the situation.

2.7 The Chairman considered that one should recognize the current situation, which was nevertheless better than before, and that the attention of administrations should be drawn to the matter.

2.8 The delegate of the United Kingdom, referring to **considering** a), suggested indicating the causes of the situation, namely congestion in the bands allocated to broadcasting.

2.9 The delegate of Cuba thought it essential that administrations should be alerted. In his view, any modification should tend to make the Recommendation more restrictive, given the consequences of such practices. He was opposed to the United Kingdom's proposal, which merely justified the problem, whereas what was needed was due respect for the Table of Frequency Allocations.

2.10 His views were supported by the delegates of Nigeria, Swaziland, Saudi Arabia, Zimbabwe, Argentina and Zambia.

2.11 The delegate of the United Kingdom withdrew his proposal.

2.12 The delegate of Mexico, supported by the delegates of Colombia, Argentina and Niger, proposed deleting the word "generally" from **considering** b).

2.13 It was so agreed.

2.14 The delegate of Cuba, supported by the delegates of Indonesia and Mexico, thought that it would be more accurate to refer in **considerings** b) and c), to "unregulated use" of HF bands rather than "unregulated sharing".

2.15 The Chairman, supported by the delegate of Argentina, suggested referring to use of HF bands not in conformity with the Radio Regulations. He proposed that a document setting out the different suggestions regarding **considerings** b) and c) should be prepared for the next meeting of Committee 4.

2.16 It was so agreed

2.17 The delegate of Chile suggested aligning the wording under **recommends** on the title of the draft Recommendation in the Spanish version.

2.18 The Chairman confirmed that the texts would be aligned and proposed that draft Recommendation [SWG 4A2] be provisionally approved, subject to the re-wording of **considerings** b) and c) for the Committee's next meeting.

2.19 It was so agreed

2.20 The delegate of the United States said that, although the Committee had made an effort to improve the conditions for the application of the planning system for HF broadcasting, the extension of the spectrum offered by the compromise solution fell far short of that indicated by the IFRB in its Document 4. His delegation feared that the decisions taken would not lead to the desired improvement and reserved its position; it may raise the issue again in Plenary.

2.21 The Chairman recalled that **considerings** b) and c) of the draft Recommendation in Annex 2 to Document 214 would be reconsidered in light of a new text which he would place before the Committee, and that a discussion on the amateur service in the 7 MHz band was also included on the agenda of a future meeting of Committee 4.

The meeting rose at 1120 hours.

The Secretary:
T. GAVRILOV

The Chairman:
I.R. HUTCHINGS

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 246-E
24 February 1992
Original: English

COMMITTEE 5

SUMMARY RECORD
OF THE
SIXTH MEETING OF COMMITTEE 5
(REGULATORY)

Friday, 21 February 1992, at 0935 hours and 1505 hours

Chairman: Mr. E. GEORGE (Germany (Federal Republic of))

Subjects discussed		Document
1.	Second and final report of Working Group 5C	192

1. Second and final report of Working Group 5C (Document 192)

1.1 The Chairman of Working Group 5C, introducing Document 192, drew attention to the Working Group's deliberations and action as described in section 3. In respect of the liaison statement of the Working Group of the Plenary, the square brackets referred to in the penultimate paragraph with regard to the amended text agreed upon as a compromise did not appear in the text of Annex 2 to Document 192; he would revert to the subject at the appropriate time. The two new Resolutions proposed for consideration by Committee 5 were submitted in Annexes 1 and 2 to that document. He also indicated that the definition No. 182 was in square brackets for the time being.

Annex 1: Draft Resolution COM5/[7]

1.2 The Chairman invited the Committee to consider the draft new Resolution, contained in Annex 1, relating to the implementation of changes in frequency allocations between 4 000 kHz and 20 000 kHz; he stressed that those figures and the square brackets surrounding them, as well as the square brackets elsewhere in the text, could be dealt with only in the Plenary.

1.3 The delegate of Australia indicated he would prefer a starting date of 1 October 1992 due to the large number of low power services in Australia that would be affected by the changes in frequency allocations.

1.4 The Chairman, in replying to an observation by the delegate of the Russian Federation, suggested that, as a precaution, square brackets should also be placed around the services which are to vacate the bands that were mentioned in the text.

1.5 The delegate of Israel said that Committee 4, in discussing that matter, had decided that the fixed and mobile services could transmit without interference to broadcasting; his delegation saw no need, therefore, to add square brackets.

1.6 The Chairman suggested that square brackets should be placed only around references to the mobile service.

1.7 It was so agreed.

1.8 The Chairman invited the Committee to consider the text of the draft Resolution section by section.

1.9 There were no comments on the title and the opening phrase.

1.10 It was agreed to place square brackets around the words "and mobile" in **considering** a).

1.11 Referring to **considering** b), the delegate of the Russian Federation, supported by the delegate of Israel, proposed the deletion of the words "or amateur" and the square brackets.

1.12 The delegate of Mexico said that her delegation would wish to submit a proposal relating to the amateur service.

1.13 The delegate of Canada said that the words should remain within square brackets, pending Committee 4's decision.

1.14 The Chairman said he took it that the Committee agreed to leave **considering b)** as it stood, except for the addition of square brackets around the words "and mobile".

1.15 It was so agreed.

1.16 There were no comments on **considering** c), d) and e).

1.17 The delegate of Canada proposed that a further **considering** paragraph should be added after **considering** e), to reflect the fact that many countries had notified typical stations in the fixed and mobile services to the IFRB.

1.18 The delegate of the Bahamas said that the Canadian proposal reflected the procedure which, applied by the IFRB in implementation of Resolution Nos. 8 and 9 of WARC-79, had not produced the expected results. Consequently, if the Canadian proposal was adopted, the additional **considering** paragraph proposed by Morocco and referred to in section 3 of Document 192 should likewise be included.

1.19 The delegate of the Russian Federation opposed the Canadian proposal, since the procedure in question would conflict with the Radio Regulations.

1.20 The delegate of Morocco likewise opposed the Canadian proposal, pointing out that the action taken to implement Resolutions Nos. 8 and 9 of WARC-79 had failed largely because some administrations had taken advantage of the procedure to replace one entry, involving a service area where a receiving station might be located, by a number of assignments.

1.21 The member of the IFRB informed the meeting that the relevant provisions were RR 1223 - 1227.

1.22 The delegate of Israel said that his delegation would oppose the adoption of the additional **considering** paragraph referred to in section 3 of Document 192, for the reasons expressed in Working Group 5B.

1.23 The Chairman noted that the additional **considering** paragraph proposed by the delegate of Canada had been withdrawn, and that the delegate of the Bahamas did not wish to press for the inclusion of the Moroccan text.

1.24 There were no comments on the **recognizing** paragraph, or on paragraph 1 under **resolves that**.

1.25 Referring to paragraph 2 under **resolves that**, the delegate of Australia said that, as a result of new footnotes proposed by Committee 4 and contained in Document 213, displaced assignments would be allowed to remain on condition that harmful interference was not caused to the broadcasting services. He therefore proposed that the words "should have the status shown in Article 8 or RR 342. If neither of these applies they" should be inserted after "[1 April 1992]".

1.26 The delegate of the Russian Federation supported the insertion proposed, and also proposed that the words "after the date [1 April 1992]" should be deleted, in order to show that old and new assignments alike were covered.

1.27 The Chairman said that the paragraph in question related only to new assignments; the deletion proposed by the previous speaker could perhaps relate to the last sentence of paragraph 6.

1.28 The member of the IFRB suggested that, in order to avoid unnecessary complication, the matter should be discussed by an informal group.

1.29 The delegate of Morocco suggested that such a group might also consider an additional operative paragraph to the effect that the procedure should apply to stations of the fixed and mobile services except in cases duly authorized by Article 8 of the Radio Regulations; in that way, a distinction would no longer need to be made.

1.30 Following a brief discussion in which the delegates of Canada and the United States and the Chairman took part, it was agreed to set up an informal drafting group, consisting of the delegates of Australia, Canada and the member of the IFRB, to consider the text of paragraph 2.

1.31 There were no comments on **resolves** 3, 4, 5 and 6.

1.32 The Chairman, supported by the member of the IFRB and the delegate of the Netherlands, proposed the deletion of the words "in accordance with RR 1445 - RR 1449" from paragraph 7.

1.33 It was so agreed.

1.34 It was agreed to place square brackets around the words "and mobile" in both places where they appeared in the **invites administrations** paragraph.

1.35 The Chairman invited the Committee to comment on the dates shown in square brackets in paragraph 1.

1.36 In the ensuing debate the delegates of Australia, India, the Islamic Republic of Iran, Senegal, Mexico, Venezuela, and Canada expressed support for a starting date of 1 October 1992, while the delegates of Japan, the Russian Federation, Morocco, the Congo, Italy, Algeria, the United Kingdom and Spain favoured the retention of 1 April 1992. The delegate of Senegal then suggested a flexible approach while the delegates of Mexico and Venezuela advocated a compromise date of 1 July 1992.

1.37 The Chairman suggested that the matter be considered by an informal group and taken up again by the Committee at a later stage.

1.38 It was so agreed.

1.39 The Chairman invited the meeting to consider the date for the end of the transition period; the draft Resolution under consideration contained 1 January 2007 in square brackets but he noted that the date suggested by Committee 4 was 1 April 2007.

1.40 The delegate of Australia said that Committee 4 intended to align the date with that chosen by Committee 5.

1.41 The Chairman suggested that the question should be left pending until he had consulted the Chairman of Committee 4.

1.42 It was so agreed.

Annex 2: Draft Resolution COM5/[10]

1.43 The Chairman, introducing the draft new Resolution in Annex 2 to Document 192 relating to terrestrial digital sound broadcasting, invited delegations to make general comments on the text.

1.44 The delegate of Mexico expressed her concern at the earlier proposals by Spain and Germany that the draft Resolution should focus on Region 1. When the text was debated in detail, she would reiterate the proposals made in the Working Group which, due to lack of time, had not been discussed. They would result in the Resolution applying to all three Regions and meet the concerns of a number of delegations as well as her own.

1.45 The delegate of Israel added that worldwide application of the Resolution was very important and said that he would prefer the square brackets to be deleted from operative paragraph 1.

1.46 The delegate of Morocco said that his delegation agreed to discuss the draft Resolution on the understanding that any decisions made would be provisional until there was an overall review of the decisions of the Conference.

1.47 The delegate of Algeria expressed his concern that inviting the CCIR to undertake studies on specific bands would constitute a restrictive factor; the matter should be left open so that a future competent administrative radio conference could decide which were the appropriate bands to consider.

1.48 The delegate of the Congo said that, in view of the recently adopted Plan for the African Region, the CCIR should be asked to advise which bands were most appropriate and would satisfy all Regions for digital sound broadcasting systems. If the bands 87.5 - 108 MHz were chosen, the Plan for Africa would be jeopardized as some stations were already broadcasting in those bands.

1.49 The delegate of Mauritania also expressed his serious concern on the bands selected.

1.50 The Chairman invited the Committee to consider the text of the draft Resolution section by section.

1.51 There were no comments on the title, the opening phrase, and **considering** a), b) and c).

1.52 Referring to **considering** d), the delegate of Japan said that he could accept the text only if the VHF frequency band was mentioned in operative paragraph 1

1.53 The delegate of Mexico, supported by the delegate of Morocco, proposed the addition of the words "and that this Conference has adopted measures to allocate frequencies in this range to the broadcasting-satellite service (sound) and the terrestrial service" to the end of the present text.

1.54 The delegate of the Russian Federation said that a reference to satellite sound broadcasting was inappropriate in the text under consideration.

The meeting was suspended at 1110 hours and resumed at 1505 hours.

1.55 The delegate of Canada endorsed the Mexican proposal, since it was clear that there was considerable support in Committee 4 for satellite sound broadcasting services with complementary terrestrial services.

1.56 The delegate of Germany pointed out that the original proposal - by the Spanish and his own Administration - related to terrestrial digital sound broadcasting, whereas the allocation to be made in Committee 4 was concerned with satellite services to which the terrestrial service was merely complementary. He therefore saw no reason to refer to the satellite service in **considering** d).

1.57 The delegates of Algeria, Mali, Israel and Cuba supported the Mexican proposal.

1.58 The delegates of Spain, the United Kingdom, Japan and Nigeria opposed the proposal.

1.59 The delegate of Mexico acknowledged that the problem affected mainly Region 1 and should perhaps be included as such in the agenda of a future competent administrative radio conference. He suggested that his proposal be placed in square brackets and transmitted to the Plenary for a decision.

1.60 The Chairman pointed out that the original proposal did not relate solely to terrestrial digital sound broadcasting but also referred to the question of satellite sound broadcasting in a higher band. The two systems were different but not mutually exclusive.

1.61 The delegate of Canada said that confusion had arisen from the outset between the proposals for digital sound broadcasting in the 88 - 108 MHz range and proposals for the broadcasting-satellite service (sound) with a complementary terrestrial service under discussion in Committee 4. In that connection, it was true that the term "complementary" had no strict definition in the ITU. Eventually, given the heavy loading in the 88 - 108 MHz band, there was bound to be a move to a terrestrial and satellite-based service in the allocation that the present Conference, all being well, would provide. In his view, the addition of the words proposed by the delegate of Mexico would help to dispel any misunderstanding.

1.62 The delegate of Germany, supported by the delegate of Israel, proposed the addition of the following phrase to the end of **considering** d): "for terrestrial broadcasting as well as for broadcasting from satellites".

1.63 The delegate of France, supported by the delegate of Japan, proposed that the text of **considering** d), which was not strictly accurate, should be replaced by the following: "that extensive studies have been made in the CCIR on digital sound broadcasting by satellite with complementary terrestrial services between 0.5 and 3.0 GHz".

1.64 The delegate of the United Kingdom said that he had heard no convincing argument in favour of the Mexican proposal. If it was adopted, however, the word "terrestrial" should be added to the phrase "digital sound broadcasting" wherever it occurred in the text in order to avoid any confusion.

1.65 The delegate of Mexico, supported by the delegate of Canada, said he could agree to the United Kingdom proposal provided a reference to the VHF band was also added in all cases.

1.66 The delegate of Spain proposed that, with the addition of "VHF" to the title of the draft Resolution, **considering** d), could be deleted.

1.67 The delegates of Japan, Germany, Mexico and Italy supported the Spanish proposal.

1.68 The delegates of Senegal, Mali and Morocco said that they could agree to the deletion of **considering** d) but not to the addition of VHF to the title.

1.69 The Chairman suggested that examination of **considering** d) should be deferred pending further consultation.

1.70 It was so agreed.

1.71 There were no comments on **considering** e) and f).

1.72 With regard to **considering** g), the delegate of Algeria, referring to the possible use of the band 87.5 - 108 MHz, drew attention to the need for adequate protection of the assignments in the Geneva 1984 Plan and requested that the text be amended accordingly. He also expressed doubts concerning the phrase "or other broadcasting bands", which might imply that any band allocated to broadcasting could be used for the implementation of digital sound broadcasting on an interim basis.

1.73 The delegate of Morocco agreed with the delegate of Algeria on the need to protect the assignments in the Geneva 1984 Plan. As for the doubt raised with regard to the interpretation of "or other broadcasting bands", he proposed that the phrase should be deleted.

1.74 The delegates of Mauritania and Niger endorsed the comments by the delegates of Algeria and Morocco.

1.75 The delegate of the Congo also shared their concern; he wondered how the system would be operated and whether another band would be allocated to the service following the expiry of the interim period.

1.76 The delegate of Spain said that he understood the concerns expressed by the previous speakers, having already drawn attention to the need for adequate protection of the assignments in the Geneva 1984 Plan on previous occasions, including in Working Group 5C. However, he felt it unnecessary to amend the text along the lines suggested by the delegate of Algeria, since the Geneva 1984 Plan allowed for the use of broadcasting systems other than FM systems provided that interference did not exceed the limit specified in the Plan. Furthermore, since other VHF broadcasting bands would be used as an alternative to the band 87.5 - 108 MHz, he suggested that, instead of deleting "or other broadcasting bands", a reference to "VHF" should be included in the appropriate place.

1.77 The delegate of Israel endorsed that proposal.

1.78 The delegate of Germany, referring to the protection of assignments in the Geneva 1984 Plan, pointed out that CCIR Study Group 10 was looking at ways and means of ensuring that adequate protection would be provided should the DSB system be introduced in any of the broadcasting bands. He was confident of the successful outcome of their studies.

1.79 The delegate of France agreed on the importance of protecting the assignments in the Geneva 1984 Plan, but not only with respect to the band 87.5 - 108 MHz. Since other bands were concerned, he suggested that a more general phrase be inserted in the latter part of **considering** g) on the lines of, "in the bands allocated to broadcasting, while ensuring protection of the assignments in the relevant broadcasting Plans in force."

1.80 The delegate of Israel said that he could accept the amendment proposed by the delegate of France, provided that the word "European" was deleted, since it was hoped that the system would eventually be implemented worldwide.

1.81 The delegate of Italy supported the proposal by the delegate of France, which clarified the intent of the draft Resolution. She could agree to the deletion of "European" as proposed by the delegate of Israel, if indeed other countries outside Europe intended to implement such a system.

1.82 The delegate of Morocco also endorsed the proposal by the delegate of France, but expressed concern with regard to the suggested addition of "VHF". He favoured a specific reference to the bands intended to be used and, in that connection, enquired which bands they would be.

1.83 The Chairman replied that the lower television band channel 12 was one of the options being considered for the implementation of the interim system in Germany. He assured those who had expressed concern that if that band were to be chosen, adequate protection would be afforded for all the assignments in question.

1.84 The delegate of the Congo said that he could agree in principle to the amendment proposed by the delegate of France, although he too considered that there should be a more specific reference to the bands concerned, lest they be queried when the text was submitted to Plenary.

1.85 The delegate of Mexico said that he could approve the French proposal, albeit with some hesitation, but stressed the need for the inclusion of a reference to VHF in order to avoid any confusion.

1.86 The delegate of Spain also endorsed the French proposal, but considered that the reference to VHF might be more appropriate under **resolves to invite the CCIR**.

1.87 Replying to a question by the delegate of Algeria, the member of the IFRB confirmed that channel 12 was included in the Stockholm 1969 Plan.

1.88 The delegate of Canada said that he could accept the French proposal, provided a reference to VHF was included. As for the proposed deletion of "European", he suggested that it might be replaced by "Region 1", since neither the Region 2 nor the Region 3 countries were planning to implement an interim DSB system.

1.89 Replying to a question by the delegate of Ecuador, the Chairman said that the matter of where the digital sound broadcasting system would be accommodated on a permanent basis should be taken up by a future competent conference.

1.90 Following a request from the delegate of Senegal to place "VHF" in square brackets pending consideration of the **resolves to invite the CCIR** part, the Chairman urged the Committee to agree to a compromise solution. It was clear that a number of delegates could not accept the French proposal unless a reference to VHF was included. Furthermore, there seemed to be little support for the deletion of "European", since only European countries were concerned by the implementation of a DSB system on an interim basis. Taking into account delegates' comments and suggestions, he therefore suggested that the text of **considering** g) should be amended to read as follows:

"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 protection to the assignments in the relevant broadcasting Plans in force".

1.91 **Considering** g), as amended, was approved.

1.92 The Chairman invited the Committee to consider the introductory phrase under **resolves to invite the CCIR**, to which the delegate of the United Kingdom had proposed adding the word "terrestrial" before "digital sound broadcasting".

1.93 The delegate of Mexico proposed adding the phrase "in the VHF bands" after "digital sound broadcasting".

1.94 The delegate of Senegal supported the insertion of the word "terrestrial" but not of the words "in the VHF bands", which might more appropriately be incorporated in paragraph 1.

1.95 The delegate of Canada proposed inserting the phrase "in Region 1" after "digital sound broadcasting", or failing that, a similar reference in paragraph 1 or 2.

1.96 The Chairman suggested the following text for the introductory phrase: "in order to harmonize the implementation of terrestrial digital sound broadcasting".

1.97 It was so agreed.

1.98 The Chairman invited the Committee to examine paragraph 1, in which the words "broadcasting" and "band[s]" were placed in square brackets.

1.99 The deletion or inclusion of the word "broadcasting" gave rise to considerable discussion. The delegates of Algeria, Morocco, Spain, the Congo, Tunisia and Italy were in favour of deleting the word "broadcasting". The delegate of Senegal proposed deleting the whole phrase "in the VHF broadcasting band". It was argued that the inclusion of the word "broadcasting" tended to place limitations on the scope of the CCIR technical studies and that the CCIR might find other bands offering greater compatibility between digital sound broadcasting and the existing services, which would give administrations the possibility of selecting bands not allocated to broadcasting.

1.100 The delegate of Israel opposed the deletion of the word "broadcasting", as in his view the three VHF broadcasting bands provided sufficient range to accommodate digital sound broadcasting. He also emphasized that all proposals put forward so far, even in Europe, concerned only the broadcasting bands.

1.101 The delegate of Saudi Arabia was strongly in favour of including the words "broadcasting band".

1.102 The Chairman suggested the following wording for the end of the paragraph as a compromise solution: "terrestrial digital sound broadcasting in the VHF band".

1.103 The delegates of Nigeria, Senegal and Mali said that they would prefer to replace "the VHF broadcasting bands" by "in appropriate VHF bands".

1.104 In the absence of any formal objections, paragraph 1, with the amendment read out by the Chairman, was approved.

1.105 The delegates of Saudi Arabia and Israel expressed formal reservations concerning the deletion of the word "broadcasting" which had appeared between square brackets in the draft submitted by Working Group 5C.

1.106 Referring to paragraph 2, the delegate of Senegal, supported by the delegate of Israel, proposed replacing the phrase "protection of the safety services" by "protection of other services".

1.107 The delegates of the United Kingdom, the United States and Germany raised strong objections to that amendment, as the present wording was the outcome of lengthy discussions in the Working Group.

1.108 The Chairman, replying to a request by the delegate of Senegal for a clear definition of the word "safety", which might vary from one country to another, read out the definition in No. 56 of the Radio Regulations.

1.109 Paragraph 2 was approved as it stood.

1.110 There was no comment on the **resolves further** paragraph.

1.111 The delegate of Morocco, supported by the delegate of Algeria, proposed the insertion of a new paragraph under **resolves further**, to read as follows:

"to recommend the convening of a competent conference to study the use of terrestrial digital sound broadcasting while protecting the existing Plan".

1.112 That proposal was opposed by the delegate of Cuba, who pointed out that it would only be necessary to place digital sound broadcasting on the agenda of a conference if new bands were selected which were not allocated for broadcasting, and by the delegate of the Congo because of the number of problems concerning protection that would have to be raised.

1.113 In response to a request for clarification from the delegate of Mexico, the Chairman indicated that the aim of such a conference would be to pave the way for the orderly introduction of digital sound broadcasting, taking due account of other services.

1.114 The Chairman of Working Group 5C observed that, after lengthy discussion in the Working Group, the text of **resolves further** had been accepted by consensus as a compromise solution, and it had been agreed that the Administrative Council was competent to take the appropriate decisions. He felt, therefore, that the text should be approved as it stood.

1.115 The delegates of Germany, Spain, the United Kingdom and Nigeria supported that view.

1.116 The delegate of Mexico said that if the paragraph was adopted he would have to express reservations.

1.117 The delegate of Cuba expressed reservations concerning the entire draft Resolution, which contained a number of unclear or controversial points.

1.118 The delegate of Canada proposed inserting "VHF" before "terrestrial digital sound broadcasting", so as to bring the text into line with amendments already made to **considering** g).

1.119 The Chairman said that the Canadian proposal, along with the rest of the draft Resolution, would be discussed at the Committee's next meeting.

The meeting rose at 1805 hours.

The Secretary: The Chairman:

J. LEWIS E. GEORGE

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 247-E
24 February 1992
Original: French

COMMITTEE 4

SUMMARY RECORD

OF THE

EIGHTH MEETING OF COMMITTEE 4

(FREQUENCY ALLOCATION)

Monday, 24 February 1992, at 0930 hours

Chairman: Mr. I.R. HUTCHINGS (New Zealand)

Subjects discussed		Documents
1.	Oral report by the Chairman of Working Group 4B	-
2.	Report by the Chairman of ad hoc Group 2	235
3.	Report by the Chairman of ad hoc Group 3	236

1. Oral report by the Chairman of Working Group 4B

1.1 The Chairman of Working Group 4B recalled that an informal ad hoc Group under his chairmanship had been set up on 20 February to study the different proposals relating to the mobile-satellite service and to rationalize them for Committee 4. Since the CEPT Member countries and the United States had succeeded in harmonizing some of their proposals, Working Group 4B had decided that any texts arising from the compromises reached by CEPT and the United States would be considered by the informal ad hoc Group, which would report its conclusions to Committee 4. Accordingly, the ad hoc Group, which comprised the delegates of Brazil, Canada, Ecuador, France, Indonesia, Japan, Nigeria, Senegal, Saudi Arabia, Sweden, the Russian Federation and the United States, had met on Sunday, when it had also endeavoured to take account of the views of other administrations expressed in Working Group 4B. As the ad hoc Group had not had time to complete its discussion, he was unable to submit a written report and suggested that the Group pursue its work later that day. Moreover, his report did not necessarily reflect the point of view of all the participants, bearing in mind that the Group's aim was to prepare a basis for a consensus in order to facilitate the work of Committee 4.

1.2 The Group had studied the band 2 500 - 2 690 MHz and had considered it advisable to allocate an altogether provisional bandwidth of 20 MHz near 2 690 MHz for Earth-to-space links, and a similar bandwidth to space-to-Earth links near 2 500 MHz, with safeguards for existing services. In the bands 1 610 - 1 626.5 MHz and 2 483.5 - 2 500 MHz, the majority of participants in the Group had expressed the view that provision should be made for mobile-satellite services, again with protection for existing services in the Table. Use of the band above 1 610 MHz and the protection for the aeronautical radionavigation service and related safety services had been considered to be of particular importance.

1.3 In the band near 2 GHz contemplated for the FPLMTS, the Group had reviewed certain options for allocating part of the spectrum to mobile-satellite systems. Participants had also considered the allocation of a portion of the spectrum for mobile-satellite services below 1 525 MHz; in view of the concerns expressed by several members, however, it had been decided that additional study of that option would be required. For low-Earth orbit systems below 1 GHz, the principle of allocation of part of the spectrum had been adopted, but additional studies would nevertheless be required concerning the details of certain proposed allocations and the protection of other systems operating in that band. Reminding the meeting that the analysis given was not necessarily shared by all the members of the Group, which was willing to pursue its work, he offered to draw up a report if the Committee so desired.

1.4 The Chairman, supported by the delegate of Germany, said it would be useful for the Group to continue its work and produce a document as soon as possible, for example by 1500 hours the following day.

1.5 The delegate of Syria said that the unofficial group should adopt a global approach, since the broadcasting-satellite service was extremely important for the developing countries in particular.

1.6 The delegate of Lebanon considered that the results of the Conference hinged on the conclusions of the Group, which should work in parallel with other Committees.

1.7 The Deputy Secretary-General thought it would be preferable to set a deadline for the work of the Group, which, in order to expedite matters, should report to the Chairman of the Conference.

1.8 The delegate of Saudi Arabia thought that the meetings should not be continued but that a written report would be useful.

1.9 The delegate of Algeria shared that view and asked what precise status the report would have, since he had gathered that the aim of the unofficial group was to try to reconcile points of view and give the Committee an insight into the different schools of thought.

1.10 The Chairman pointed out that the Group's task was not to finalize proposals, but rather to identify areas of agreement or diverging views and report them to the Committee. If delegates so wished, he proposed that the Group might be given a more official status.

1.11 The delegate of Algeria said that if the Group had official status, he wished to participate in it.

1.12 The delegate of the Russian Federation, while in favour of pursuing the Group's work, did not agree to converting such an unofficial group into an official Working Group, since it was not responsible for making formal proposals.

1.13 The Chairman of Working Group 4B said that it would not be a problem to draft a report; issues of substance had already been considered in a discussion which would not be reopened.

1.14 The delegate of Algeria had no objection to maintaining the Group's current composition as indicated by its Chairman, as long as it retained an informal status. If it became official, he would then like to participate.

1.15 The Chairman proposed that the Group should retain its unofficial status and should submit its report as soon as possible.

1.16 It was so agreed.

2. Report by the Chairman of ad hoc Group 2 (Document 235)

2.1 The Chairman of ad hoc Group 2, introducing Document 235, said that the Committee would have to take up the discussion on **resolves** 5 of the draft Resolution in the Annex to the document, which remained in square brackets, as well as the set of amendments to Article 8. The new text of **resolves** 5 necessitated two other additions, namely **considering** d) and **recognizing** b). The proposed compromise was designed to strike a delicate balance between the different points of view on the issue of including the fixed-satellite service (FSS) in that part of the spectrum. The service had to be accommodated in a band already used by other services, on a primary and a secondary basis. The problem was how certain extremely important services relating to the environment could continue to operate after the FSS had been accommodated. He proposed three amendments of form, namely: including the text from **recognizing** b) in Footnote 855B; replacing "SRSS" by "SRS" wherever it appeared in the English text; and in **considering** c), after "EESS", adding the words "and the standard frequency and time-signal satellite service". All the portion of text on page 3 had been placed in square brackets at the request of the Russian Federation.

2.2 In reply to a question by the delegate of Australia regarding the abbreviations, the Chairman said that the Editorial Committee would probably remove them.

2.3 The title of the draft Resolution and **considering** a), b) and c) were approved, subject to replacement of the words "the FSS and RLS" by "the FSS, the radiolocation service and the radionavigation service" in **considering** b) and incorporation of the amendments proposed by the Chairman of ad hoc Group 2 in **considering** c).

2.4 The Chairman suggested deleting the square brackets around **considering** d).

2.5 The delegate of the Netherlands approved that suggestion, although his delegation, which had frequently spoken on behalf of CEPT, acknowledged the problems raised by active sensors in an environment where the FSS was operating in the same part of the spectrum. Accordingly, the CCIR might be invited to study compatibility between the FSS and the space research and earth exploration-satellite services.

2.6 The delegate of Zimbabwe asked whether the addition of d) imposed constraints on operation of the fixed service on a primary basis in the band in question.

2.7 The Chairman replied that there was already a service with secondary status in that band in Footnote 713; it was a question of studying the compatibility of services, not of imposing restrictions on the FSS. He proposed that **considering** d) be approved and the square brackets deleted.

2.8 It was so agreed.

2.9 **Recognizing** a) was approved.

2.10 The delegate of Algeria, supported by the delegate of Zambia considered that it would be superfluous to include **recognizing** b) in Footnote 855B.

2.11 The delegate of France proposed that the word "existing" be inserted before "non-geostationary space stations" in **recognizing** b).

2.12 The delegate of Tanzania asked for explanations concerning the space research service and earth exploration-satellite service operating on a secondary basis. To his mind, inclusion of the FSS in that band did not provide any protection to the secondary services other than that provided under the normal procedures.

2.13 The Chairman recalled that, in introducing the text, the Chairman of ad hoc Group 2 had proposed that **recognizing** b) should also appear in Footnote 855B so as to become an integral part of the Regulations.

2.14 The Chairman of ad hoc Group 2 pointed out that the amendments in question had been proposed at the last minute and had not been examined. Delegates might perhaps prefer an interpretation to be given by the IFRB.

2.15 The Chairman of the IFRB pointed out that the text was a Resolution, and that the **recognizing** was not an integral part of the Regulations. One solution might be to amend the text as follows: "**recognizing** that provision 855B states that, until 1 January 2000, ...". The thrust was in fact to request the CCIR to undertake certain studies, making the proposed text a stand-alone Resolution.

2.16 The delegate of the Netherlands said he could go along with both the Chairman of the IFRB's and the Chairman of the Committee's proposals.

2.17 The Chairman asked whether the delegates could agree to a reference to Footnote 855B in **recognizing** b), to make it quite clear that the paragraph in question merely noted regulatory provisions which existed elsewhere.

2.18 It was so agreed.

2.19 Referring to the proposal by the delegate of France, the delegate of Japan announced that in 1996 his country would be launching a satellite for the observation of rainfall in the Tropical Zones and flood prevention. The project was being carried out with international cooperation and Japan would prefer the text of the paragraph to remain unchanged.

2.20 The Chairman proposed that the issue should be settled when the wording of Footnote 855B was actually finalized; according to the decision taken, the word "existing" could then be included or not.

2.21 The delegate of Niger said that his Administration maintained its reservation and would take the floor in the Plenary.

2.22 Subject to the amendment adopted, **recognizing** b) was approved.

2.23 **Resolves** 1 was approved.

2.24 In **resolves** 2, the delegate of Algeria requested that the words "radio services" should be replaced by "radiocommunication services", while the Chairman proposed the following wording: "to invite administrations and other organizations interested in the radio services allocated in the bands 13.75 - 14 GHz to participate ...".

2.25 **Resolves** 2, as amended, was approved.

2.26 **Resolves** 3 and 4 were approved.

2.27 The delegate of Tanzania asked, with reference to **resolves** 5, whether the text would have the effect of upgrading the earth exploration-satellite service.

2.28 The Chairman said that it would not. It would simply invite the CCIR to study the question of sharing and investigate whether the services were technically compatible.

2.29 The Chairman of the IFRB confirmed the view expressed by the Chairman, adding that the necessary studies would be concerned with sharing between the space research service and the fixed-satellite service, on the one hand, and between the earth exploration-satellite service and the fixed-satellite service on the other. The FSS was being introduced on a primary basis, and it was the operation of the other two services on a secondary basis that the CCIR had to study.

2.30 The delegate of the Netherlands confirmed that the intention of the new text was in line with the interpretation given by the Chairman of the IFRB. The purpose of the **resolves** was specifically to introduce a second service on a primary basis. It was fair with regard to the space research service and the earth exploration-satellite service that the possibility of sharing the bands allocated on a primary basis to the new service should be considered.

2.31 The delegate of Niger pointed out that paragraph 5 had been added at the last moment. He wondered whether, if the CCIR studies were not conclusive, the fixed service would have to give up that band, which had already been allocated as from the year 2000.

2.32 The delegate of Gabon shared the concern expressed by the previous speaker. If paragraph 5 was to be kept, it would have to be made broader and more flexible, because the two services did not have the same status.

2.33 The delegate of Kenya expressed the same doubts as the delegates of Tanzania and Niger and thought that paragraph 5 should be redrafted so as to exactly reflect the interpretation given by the IFRB.

2.34 The delegate of Algeria considered that the word "sharing" was not appropriate. The studies should rather show whether there was or was not compatibility between the space research and earth exploration-satellite services and the FSS. Paragraph 5 could thus read: "to invite the CCIR to conduct the necessary studies with regard to compatibility between ... ".

2.35 The Chairman, in light of the views expressed, proposed the following wording: "to invite the CCIR to conduct the necessary studies with regard to technical compatibility between primary allocation to the FSS and to the SRSS and EESS".

2.36 The delegate of Algeria, supported by the delegate of the Netherlands, agreed with that wording, but proposed that the idea of primary allocation should be supplemented by the idea of secondary allocation, since after the year 2000 allocations would be on a secondary basis.

2.37 The delegate of Niger thought that the uncertainty about the conclusions of the CCIR studies was a reason for deleting paragraph 5.

2.38 The Chairman replied that in paragraph 1 the CCIR was invited to conduct the necessary studies, prior to 31 January 1994, and to report the outcome at least one year before the next competent conference. It was understood that conference would very probably be held before the year 2000, so that administrations would have plenty of time to conduct the necessary studies and make proposals to the conference, which would be able to take a decision on the footnotes and the table in the text, in the light of the CCIR's studies or practical experience. Thus he did not think it would be a good idea to delete paragraph 5.

2.39 Paragraph 5 was approved with the amendment proposed by Algeria.

2.40 On the proposal of the delegate of Finland, the Chairman suggested making paragraph 5 the second paragraph and renumbering the other paragraphs accordingly.

2.41 It was so decided.

2.42 The Chairman invited delegates to consider the amendments to Article 8 on page 3 of Document 235.

2.43 The amendments to the Table for the band 13.75 - 14 GHz were approved.

2.44 The Chairman said that at the end of Footnote ADD 855A, the number of the Resolution should be inserted, namely "COM4/1".

2.45 With that addition, Footnote 855A was approved.

2.46 The Chairman of ad hoc Group 2, referring to ADD 855B, said that it had been unanimously agreed to delete the words "and in the earth exploration-satellite service", as there were no geostationary space stations operating in that service.

2.47 It was so decided.

2.48 The delegate of Swaziland thought it would be better to add the words "until 1 January 2000, after which those stations shall retain their secondary status" at the end of the footnote, rather than **recognizing** b) of the draft Resolution just approved by the Committee. Replying to a comment by the Chairman concerning the purpose of the first part of Footnote 855B, he stressed the fact that agreement had been reached on the space stations referred to in the Table on the condition that they operated on a secondary basis. He accordingly maintained his proposal for amendment of Footnote 855B.

2.49 The Chairman of ad hoc Group 2, supported by the Chairman of the IFRB, pointed out that agreement had been reached on the text of **recognizing** b) in the Group, but solely with reference to stations in the fixed-satellite service, up to 1 January 2000.

2.50 The delegate of Syria considered that **recognizing** b) should be added in Footnote 855B because the space research-satellite service and earth exploration-satellite services ought to be protected.

2.51 The delegates of Tanzania, Zimbabwe, Nigeria, Niger and Kenya supported the proposal by the delegate of Swaziland, which would make Footnote 855B more precise.

2.52 The Chairman pointed out that the first part of Footnote 855B referred to geostationary space stations whereas **recognizing** b) referred to non-geostationary space stations, so that they were concerned with different objectives.

2.53 The delegate of the United States fully agreed with what the Chairman had just said. He was greatly concerned, because the proposed amendments would certainly lead to a long debate. The discussion had been hard going and he did not want to reopen it.

2.54 The delegate of the Netherlands, supported by the delegate of Canada, said that he did not think the amendment proposed by the delegate of Swaziland was necessary, but that he had nothing against adding it at the end of Footnote 855B. It would be for the Editorial Committee to finalize the text.

2.55 The Chairman of ad hoc Group 2 said that the text of Footnote 855B with the deletion "and in the earth exploration-satellite service" and the addition of **recognizing** b) represented the agreement reached in ad hoc Group 2.

2.56 The Chairman suggested that Footnote 855B should comprise two parts. The first would concern geostationary space stations and the second, which would consist of **recognizing** b), would be concerned with non-geostationary space stations.

2.57 The delegate of Tanzania, supported by the delegate of Syria, said he would find it difficult to reconcile the Chairman's suggestion with Article 8, because its effect would be to maintain the status quo, so that space stations in those services would continue to function from 1 January 2000 on a shared basis whereas that would not be the case for non-geostationary space stations.

2.58 The Chairman of the IFRB explained for the benefit of the delegate of Swaziland that the stations in question would keep their secondary status in relation to the fixed-satellite service.

2.59 The delegate of the United States said he was against the introduction of any additional text which would depart from the text of a difficult compromise allowing the introduction of the FSS in that part of the spectrum. He explained that he was not in fact opposed to the Swaziland proposal, but rather to the allocation of frequencies to the fixed-satellite service.

2.60 The Chairman invited delegates to take a decision on the proposal by the delegate of France to add the word "existing" before the words "non-geostationary space stations" in **recognizing** b).

2.61 After a brief exchange of views between the delegates of Japan and France, the latter said he was prepared to withdraw his proposal.

2.62 It was decided to add the text of **recognizing** b) of the draft Resolution at the end of Footnote 855B.

2.63 The delegate of the United States requested that the report of Committee 4 to the Plenary should state that in the United States the band 13.75 - 14 GHz was already allocated to the radiolocation service on a primary basis and to the standard frequency and time signal-satellite service and space research services on a secondary basis.

2.64 Following a statement by the delegate of the Russian Federation, to the effect that he could withdraw his earlier reservations if that would enable the Committee to make progress, the Chairman said that the square brackets round the whole text on page 3 of Document 235 could be deleted. As a result of the comments made by the delegate of the United States, the reference to the fixed-satellite service (Earth-to-space) in the Table would be put in square brackets, as would the addition proposed by the delegate of Swaziland to Footnote 855B.

2.65 Document 235 as a whole was approved, with the amendments made during the discussion.

3. Report from the Chairman of ad hoc Group 3 (Document 236)

3.1 The Chairman of ad hoc Group 3, introducing his report on the general-satellite service, said that the Group had considered the options put forward in Document DT/74 and had agreed to consider the compromise solution in paragraph 5 of that document. A discussion had taken place, during which the importance of protecting existing allocations had been stressed. It had proved possible to arrive at a compromise solution, and there were still three questions to be considered concerning the bandwidth to be allocated to each region, the specific parts of bands 19.7 - 20.2 GHz and 29.5 - 30.0 GHz in which the allocations should be made and the possible adoption of regulatory provisions to protect existing allocations. The Group had decided to recommend four allocations to the Committee for Regions 1, 2 and 3. Lastly, the Group had considered the regulation issues and had prepared a draft Recommendation which was contained in the Annex to Document 236.

3.2 The Chairman said that the document would be considered at the next meeting of Committee 4.

The meeting rose at 1235 hours.

The Secretary: The Chairman:

T. GAVRILOV I.R. HUTCHINGS

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 248-E
26 February 1992
Original: English

COMMITTEE 5

SUMMARY RECORD

OF THE

SEVENTH MEETING OF COMMITTEE 5

(REGULATORY)

Monday, 24 February 1992, at 0930 hours

Chairman: Mr. E. GEORGE (Germany)

Subjects discussed		Documents
1.	Sixth report of Working Group 5B	242
2.	Second and final report of Working Group 5C (continued)	192
3.	Additional text for Resolution COM5/3	DT/101
4.	Modification to Footnote 404 of the Radio Regulations	101(Add.1)
5.	Draft Resolution relating to changes in frequency bands	65
6.	Organization of work	217, 218(Rev.1), 219

1. Sixth report of Working Group 5B (Document 242)

1.1 The delegate of Morocco said that a number of important, interrelated problems had yet to be solved in both Committee 5 and Committee 4. In order not to delay the work of the Conference, his delegation could agree to discuss the content of the documents on the agenda, on the understanding that their final adoption was subject to agreement on all of the questions, as stated by the Chairman of the Conference.

1.2 The Chairman said that the Committee would proceed on that assumption.

1.3 Reporting on progress since 21 February, the Chairman of Working Group 5B said that the Group had received a report from Sub-Working Group 5B3 (Document DT/97) on procedures relating to non-geostationary-satellite networks. However, in view of its importance and the fact that it had been distributed only that morning, it had not yet been considered by Working Group 5B.

1.4 Two reports from Sub-Working Group 5B4 (Documents DT/85 and DT/88) on the introduction of BSS (HDTV) systems and the future adoption of flexibility procedures had been considered and, although many uncertainties subsisted, the two corresponding draft Resolutions had been agreed upon and were included in the Working Group's report, bearing in mind that when Committee 4 had finished its work on allocation of bands, the Resolutions might have to be modified. Document DT/96, also submitted by Sub-Working Group 5B4, contained a draft Resolution on the introduction of systems in the BSS (Sound) service; that document too would be taken up at the Working Group's next meeting.

1.5 Document DT/98 was the final report of Sub-Working Group 5B5 on modifications to Articles 27 and 28. Since work in Committee 4 had not progressed, it was proposed that Sub-Working Group 5B5 be allowed to proceed with its work and report directly to Committee 5 when it had the necessary input from Committee 4.

1.6 Draft Resolutions COM5/[5] and COM5/[6] in Document 242 concerned interim and future procedures for BSS (HDTV). As already stated, many points were still in abeyance (frequency bands might differ from one region to another, and dates, power flux-density limits and footnotes were provisional) and would have to be reviewed in the light of results in Committee 4.

Draft Resolution COM5/[5]

1.7 Referring to the title, the delegate of Mexico observed that while unresolved issues were identified by means of square brackets, the frequencies for Region 2 were not indicated even provisionally.

1.8 The Chairman thought that the eventual allocation to Region 2 would not require interim procedures. The Chairman of Working Group 5B confirmed that point. It had been felt necessary to concentrate on Regions 1 and 3 where such procedures were needed but when Committee 4 had taken decisions, Region 2 would be included if need be.

1.9 To cover that possibility and to serve as a reminder to take up the question of regional allocations, the Chairman suggested that the words "[in Regions ....]" be added at the end of the title.

1.10 It was so agreed.

1.11 **Considering** a) and b) were approved.

1.12 It was agreed to replace "the year [2005]" by "[1 April 2005]", in **considering** c) and d), in the interest of consistency with the other parts of the text.

1.13 **Considering** e) and f) were approved as they stood.

1.14 The **resolves** paragraph was approved, subject to deletion of the square brackets.

1.15 The **invites all Administrations** and **instructs the IFRB** paragraphs were approved.

Annex to draft Resolution COM5/[5]

1.16 It was agreed to align the title with that of the Resolution itself.

1.17 The Chairman having referred to an earlier decision to place the whole of Section I between square brackets, the delegate of Australia said that his delegation still had doubts about the usefulness of the text, which seemed to carry the same meaning as Section II.

1.18 The Member of the IFRB explained that it was not yet known how Footnote 873A would read. He himself still had certain problems with Article 34, and Working Group 5B had debated whether that Article was really necessary. The essential point was the application of Resolution No. 33. Since Footnote 873A would presumably place some restrictions on BSS (HDTV) with respect to other services, it was important for the texts not to be contradictory. Section I did indeed seem repetitive and might perhaps be deleted.

1.19 Following further discussion, it was agreed to retain Section I.

1.20 The Member of the IFRB pointed out that Section II dealt with experimental systems and Section III with operational systems, although administrations simply notified broadcasting satellite stations without differentiating between them. It was not clear how the IFRB would identify them.

1.21 The delegate of the United Kingdom observed that paragraph 7 (Section IV) mentioned characteristics that applied to operational systems only.

1.22 The Member of the IFRB agreed that the text could be left as it stood; at the implementation stage, the Board would have to request administrations to indicate whether they were notifying stations under Section II or III.

1.23 Draft Resolution COM5/[5] as a whole, as amended, was approved, together with its Annex.

Draft Resolution COM5/[6]

1.24 On a proposal by the delegate of Japan, it was agreed to place the words "and of the associated feeder links" at the end of the title between square brackets, pending the outcome of Committee 4's work on feeder-link bands.

1.25 **Considering** a) and b) were approved.

1.26 The Member of the IFRB observed that post-Conference work would be facilitated if a cross-reference to Resolution COM5/[5] were inserted in **considering** c).

1.27 It was agreed to add the words "(see Resolution COM5/[5])" at the end of the paragraph, and to replace "the year [2005]" by "[1 April 2005]".

1.28 As a consequence of the amended title, it was agreed to place the words "and associated feeder link" in **considering** d) between square brackets.

1.29 The two operative paragraphs were approved.

1.30 Draft Resolution COM5/[6] as a whole, as amended, was approved,

2. Second and final report of Working Group 5C (Document 192) (continued)

Annex 1 - Draft new Resolution COM5/[7]

2.1 The Chairman drew attention to the parts of the draft new Resolution relating to implementation of changes in frequency allocations between [4 000 kHz and 20 000 kHz] on which the Committee had failed to reach agreement at its previous meeting.

2.2 The Member of the IFRB, referring to paragraph 2 under **resolves that**, said that even if no provisions were forthcoming it would still be possible for administrations to have their systems recorded, under conditions set out in a footnote; the simplest solution seemed to consist in replacing the last part of the second sentence by a phrase to the effect that the finding would be reviewed by the IFRB as of [1 April 2007].

2.3 The delegate of Australia said that the solution proposed would meet his concerns. He withdrew his earlier proposal to put back the starting date of 1 April 1992 to 1 October 1992.

2.4 The delegate of the Russian Federation said he did not understand what instructions were being given to the IFRB concerning notices received after 1 April 1992 or how they would be reviewed.

2.5 The Member of the IFRB said that, for example, if a notice was subject to a footnote restricting the assignment to national use, it would continue to have a favourable finding after its review in 2007. However, if a system notified after 1 April 1992 was being used for international service, it would not meet the conditions of the footnote and the finding would become unfavourable. It might be wise to add the phrase "in accordance with the provisions of the Radio Regulations" to the text.

2.6 The delegate of the Islamic Republic of Iran said that the square brackets could be removed from round the date 1 April 1992 now that the paragraph had been expanded. Perhaps the IFRB would subsequently be able to find more exact wording for the amendment.

2.7 At the suggestion of the Member of the IFRB, it was agreed to include a precise reference to RR 1240, so that the text would read: "... to indicate that the finding will be reviewed by the IFRB as of [1 April 2007] in accordance with RR 1240".

2.8 The delegate of the Russian Federation regretted that the modified text still allowed the undesirable possibility of continued notification in the bands in question; however, if the text commanded majority support he would not press the point.

2.9 The Chairman noted that in paragraphs 1 and 6 the date "1 January 2007" should read "1 April 2007", that in paragraph 7 the words "in accordance with RR 1445 - RR 1449" had been deleted, and that in the absence of further information from Committee 4, the words "and mobile" would remain in square brackets wherever they appeared in the Resolution.

2.10 Resolution COM5/[7] (Annex 1 to Document 192) as a whole, as amended, was approved.

Annex 2 - Draft new Resolution COM5/[10]

2.11 The Chairman suggested that further consideration of the draft new Resolution relating to terrestrial digital sound broadcasting be deferred until a clearer picture emerged of the discussions in Committee 4.

2.12 It was so agreed.

Annex 3 - MOD 181 and MOD 182

2.13 The Chairman of Working Group 5C said that the Working Group was submitting Annex 3 to the Committee on the understanding that MOD 181 should remain in square brackets pending advice from the Working Group of the Plenary. That advice, now available in Document 219, would be discussed under a later agenda item.

2.14 The delegate of the Russian Federation agreed to MOD 182 but, in connection with MOD 181, said that he preferred the present definition of geostationary satellite in the Radio Regulations. If the fact that the satellite was only approximately in the plane of the Earth's equator were highlighted, as in MOD 181, it would not be clear why other possible inaccuracies were not specified.

2.15 The delegate of Argentina proposed to retain the definition in MOD 181 in square brackets pending a more precise proposal or a technical definition of the tolerance or deviation from the inclination of orbit. He could, however, agree to MOD 182.

2.16 The Chairman observed that the advice in Document 219 was not entirely clear.

2.17 Following informal consultations, the Chairman of Working Group 5C said that agreement had been reached to put to the Committee a proposal to retain the present definition in the Radio Regulations, subject to the addition of the words "in three dimensions" in the last phrase, which would then read "by extension, a satellite which remains approximately fixed in three dimensions relative to the Earth".

2.18 The delegate of the United States said that he would prefer to maintain the present, well-tried definition in the Radio Regulations.

2.19 The delegate of Venezuela said that he favoured the definition proposed by Working Group 5C in Document 192. He also agreed with the representative of Argentina that a specific value for the inclination tolerance should be included.

2.20 The delegate of France said that although his delegation could agree to retain the present definition in the Radio Regulations, the definition in Document 192 was a little clearer. However, he did not consider it appropriate to introduce parameter values into the text of a definition. The word "approximately" already implied that some parameters might deviate from those of the geostationary satellite.

2.21 The Chairman observed that it would be impossible for the Conference to set any values, and that the question would therefore best be left unasked.

2.22 The delegate of Canada suggested that the two issues might be separated and the question of the value of inclination set aside. The problem of the present definition 181 in the Radio Regulations was that it referred to "the plane of the Earth's equator", which took account of longitude and range, but not of latitude variations. The proposal to add the words "in three dimensions" would qualify that definition.

2.23 The delegates of Mexico, the United Kingdom, Argentina and the Netherlands said they would prefer to retain the present definition in the Radio Regulations.

2.24 In reply to a request from the delegate of Canada for clarification as to how the IFFB would interpret the regulation, the Member of the IFRB said that to be technically precise there was no range for any variation. But there was a need to be practical. Tolerances were provided for East/West station keeping in Article 29, though not for movement in the North/South direction. However, the Board's concern was not with the definition of the geostationary-satellite orbit, but with guidance as to what procedures were applicable in certain cases. The report of Working Group 5B3 (Document DT/97) would provide such guidance.

2.25 The delegate of the Russian Federation said that he too was in favour of retaining the present definition in the Radio Regulations; however, the Committee's decision on that point must not prejudge the proposals in Document DT/97, which were still to be discussed.

2.26 The delegate of the United States said it was his understanding that there was a practical need to determine which regulatory procedures applied in each case.

2.27 The delegate of Canada said that pending further discussion on the report of Working Group 5B3, he could agree to retaining the present definition in the Radio Regulations.

2.28 MOD 182 was approved and it was agreed that no change would be made to Provision No. 181.

3. Additional text for Resolution COM5/3 (Document DT/101)

3.1 The Chairman drew attention to Document DT/101 containing an additional text for Resolution COM5/3, to take account of CCIR studies on the rain-zone issue. The Working Group of the Plenary had requested Committee 5 to take those studies into account.

3.2 The Chairman of Sub-Working Group 5B1 explained that the proposals in Document DT/101 to add to Resolution COM5/3 (Document 212) a new **considering** d) and to modify the **invites the CCIR** paragraph had been taken from the second and third paragraphs of Document 209, and took into account the concerns of Committee 4 with regard to the particular needs of high rainfall rate climatic zones for HDTV.

3.3 The proposals in Document DT/101 were approved for inclusion in Resolution COM5/3.

4. Modification to Footnote 404 of the Radio Regulations (Addendum 1 to Document 101)

4.1 The delegate of Turkey, introducing Addendum 1 to Document 101, pointed out that, due to an error some 30 years previously, the definition of the "European Broadcasting Area" in Footnote 404 of the Radio Regulations had resulted in some five-sixths of his country being included in that area, the remainder being left outside any defined broadcasting area. That made national and international planning extremely difficult. The anomaly could be corrected easily by adopting the adjustments proposed in the document under consideration. Furthermore, his Administration would take all necessary measures on the implementation of the modified definition of provision 404 of the Radio Regulations in order not to affect the existing and planned systems of the neighbouring countries to the subject area.

4.2 The delegate of the Islamic Republic of Iran said that although the matter was not, strictly speaking, on the agenda of the Conference, he could agree to the modification provided that protection was guaranteed, as stated by Turkey. The adjustment proposed would assist coordination between the Administration of his country and that of Turkey. However, the question was a very important one and he requested the IFRB or the ITU Legal Adviser to clarify the issue.

4.3 The delegates of the United Kingdom, Italy, Germany, Spain, the Netherlands and Algeria supported the proposed adjustment on the understanding that the stations of Region 3 countries would be safeguarded.

4.4 The Member of the IFRB pointed out that Turkey was a party to the 1961 Stockholm Agreement for the European Broadcasting Area, to which Iran was not a party, and that, at first sight, only other parties to that Agreement would seem to be affected.

4.5 The Chairman suggested that the adjustment be approved provisionally and the matter taken up again once the IFRB had given further consideration to the implications for countries outside the European Broadcasting Area.

4.6 It was so agreed.

5. Draft Resolution relating to changes in frequency bands (Document 65)

5.1 The Chairman said that draft Resolution No. AA in Document 65 (CUB/65/16) was being submitted to Committee 5 as it was unclear which Working Group should address the question.

5.2 The delegate of Cuba introduced the draft Resolution, stressing that the text had been prepared bearing in mind not only the work of the present Conference but also Resolutions Nos. 24 ("Special voluntary programme for technical cooperation") and 28 ("Telecommunication infrastructure and socio-economic and cultural development") adopted at the Plenipotentiary Conference (Nice, 1989). Unless the developing countries were provided with the necessary funds and access to appropriate technology and training, they were unlikely to be able to implement the decisions of the present Conference within the time-limits agreed and he therefore urged that the draft Resolution be adopted.

5.3 The delegates of Spain, Bahamas, Ecuador, Guinea, Venezuela, Mexico and Mali supported the draft Resolution.

5.4 The Chairman suggested that greater flexibility would be achieved by deleting the wording after "services" in **considering** a).

5.5 It was so decided.

5.6 The Member of the IFRB pointed out that the word "proposed" in **considering** a) should be replaced by "made" to reflect the fact that changes had already been made in the Table of Frequency Allocations.

5.7 It was so agreed.

5.8 The delegate of the United Kingdom, supported by the delegate of the United States, considered that it would be more realistic to refer to assisting in the provision of resources in **resolves** 1 rather than to actually provide resources. He would also welcome the Secretary-General's comments on the appropriateness of the work of a future world development conference being referred to in a Resolution of a world administrative radio conference.

5.9 The Chairman suggested that the Committee should endorse the draft Resolution without adopting any exact wording and that the Secretary-General should be requested to answer specific queries on the subject before further action was taken.

5.10 It was so agreed.

6. Organization of work (Documents 217, 218(Rev.1) and 219)

6.1 After a brief debate it was decided that Documents 217, 218(Rev.1) and 219 would be discussed by Working Group 5B.

The meeting rose at 1220 hours.

The Secretary: The Chairman:

J. LEWIS E. GEORGE

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 249-E
24 February 1992
Original: English

COMMITTEE 6

Source: Documents 192, 242

SIXTH SERIES OF TEXTS FROM COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 has approved the annexed texts to be submitted to the Editorial Committee for consideration and subsequent transmission to the Plenary session:

- Resolution COM5/5
- Resolution COM5/6
- Resolution COM5/7
- Article 1.

E. GEORGE
Chairman of Committee 5

Annexes: 4

ANNEX 1

RESOLUTION COM5/[5]

Relating to the Introduction of HDTV Systems of the Broadcasting-Satellite Service (BSS) in the Band [21.4 - 22.0] GHz [in Regions ...]

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

considering

a) that this present Conference has reallocated the band [21.4 - 22.0] GHz to the broadcasting-satellite service to be implemented after [1 April 2005] and that by [ADD 873A] it is intended for use by the BSS for wide RF-band high-definition television (HDTV);

b) that until [1 April 2005] the existing services operating in the band [21.4 - 22.0] GHz in accordance with the Table of Frequency Allocations are therefore entitled to continue in operation without harmful interference from other services;

c) that nevertheless it is desirable to facilitate the introduction of experimental HDTV systems into this band before [1 April 2005] 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 2005] without affecting the continued operation of existing services;

e) that after [1 April 2005] the introduction of HDTV systems into this band must be regulated in a flexible and equitable manner until such time as a future competent WARC has adopted definitive provisions for this purpose in accordance with Resolution No. 507;

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 COM5/[5]

Interim Procedures for the Introduction of BSS (HDTV) Systems in the Band [21.4 - 22.0] GHz [in Regions ...]

Section I. General Provisions

1. It shall be understood that prior to [1 April 2005] all existing services in the band [21.4 - 22.0] GHz 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 only on the basis of [No. 873A] of the Radio Regulations; 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 into the band [21.4 - 22.0] GHz 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 2005]

2. For the purpose of introducing experimental BSS (HDTV) systems in the band [21.4 - 22.0] GHz before [1 April 2005] under the provisions of Article 34 of the Radio Regulations, the procedures contained in Resolution No. 33 shall be applied.

Section III. Interim Procedure Relating to Operational BSS (HDTV) Systems Introduced Before [1 April 2005]

3. For the purpose of introducing operational BSS (HDTV) systems in the band [21.4 - 22.0] GHz before [1 April 2005] the procedure contained in Resolution No. 33 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 No. 33 only shall be applied.

Section IV. Interim Procedure Relating to BSS (HDTV) Systems Introduced After [1 April 2005]

5. For the purpose of introducing and operating BSS (HDTV) systems in the band [21.4 - 22.0] GHz after [1 April 2005], and before a future Conference has taken decisions on definitive procedures, the procedure in Sections B and C of Resolution No. 33 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 into the band [21.4 - 22.0] GHz 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 WARC.

ANNEX 2

RESOLUTION COM5/[6]

Relating to the Future Adoption of Procedures to Ensure Flexibility in the Use of the Frequency Band Allocated to the Broadcasting-Satellite Service for Wide RF-Band High-Definition Television [and of 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 present Conference has added an allocation to the broadcasting-satellite service in the band [ ] GHz for use by wide RF-band high-definition television (HDTV);

b) that considerable further technological development of wide RF-band HDTV is expected before such services can be introduced for general operational use;

c) that this Conference has made interim provisions to be applied during the period before [1 April 2005] to regulate the introduction of BSS (HDTV) systems of an experimental or operational character (see Resolution COM5/[5];

d) that in the longer term regulatory provisions designed to ensure a 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 design of future regulatory provisions for BSS (HDTV) to ensure flexibility in the use of the [ ] GHz band, 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 the inclusion of an appropriate item in the agenda of a future world administrative radio conference.

ANNEX 3

Draft

NEW RESOLUTION COM5/[7]

Relating to Implementation of Changes in Frequency Allocations Between [4 000 kHz And 20 000 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 [4 000 kHz and 20 000 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 [or amateur] services;

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 in replacing the displaced assignments with appropriate protection;

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

recognizing

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

resolves that

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

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

3. as of 1 April 1992, the IFRB shall undertake a continuing action to review the Master International Frequency Register with the help of the administrations. In this respect the IFRB shall periodically consult the administrations for the frequency assignments for 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. administrations shall, for assignments of class of operation A in the reallocated bands, either notify the IFRB the replacement frequencies or request the IFRB assistance in selecting the replacement frequencies in application of RR 1218 and Resolution No.103;

5. 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 RR 1001.1;

6. the IFRB should modify the draft procedures taking account to the extent practicable of 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 in relation to their assignments to be in conformity with the Table of Frequency Allocations by the due date;

7. 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 RR 1376 - RR 1380,

invites administrations

when seeking reaccommodation of the displaced assignments for their fixed [and mobile] services in the bands between [4 000 kHz and 20 000 kHz] which have been reallocated to the broadcasting [or amateur] services, to make every effort to find replacement assignments in the bands allocated to the fixed [and mobile] services concerned.

ANNEX 4

CHAPTER I

Terminology

ARTICLE 1

Terms and Definitions

Section VIII. Technical Terms Relating to Space

NOC **181**

MOD **182** 8.14 Geostationary-satellite orbit: The orbit ~~in which a satellite must be placed to be a geostationary satellite.~~ of a geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 250-E
25 February 1992

LIST OF DOCUMENTS

(Documents 201 to 250)

No.	Origine	Title	Destination
201	INS	Proposals for the work of the Conference	WG 4B
202	WG 4C	Note by Chairman of Working Group 4C to the Working Group of the Plenary	WG PL
203(Rev.1)	BEN, GMB, SEN	Proposals for the work of the Conference	C4
204	E	Proposals for the work of the Conference	C4
205	WG 4C	Consequential changes required as a result of allocation proposals adopted by Working Group 4C in the frequency range 31.8 - 34.7 GHz	C4
206	DG 2/WG 4C	Report from the Chairman of Drafting Group 2 presented by the Chairman of Working Group 4C to Committee 4	C4
207 + Corr.1	WG 4C	Second Report of Working Group 4C to Committee 4	C4
208	C5	Fourth series of texts from Committee 5 to the Editorial Committee	C6
209	C4	Note from the Chairman of Committee 4 to the Chairman of Committee 5	C5
210	C6	R.1 - First series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
211	COG	Proposed amendment to Document DT/40 concerning Appendix 26 of the Radio Regulations	C5
212	C6	B.4 - Fourth series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
213	WG 4A	Second Report of Working Group 4A to Committee 4	C4
214	WG 4A	Fourth and last Report of Working Group 4A to Committee 4	C4
215	C4	First series of texts submitted to the Editorial Committee by Committee 4	C6
216	C4	Second series of texts from Committee 4 to the Editorial Committee	C6
217	WG PL	PFD Limits applicable to the Band 37 - 37.5 GHz	C4, C5

No.	Origin	Title	Destination
218(Rev.1)	WG PL	Coordination of Geostationary Satellite Systems with Geostationary Space Stations in the Inter-Satellite Service above 20 GHz	C5
219	WG PL	The maximum allowable inclination angle of satellite networks using slightly inclined Geostationary-Satellite Orbits	C5
220	C4	Third series of texts submitted to the Editorial Committee by Committee 4	C6
221	CAN	Proposals for the work of the Conference	C4
222	WG PL	Third series of texts from the Working Group to the Plenary to the Editorial Committee	C6
223	WG PL	Sharing between Services	C4
224	WG 4B	First Report of the Chairman of Working Group 4B to Committee 4	C4
225	INS	Proposals for the work of the Conference	C4
226	WG 2A	Second Report of Working Group 2A to Committee 2	C2
227	CME, CTI, GHA, GUI, IND, MOZ, TZA, TON, UGA, ZMB, ZWE	Introduction of Low-Earth Orbit (LEO) systems above 1 GHz	C4
228	GUI	Proposals for the work of the Conference	C4
229	WG PL	EIRP Limits of the terrestrial systems to protect the inter-satellite service above 20 GHz	C5
230	C4	Draft new Recommendation [COM4/A2] relating to the elimination of HF broadcasting on frequencies outside the HF bands allocated to the broadcasting service	C4
231	C4	Fourth series of texts from Committee 4 to the Editorial Committee	C6
232	WG PL	Additional orbital characteristics to be provided with the data already listed in Appendices 3 and 4 to allow the evaluation of interference to and from non-geostationary satellite networks	C5
233	WG PL	Note from the Chairman of the Working Group to the Plenary to the Chairman of Committee 4	C4
234	AUS, B, CHL, USA, IND, INS, LBN, MRC, MEX, NIG, VEN	Proposals for the work of the Conference	C4

No.	Origin	Title	Destination
235	Ad hoc group 2 to C4	Report from the Chairman of ad hoc Group 2 to the Chairman of Committee 4	C4
236 + Add.1	Ad hoc group 3 to C4	Report from the Chairman of ad hoc Group 3 to Committee 4 to the Chairman of Committee 4 - General-Satellite Service	C4
237 + Add.1	C6	B.5 - Fifth series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
238	C6	B.6 - Sixth series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
239	Ad hoc group 1 of PL	Report by the Chairman of ad hoc 1 of the Plenary	PL
240	C4	Allocation of documents	C4
241	MEX	Proposals for the work of the Conference	C4
242	WG 5B	Sixth Report of Working Group 5B to Committee 5	C5
243	C5	Fifth series of texts from Committee 5 to the Editorial Committee	C6
244	PL	Minutes of the Fifth Plenary Meeting	PL
245	C4	Summary Record of the seventh meeting of Committee 4	C4
246	C5	Summary Record of the sixth meeting of Committee 5	C5
247	C4	Summary Record of the eiWGh meeting of Committee 4	C4
248	C5	Summary Record of the seventh meeting of Committee 5	C5
249	C5	Sixth series of texts from Committee 5 to the Editorial Committee	C6
250	SG	List of documents (201 - 250)	-

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 251-E
24 February 1992
Original: English

COMMITTEE 4

Sweden

PROPOSAL FOR THE WORK OF THE CONFERENCE

Noting that this Conference may allocate the band 1 610 - 1 626.5 MHz to the mobile-satellite service, on a primary basis, and also adopt a draft interim procedure for the coordination of stations of non-geostationary-satellite networks vis-à-vis, i.e., terrestrial stations in the same band, Sweden would like to put forward the following for consideration:

Our existing primary service in the band 1 610 - 1 626.5 MHz, i.e., the aeronautical radionavigation service might cause harmful interference to stations of the mobile-satellite service. We note that the CCIR Report to this Conference does not provide any sharing criteria between these services.

In summary, we submit the following proposal:

S/251/1
ADD 731X

Stations of the mobile-satellite service shall not cause harmful interference to, or claim protection from, the aeronautical radionagivation service operating in accordance with the Table and No. 731.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 252-E
24 February 1992
Original: English

COMMITTEE 6

Source: Document 235

FIFTH SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

At its eighth meeting, Committee 4 adopted the modifications to Article 8 of the Radio Regulations, and Resolution COM4/1, as contained in Annexes 1 and 2 to this document.

The delegation of the United States reserved its position with respect to the allocations, and the delegation of Niger reserved its position with respect to Resolution COM4/1.

Annex 3 contains an alternative text for 855B which has been developed following discussions between administrations. This text might be considered as an alternative to that in Annex 1.

I. HUTCHINGS
Chairman

Annexes: 3

ANNEX 1

GHz
13.75 - 14

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	~~13.4~~13.75 - 14	RADIOLOCATION [FIXED-SATELLITE (Earth-to-space)] Standard Frequency ~~and Time Signal-Satellite~~ (Earth-to-space) Space Research 713 853 854 855 855A 855B [855C]	

ADD **855A** 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 toward 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 COM4/1).

ADD **855B** In the band 13.75 - 14 GHz geostationary space stations in the space research satellite service, which have received advance publication prior to 31 January 1992, shall operate on an equal basis with stations in the fixed-satellite service, [until 1 January 2000, after which date they shall retain their secondary status in relation to the fixed-satellite service].

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.

[**ADD** **855C** Alternative allocation: In the United States, the band 13.75 - 14 GHz is allocated to the radiolocation service on a primary basis, and to the standard frequency and time-signal satellite (Earth-to-space) and space research services on a secondary basis.]

ANNEX 2

RESOLUTION COM4/1

Relating to the 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 present Conference has made an additional 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 standard frequency and time-signal satellite services needs to be studied;

d) the impact of the additional allocation to the fixed-satellite service in 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 were advance published 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

1. to invite the CCIR to conduct the necessary studies, prior to 31 January 1994, with respect to values given in the footnotes related 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 invite the CCIR 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;

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

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

5. to invite the Secretary-General to bring this Resolution to the attention of the Administrative Council and the next full Plenipotentiary Conference with a view to including the review of the footnotes in the agenda of the first World Administrative Radio Conference.

ANNEX 3

GHz
13.75 - 14

Allocation to Services		
Region 1	Region 2	Region 3
MOD ~~13.4~~13.75 - 14	RADIOLOCATION FIXED-SATELLITE (Earth-to-space) Standard Frequency and Time Signal-Satellite (Earth-to-space) Space Research 713 853 854 855 855A 855B	

ADD **855A** 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 toward 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 COM4/1).

ADD **855B** In the band 13.75 - 14 GHz geostationary space stations in the space research satellite service, which have received advance publication prior to 31 January 1992, shall operate on an equal basis with stations in the fixed-satellite service, after which 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 which date they shall retain their secondary status in relation to the fixed-satellite service.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 253-E
24 February 1992
Original: English

COMMITTEE 4

Report of the Chairman of ad hoc 1 to Committee 4

ALLOCATION OF FREQUENCY BANDS TO BSS (HDTV) AND THE ASSOCIATED FEEDER LINKS

1. The terms of reference of the ad hoc 1 C4 Group was to determine a worldwide allocation for HDTV down links and associated feeder links. Membership of the Group was representative of the three Regions.

Down links

2. The Group examined the proposals put forward by administrations, analysed in Documents DT/72 and DT/75. The three allocations attracting maximum support, 17.3 - 17.8 GHz, 21.4 - 22 GHz and 24.65 - 25.25 GHz, were discussed in depth to identify the advantages and disadvantages, and to determine the strength of the views expressed by administrations in their proposals.

3. It became clear that with each band there was at least one factor which made it unacceptable to some administrations. The following were accepted as being the main reasons:

a) 17 GHz: BSS feeder links and fixed-service allocation in 17.7 - 17.8 GHz.

b) 21 GHz: Intensive use by some administrations for fixed links.

c) 25 GHz: High rain rates in tropical countries requiring unacceptably high satellite powers.

4. The Group therefore came to the following conclusion on the requirement for a worldwide allocation for HDTV down links:

That the needs of administrations for an optimum worldwide allocation taking account of the capacity currently available from the 1977 and 1983 Plans were as follows:

i) for Region 2: the band 17.3 - 17.8 GHz;

ii) for Regions 1 and 3: the band 21.4 - 22 GHz;

taking note of Resolution COM5/3 (Document 212), **considering** b), "that Resolution No. 521 (WARC Orb-88), **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 suitability of these bands for HDTV without prejudice to the existing plans in this band' ", and also Document 209 (Note from the Chairman of Committee 4 to the Chairman of Committee 5), indicating that improvements in the utilization of the 12 GHz planned bands may enable countries, in particular those which have high rainfall climatic zones, to accommodate BSS (HDTV) needs or part of their needs in that band.

5. The Group noted that some countries identified a consequential requirement of the proposals for a Region 1 and 3 allocation to the BSS (HDTV) service in the band 21.4 - 22 GHz, that it cannot be separated from the need to allocate the band 24.25 - 25.25 GHz to the fixed service displaced from 21.4 - 22 GHz, together with the question of the time-scale for implementing HDTV. Furthermore, requirements of the existing radionavigation service in the 24.25 - 25.25 GHz band will also need to be taken into account. Currently, only one administration has a service implemented in this band for airport surface detection radar.

On other consequential changes, it was noted that there was a proposal for the inter-satellite service in the 21.7 - 22 GHz band. With the recommendation of 21.4 - 22 GHz for BSS (HDTV), there may be a need to look elsewhere in the spectrum to satisfy this requirement.

Additionally, there is a proposal for radiolocation-satellite in one of the bands that is still under consideration for BSS (HDTV) feeder links. This proposal, therefore, still requires attention.

6. Table A, attached, shows the position of administrations as of 21 February taking into account the discussions in the ad hoc 1 C4 Group.

Feeder links

7. The Group identified from the proposals the following bands as possibilities to accommodate feeder links to BSS (HDTV):

i) a new allocation to the FSS (Earth-to-space) in the frequency range 24.25 - 25.25 GHz;

ii) existing allocations to the FSS (Earth-to-space) in the frequency range 27 - 31 GHz;

noting that a substantial number of countries, particularly those in high rainfall rate areas, would need to use the existing feeder-link allocation in the band 17.3 - 18.1 GHz and a possible new FSS (Earth-to-space) allocation in the frequency range 18.1 - 18.6 GHz.

8. The use of those bands by feeder links would have some consequential implications that include:

- the consideration of sharing with the radionavigation service in the band 24.25 - 25.25 GHz;
- the proposed allocation of the band 24.45 - 24.75 GHz to the inter-satellite service;
- the regulatory consideration of the proposed additional allocation for the fixed service in the band 24.25 - 25.25 GHz and the related potential sharing with the feeder-link earth stations;
- the sharing issues in the 17.7 - 18.6 GHz band relating to the use of fixed, mobile and fixed-satellite (space-to-Earth) services.

R.A. BEDFORD
Chairman of ad hoc 1 C4

TABLE A

Summary of Proposals for BSS (HDTV) Down-link Allocation[1,2]

17 GHz (17.3 - 17.8 GHz)	**21 GHz** (21.4 - 22 GHz)
CAN	URS
B	PNG
USA	EUR (30 Adms.)
MEX	AUS
CLM	IND
VEN	MLI
	ALG
	PAK
	BFA
	THA
	CLN
	TZA
	SEN
	IRN
	TUN
	TUR
	BEN
	GAB
	OMA
	TCD
	KEN
	SWZ
	GRC
	NIG
	SNG
	J
	ISR
	KOR
	NZL

1 Proposals concerning the 12 GHz band are not reproduced above as these are now being addressed in the context of Resolution COM5/3. However, in the light of the deliberations in the ad hoc 1 C4 the position of PNG, EQA, LUX and GAB needs clarifying.

2 In the light of the deliberation in ad hoc 1 C4 the position of EQA, LYB, BGD, INS, ZMB and GUI needs clarifying.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

Document 254-E
24 February 1992
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MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

COMMITTEE 5

Note by the Chairman of the Working Group to the Plenary
to the Chairman of Committee 5

SHARING CRITERIA IN ARTICLES 27 AND 28 (FIRST REPLY)

In response to a request from the Chairman of Sub-Working Group 5B5 (see Document DT/91 (Rev. 1)), the Working Group to the Plenary offers the following comments as the first reply.

1. Applicability of Nos. 2502, 2505, 2506 and 2507 to bands 1610 - 2655 MHz

1.1 Nos. 2502, 2505, 2506 and 2507 are appropriate for the bands 2025 - 2110 MHz and 2200 - 2290 MHz.

For trans-horizon systems, ADD 2509.2 in Annex 2 to Document DT/93 (Rev. 2) should apply except for No. 2506, because even trans-horizon systems should observe No. 2506.

1.2 The Working Group to the Plenary has not considered the 1765 - 1775 MHz and 1960 - 1990 MHz bands, because services are not identified.

1.3 The 1610 - 1626.5 MHz and 2638.5 - 2665 MHz bands are under study.

2. Applicability of No. 2509A (Doc. DT/90 (Rev. 1)) to the 2025 - 2110 MHz and 2200 - 2290 MHz bands

In view of Resolution No. [XYZ] in Annex 4 to Document DT/93 (Rev. 2), the Working Group to the Plenary understands that there is no need to study this issue.

3. Applicability of Nos. 2505 and 2508 to the 21.4 - 22.2 GHz and 25.25 - 29.5 GHz bands for the inter-satellite service

Nos 2505 and 2508 are appropriate for the 21.4 - 22.2 GHz and 25.25 - 29.5 GHz bands. In addition, Nos. 2512, 2512.1 and 2512.2 as proposed in Document 229 should apply to the [25.25 - 27.5 GHz] band.

4. Applicability of the power limit in No. 2548A to the mobile-satellite service in the band 1610 - 1626.5 MHz

This issue is under study.

5. Applicability of No. 2557 to the 1475 - 1525 MHz, 1515 - 1525 MHz, 2025 - 2110 MHz and 2200 - 2290 MHz bands

5.1 No. 2557 is appropriate for the 2025 - 2110 MHz and 2200 - 2290 MHz bands.

5.2 The 1475 - 1525 MHz and 1515 - 1525 MHz bands are under study.

6. Applicability of No. 2562 to the 2483.5 - 2500 MHz band proposed for the mobile [-satellite] service

The Working Group to the Plenary considers that "mobile service" in § 6 of Document DT/91 (Rev. 1) should read "mobile-satellite service".

This issue is under study.

7. Applicability of No. 2578 to the 22.55 - 23.55 GHz, 25.25 - 27.502 GHz and 37.0 - 37.5 GHz

No. 2578 is appropriate for the quoted frequency bands (see also Document 217 for the 37.0 - 37.5 GHz band).

Note - Committee 5 is invited to take into account Document 218 (Rev. 1) in developing limits on geostationary space stations in the inter-satellite service above 20 GHz under Article 29.

M. MUROTANI
Chairman, Working Group to the Plenary

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

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MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

COMMITTEE 5

Note by the Chairman of the Working Group to the Plenary
to the Chairman of Committee 5

GENERALIZED COORDINATION DISTANCE FOR COORDINATION BETWEEN FIXED STATIONS AND TYPICAL EARTH STATIONS OPERATING IN NON-GEOSTATIONARY SATELLITE NETWORKS

At the request of the Chairman of Sub-Working Group 5B3, the Working Group to the Plenary offers the following comments.

1. The most recent CCIR information concerning the determination of coordination area for earth stations operating with non-geostationary spacecraft in bands shared with terrestrial services is contained in draft new Recommendation [D/12], and the most recent CCIR information concerning coordination areas using predetermined coordination distances is contained in draft new Recommendation [E/12].

2. Although this current CCIR documentation does not address all of the bands and services that may be considered for use by non-geostationary satellite systems, a generalized coordination distance of 500 km for land and maritime mobile earth stations operating with a non-geostationary satellite appears reasonable pending the adoption of CCIR Recommendation addressing a specific band and service. In particular, further CCIR studies may indicate that a distance less than 500 km may be more appropriate for the coordination distance when both stations are ground based.

3. For cases involving aeronautical mobile earth stations, a coordination distance of 1,000 km should be used with respect to other airborne stations and 500 km with respect to ground-based stations.

M. MUROTANI
Chairman of the Working Group to the Plenary

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 256-E
24 February 1992
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COMMITTEE 5

Mexico

PROPOSALS FOR THE WORK OF THE CONFERENCE

INTRODUCTION OF THE DIGITAL SOUND BROADCASTING SERVICE ON A PRELIMINARY BASIS

In order to promote the development of the digital sound broadcasting service, with a view to bringing it into general use by a date fixed by the Conference, it is of the greatest importance that it should be introduced on a preliminary basis, which will be a key factor in ensuring that production of transmitting equipment, but above all of receiving equipment, is economically viable.

In accordance with the Conference's agenda, provisional introduction will have to provide for digital sound broadcasting via satellite and for the use of the terrestrial service, as complementary services ensuring optimum use of the radio-frequency spectrum. The CCIR considered that a mixed service could optimize use of the spectrum, making the satellite and terrestrial services coordinate their development closely.

Mexico agrees with those countries which recognize that satellite systems take many years to plan, design and put into operation and that terrestrial digital audio broadcasting systems could start the service much earlier than satellite systems, in local coverage areas, with less repercussions for existing services; this is extremely attractive, particularly for small countries, which might not even use satellites for the service, since in such cases their use might not be justified.

Mexico has considered the introduction of the terrestrial service initially, with local coverage for areas in which there is not much occupancy by existing services, so that it will be easier to transfer them or coordinate them with the frequencies to be used. A satellite service will impose much greater demand than a terrestrial service.

We do not regard the reference to complementarity in the Conference agenda as prejudging the order in which the service is to be introduced, so that it would be perfectly possible to start with the terrestrial service before the satellite one.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 257-E
24 February 1992
Original: French/English

COMMITTEE 5

Seventh and last report of Working Group 5B to Committee 5

1. Introduction

The terms of reference of Working Group 5B were to examine all the proposals concerning Articles 11, 12, 13, 27, 28, 29 and 30 and Appendices 30 and 30A, and to deal with the Recommendations and Resolutions within its field.

It was to complete its work by 24 February 1992.

2. Summary of the work

The Working Group set up five Sub-Groups and one ad hoc Drafting Group.

a) the ad hoc Drafting Group, which was chaired by Mrs. Limodin (France), was set up to align the text of No. 2613 of Article 29 in the three languages;

b) Sub-Group 5B1, chaired by Mr. Spurling (United Kingdom), was responsible for preparing a draft Resolution relating to Appendices 30 and 30A;

c) Sub-Group 5B2, chaired by Mr. Pappas (United States), was responsible for amendments to Article 12, Appendix 26 and associated procedures;

d) Sub-Group 5B3, chaired by Mr. Amero (Canada), was given the task of drawing up a Resolution on the introduction of an interim procedure for the coordination and notification of frequencies for non-geostationary-satellite networks. Its terms of reference were extended to include specifying, for coordination purposes, the excursion and inclination limits of geostationary satellites;

e) Sub-Group 5B4, chaired by Mr. Jeacock (United Kingdom), was to deal with interim procedures for the introduction of HDTV and satellite sound broadcasting;

f) Sub-Group 5B5, chaired by Miss Irion (United States), was set up to incorporate the necessary amendments in Articles 27 and 28 in the light of the decisions of Committee 4.

The Group held ten meetings.

3. Conclusion

Working Group 5B has already submitted six documents for approval by Committee 5. This seventh and last report proposes a Resolution introducing interim procedures for the coordination and notification of frequency assignments to non-geostationary-satellite networks.

Some parts of the documents have had to be left in square brackets pending the decisions of Committee 4.

Annex: 1

ANNEX

RESOLUTION COM5/[ ]

Relating to Interim Procedures for the Coordination and Notification of Assignments of Non-Geostationary-Satellite[1] Networks in Certain Space Services and the Other Services to Which the Bands are Allocated[2]

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 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, will be able to adopt a more permanent procedure,

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 present 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,

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1 For the purpose of application of these interim procedures an administration when providing information in the form of Appendices 3 or 4 shall state whether its satellite is in the geostationary-satellite orbit or is in the non-geostationary-satellite orbit and shall provide the appropriate orbital information.

2 This Resolution shall be applied only to the frequency bands [MHz]. This footnote is to be reviewed when the decisions of Committee 4 concerning allocations to mobile-satellite services are known.

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,

resolves

1. that pending the adoption of a more 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 Article 11 for geostationary-satellite networks and they 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;

4. to invite 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;

5. to invite the IFRB to apply these procedures and to provide the necessary assistance to administrations;

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

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

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

Note - To give this Resolution status, a reference to it should be added as a footnote to the titles of Articles 11, [12] and 13 as follows:

Text of Footnote:

See Resolution COM5/[ ] relating to interim procedures for the coordination of frequency assignments of non-geostationary-satellite networks in certain space services and the other services to which the bands are allocated.

ANNEX TO RESOLUTION COM5/[ ]

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

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 No. 703 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 (Ω);

ii) argument of perigee (ω);

iii) active service arc.

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 significantly change 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 therefore.

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 that system on which details have been published.

1.4A An administration sending information under paragraphs 1.1 and 1.2 shall provide, if requested by an administration receiving information published under paragraph 1.3, 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.

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

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 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 requirements of that administration.

1.5C If, after following the procedure described in paragraphs 1.5A and 1.5B, there are unresolved difficulties, the administrations concerned shall together 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 had 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 in 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 in 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 in 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 in 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 in a geostationary-satellite network, it shall effect coordination of the assignment with any other administration whose assignment to a station in 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. **420-425** 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 in conformity with No. **1240**, and

2.5.5 either recorded in the Master Register, *or*

2.5.6 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 the 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 receipt of the information 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 was 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 does not agree, it shall, within the same period, send to the administration seeking coordination the technical details of the networks or stations concerned upon which its disagreement is based, including those characteristics contained in [Appendix **1** or] Appendix **3** which have not previously been notified to the Board, and make such suggestions as it is 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. [The Board shall consider as notifications in accordance with Section I of Article **12** only that information relating to existing terrestrial radiocommunication stations or to those to be brought into use within the next three months.]

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.

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[1] In order to assist administrations in the identification of 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**, **2.5.4** and **2.5.5**.

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 sought the coordination, as well as any administration which responded in accordance with 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 effort of the administrations concerned to reach agreement on 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 is to be deferred for a further three months.

Section III. Coordination of Frequency Assignments to Earth Stations in 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 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 of the associated space station, but thereafter each assignment shall be dealt with individually.

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 for the information of the Board.

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 the earth station assignment into service, 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 the earth station assignment into service, or within the next three years, whichever is the longer.

---

[1] The coordination area is defined as the service area in which it is intended to operate the typical earth stations or the coordinates of the fixed earth station, extended in either case in all directions by a coordination distance of [500] km.

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 cases mentioned in paragraph **3.5.2**, the administration with which coordination is sought shall send to the administration requesting coordination a copy of 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. The Board shall consider as notifications in accordance with Section I of Article **12** only that information relating to existing terrestrial radiocommunication stations or to those to be brought into use within the next three months.

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 one 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 is to be deferred for a further three months.

Section IV. Coordination of Frequency Assignments to Terrestrial Stations for Transmission in Relation to Earth Stations in 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 the earth station of a non-geostationary-satellite network, in a band allocated 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 3.5.1.

Coordination Data

4.2 For the purpose of effecting coordination the administration requesting coordination shall send to any 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.

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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 or the coordinates of the fixed earth station, extended in either case in all directions by a coordination distance of [500] km.

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 one 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 is to 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 application of No. **1504**, 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 application of No. **1505**, 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 application of No. **1506**, 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 application of No. **1509**, 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 5.1.3 or 5.1.4 shall take into account the frequency assignments for transmission or reception already recorded in the Master Register. [In addition notices relating to terrestrial stations received in accordance with 3.7 shall be examined at the same time as the relevant typical earth stations are examined under No. **1509** and will have the same date entered in Column 2d.]

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 paragraphs **4.1** to **4.1.3** relating to coordination of the use of the frequency assignment with the other administrations concerned.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 258-E
24 February 1992
Original: English

COMMITTEE 4

Source: Document DT/100

Note from the Chairman of Working Group 4B

CONSIDERATION OF AGENDA ITEM 2.2.3a (BSS (SOUND))

After in-depth discussions, Working Group 4B presents their summary and conclusions on agenda item 2.2.3a in Annexes 1 and 2 to this document.

Full details on considerations of the subject are to be found in Document DT/100.

The Administration of Japan reserved its position with regard to this document.

G. JENKINSON
Chairman of WG 4B

Annexes: 2

ANNEX 1

Summary

Although there has been some movement in the positions of delegations, there remains a clear polarization of views. While these can be divided between preference for around 1.5 GHz and around 2.5 GHz, the latter contains the views of a small number of delegations whose specific preference is firmly for an allocation between 2.3 and 2.4 GHz. The majority of that Group with preference around 2.5 GHz is for the range 2.5 - 2.64 GHz.

Despite this polarization, there is a unity of opinion regarding major points of substance.

1) That there is a need to introduce the new BSS (Sound) and complementary terrestrial service in the near term. For developed countries to provide a new quality of service with expanded broadcasting capacity, and for developing countries to also provide for rural broadcasting development and multi-channel capacity.
2) That spectrum of at least 50 MHz and preferably at least 65 MHz must be identified by this Conference. One administration considers that 74 MHz is essential to meet the full demand for sound broadcasting.
3) That technically around 1.5 GHz is the best solution and this will also be the better solution economically, both points addressing the implications for the broadcasting services only.
4) That the major difficulties in deciding the spectrum choice are related to the sharing implications. As the planning of the relevant bands for other services varies widely between countries, it is that reason which currently dominates the preferences of countries.

For the majority of administrations the major sharing issue is related to fixed service planning, while for others it relates to land mobile or aeronautical telemetry. For a significant group of administrations in the African and Asian areas, a major determinant is the use of the 2.5 GHz band for television broadcasting and distribution.

The issue of planning was not specifically addressed, although some of the discussions touched on implications for planning and several of the points covered in Document DT/100 are relevant for that subject.

ANNEX 2

Conclusions

Two compromise proposals were suggested and both were seen to lack balance. The compromise package given below could be used as a basis for continued discussion and refinement:

1) 50 MHz - 1 445 to 1 495 be equal primary with existing allocations for terrestrial digital sound broadcasting with constraint against harmful interference to services in other countries until [2000].
2) 20 MHz of that band be also allocated primary to BSS with power flux-density constraints on other countries until [2000].
3) The remaining 30 MHz within 1 445 - 1 495 be secondary for BSS, becoming primary from [2010].
4) The band 2 580 - 2 600 be released from the constraints of Footnote 757 and given the same conditions as 2) above.
5) That a conference be requested no later than [2010] to assess the spectrum allocations above and to determine the requirements for planning.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

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Source: Documents DT/99, DT/99(Rev.1)

Note from the Chairman of Working Group 4B

CONSIDERATION OF AGENDA ITEM 2.2.4c (FPLMTS - TERRESTRIAL COMPONENT)

This document addresses the terrestrial components of the FPLMTS. The relevant aspects, which are covered in this document are:

1) time-scale availability of the frequency bands for FPLMTS (Annex 1);
2) proposed modification to Article 8 of the Radio Regulations - new footnote for FPLMTS and associated space techniques (Annex 2);
3) new Resolution on the designation of the frequency bands for FPLMTS (Annex 3).

Full details on the considerations of the subject matter are to be found in Document DT/99(Rev.1).

The delegation of Finland, supported by some administrations, proposed an alternative approach, which is reflected in paragraph 16 of Document DT/99(Rev.1).

The delegations of Algeria, Finland and Zimbabwe reserved their rights to revert to this subject at Committee 4.

G. JENKINSON
Chairman of Working Group 4B

Annexes: 3

ANNEX 1

Availability of the frequency bands for FPLMTS and time-scales for implementation

1. There was general agreement to make available the designated bands 1 885 - 2 025 MHz and 2 110 - 2 200 MHz by the year 2010.

2. Iran, Qatar, Tanzania and Yugoslavia indicated that these bands could be available by the year 2020.

3. There was a general agreement to make available the designated band 1 850 - 1 885 MHz by the year 2020 except Germany, on behalf of CEPT, requested to put this band in square brackets.

4. There was general agreement that the band 1 910 - 1 990 MHz could be made available from the year 2000 except the following Administrations which consider that the bands could be available at a later date: Morocco, Lebanon, Tunisia, Qatar, India, the Islamic Republic of Iran, Kenya, Pakistan, Gabon, Yemen, Oman, Saudi Arabia, Gambia, Egypt, Tanzania, Ghana, the Philippines, Ethiopia, Benin, Argentina, Cuba, Cameroon, Ecuador, Niger, Bulgaria, Indonesia, Mozambique, Hungary, Colombia, Yugoslavia, Malawi and Burkina Faso.

ANNEX 2

Proposed Article 8 footnote for FPLMTS and associated space techniques

746A The frequency band [- MHz] is designated and [shall/should] be made available from [ ], as required for [terrestrial components of the] future public land mobile telecommunication systems (FPLMTS) in accordance with the Recommendations of CCIR and CCITT. The frequency band [- MHz] is also designated for this purpose and [shall/should] be made available from [ ], as required for the development and operation of the FPLMTS. The frequency band [- MHz] is also designated for this purpose and [shall/should] be made available from [ ], as required for the development and operation of FPLMTS.

The designation does not preclude the use of these bands for services to which these bands are allocated. [Use of these bands by FPLMTS has priority over other mobile applications in these bands.]

In the bands designated for FPLMTS, a combination of terrestrial and space techniques may also be used in accordance with the relevant Recommendation of the CCIR and the CCITT to ensure efficient use of the radio spectrum.

See also Resolution [COM4/2].

ANNEX 3

RESOLUTION [COM4/2]

Relating to the Designation of the Frequency Bands for the Future Public Land Mobile Telecommunication Systems (FPLMTS) and the Need for Future Studies

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 designated the frequency band(s) [ ] for FPLMTS;

b) that the CCIR and the CCITT are developing Recommendations for FPLMTS;

c) that the fixed service is used extensively in the bands designated for FPLMTS and will be in future;

d) that the CCIR has identified the use of space techniques in connection with the FPLMTS;

e) that the CCIR has identified a minimum required spectrum amount of 230 MHz for the terrestrial component of FPLMTS,

recognizes

that there is an urgent need for further studies related to the FPLMTS including the use of space techniques,

urges Administrations

to actively participate in these studies,

invites the CCIR and the CCITT

1. to continue their studies for the development of Recommendations on specific technologies, including space techniques for FPLMTS and ensure that FPLMTS can also meet the telecommunication needs of the developing countries and rural areas;

2. to develop Recommendations for the implementation of FPLMTS on a worldwide basis, well in advance of [ ];

3. to identify and develop sharing arrangements between FPLMTS and the fixed service which could include the need for new radio-frequency channel arrangements for the fixed-service [see [Resolution/Recommendation] No. FFF];

4. to provide Recommendations on the combined use of terrestrial and space techniques for FPLMTS, that ensure efficient use of the radio spectrum;

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

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COMMITTEE 4

SUMMARY RECORD OF THE NINTH MEETING OF COMMITTEE 4 (FREQUENCY ALLOCATION)

Tuesday, 25 February 1992, at 0935 hours

Chairman: Mr. I.R. HUTCHINGS (New Zealand)

Subjects discussed		Documents
1.	Terms of reference of ad hoc Group 1	-
2.	Report of ad hoc Group 3 (continued)	236 + Add.1
3.	First report of Working Group 4B	224

1. Terms of reference of ad hoc Group 1

1.1 The Chairman requested the Committee to authorize a slight extension to the Group's terms of reference, to enable it to identify the requisite amendments consequent upon any determination made in relation to up links and down links for BSS (television), on the understanding that the Committee itself would be able to modify the Group's findings if it saw fit.

1.2 It was so agreed.

2. Report of ad hoc Group 3 (continued) (Document 236 + Addendum 1)

2.1 The Chairman, noting that Document 236 had been introduced at the Committee's previous meeting, invited the Chairman of ad hoc Group 3 to introduce Addendum 1 to that document.

2.2 The Chairman of ad hoc Group 3 said that Addendum 1 to Document 236 reflected, in tabular form, the proposed modifications to Article 8 of the Table of Frequency Allocations. With reference to Document 236, Committee 4 must consider the figures, currently within square brackets, in respect of Region 3 with regard to the allocations to the general-satellite service on a primary co-equal basis with the fixed-satellite service which had been recommended for its consideration, as well as the annexed draft Recommendation, the entire text of which was currently within square brackets.

2.3 The Chairman invited the Committee to consider first of all Addendum 1 to Document 236, in particular the proposal, with regard to the band 19.7 - 20.2 GHz, to add, for Region 2, "GENERAL-SATELLITE".

2.4 The delegate of the Netherlands recalled that at an earlier meeting of the Committee he had spoken on the subject on behalf of CEPT member administrations, whose strong reservation concerning the definition of GSS was mentioned in the last paragraph of Document 236. Those administrations maintained their opposition to the introduction of a general-satellite service, but would not object to an appropriate upgrading of the MSS in the band 19.7 - 20.1 GHz or to the introduction of MSS on a worldwide basis in the band 20.1 - 20.2 GHz. With regard to the text proposed for Footnote 873A, the intention remained unclear, although the idea seemed to be to facilitate interregional sharing; it would be advisable, therefore, to replace the words "urged to consider the use of" by "urged to restrict such use to"; on that basis, those administrations would be pleased to consider the idea of amending the Table of Frequency Allocations.

2.5 The delegate of the Russian Federation said that he had reservations similar to those voiced by the previous speaker. The Recommendation in question would alter the status of existing services and introduce an element of confusion into coordination arrangements and other cases which required agreement.

2.6 The delegate of Liechtenstein said he fully shared the concern expressed by the two previous speakers. The proposals in question were controversial, contradictory and bound to complicate the VGE's work. The logical solution would be to make an entry giving primary status to the MSS.

2.7 The delegate of Japan said that his delegation shared the concerns just expressed. Neither the name nor the definition of GSS had yet been approved in Committee 5, and he recalled his delegation's suggestion, during a discussion held in ad hoc Group 3, that an allocation to the GSS should be placed in square brackets for the time being. There were many unresolved issues, some of a regulatory nature; his delegation wondered, for example, about the types of stations envisaged. While not denying the need for technological progress, it felt that much remained to be done in considering the introduction of a general-satellite service.

2.8 The Chairman of ad hoc Group 3 said that the options regarding the introduction of a general-satellite service available for discussion in the Group were those set forth in section 2 of the annex to the report of Drafting Group 1 to Working Group 4C (Document DT/74). Option a), for a GSS co-primary with FSS, had received little or no support, and discussion had centred on accommodation of options b) and c), as a compromise solution outlined in paragraph 5 of Document 236 and reflected in Annex 1 of Addendum 1 to that document. Document 236 reflected the discussion which had taken place, including the information provided by INTELSAT in response to his request. The Netherlands and United Kingdom delegations had

expressed CEPT's concern, likewise reflected in Document 236; nevertheless, the general mood appeared to represent a spirit of accommodation and a recognition that the ITU must be seen to be supporting emerging technologies, with due regard to new and anticipated systems within existing allocations.

2.9 The delegate of the United Kingdom recalled that it had been stressed throughout the discussion that all the arguments adduced by the proponents of GSS could be dealt with through an upgraded MSS as well as a primary FSS.

2.10 The delegate of the Netherlands endorsed that observation.

2.11 The delegate of Pakistan said he shared the view that the purposes envisaged for the general-satellite service could well be met by the fixed and mobile services, which should be given sympathetic consideration in Committee 4's discussions.

2.12 The delegate of Algeria said that his delegation could not support the proposals reflected in Annex 1 of Addendum 1 to Document 236 since the definition of the GSS remained unclear and the CCIR was still to study, as a matter of urgency, the necessary technical characteristics and sharing criteria. Furthermore, the band in question related to Footnote 873, under which Algeria's fixed- and mobile-satellite services were catered for on a primary basis.

2.13 The delegate of Canada said that previous discussions had reflected considerable support for frequencies of 100 MHz worldwide for the GSS, and 500 MHz for Region 2; the upgrading of the MSS to primary status is not an equivalent to a GSS allocatation, since GSS may involve use of both fixed and mobile satellite earth stations. The question of defining the GSS should be dealt with in Committee 5.

2.14 The delegate of the United States said that the proposal in question was already a compromise, since the original intention had been to have a much broader spectrum, on a worldwide basis, for the GSS. Perhaps Committee 4 should defer consideration of the subject until the following day, and meanwhile request Committee 5 to provide some guidance for a suitable definition.

2.15 The delegate of France said that he had the same difficulty as previous speakers in understanding precisely what a GSS would cover. Perhaps the United States delegation could clarify what it saw as the general concept.

2.16 The delegate of Colombia said that his delegation too had difficulty with regard to the definition, and shared the views expressed by the delegate of the Netherlands.

2.17 The delegate of Australia said that his delegation could support the proposals set out in Document 236. If a new service was not introduced, the definitions of the existing fixed- and mobile-satellite services would have to be reviewed.

2.18 The delegate of the United Kingdom recalled that, during ad hoc Group 3's first meeting, the proponents of a GSS had agreed to produce a list of applications which could not be covered by an upgraded MSS and FSS; however, no such list had yet appeared. His delegation was still not convinced that there was a need for a GSS.

2.19 The Chairman suggested that, in order to make progress, the Committee might consider the possibility of upgrading the existing MSS to accommodate the new applications envisaged; he invited specific comments on the question of amending the definitions of the FSS or MSS, on the modifications to the relevant regulations that would be required and the applications that would need to be accommodated in the existing services as redefined.

2.20 The delegate of Canada said that some types of application and network architecture, such as simultaneous communications to be handled by mobile terminals in remote areas and VSAT terminals in urban areas, could hardly be covered by an upgraded MSS or FSS.

2.21 The delegate of Mexico said that a GSS would offer a number of options which would not necessarily be covered by the MSS and FSS, and would help to reduce problems such as those involved in coordination, by handling a multitude of applications in the same frequency band. The obstacle was mainly conceptual; perhaps, therefore, Committee 4 could accept the allocations put forward pending a precise definition of the GSS by Committee 5.

2.22 The delegate of the United States endorsed that suggestion.

2.23 The member of the IFRB, responding to an observation by the delegate of the Netherlands, said that although it was up to the Conference itself to decide whether or not a general-satellite service was required, the first requirement was a clear understanding of what such a service entailed. Services in addition to the FSS and MSS might be envisaged, although it was up to the proponents of a GSS to say what they might be. There might be some difficulties with regard to the regulatory aspects, because a GSS need not include all the elements that such a service could comprise; in some respects, therefore, it was akin to the generic mobile-satellite service.

2.24 Following the suggestion by the Chairman, it was agreed to defer consideration of the draft Recommendation annexed to Document 236, together with the table annexed to Addendum 1 to that document, until the Committee's next meeting.

3. First report of Working Group 4B (Document 224)

3.1 The Chairman of Working Group 4B, introducing Document 224, drew attention to an editorial correction to the French text of MOD 703, to align it with the word "excluding" in the English text. In taking a decision on the modification relating to allocations in the band 400.15 - 401 MHz, the Committee should note that subsequent amendments might be desirable as a result of possible further proposals; however, a decision should not be delayed on that account.

3.2 The delegates of Bangladesh and Sri Lanka requested the addition of their country's name to MOD 596.

3.3 The delegate of Panama requested that his country be added to those mentioned in MOD 675.

3.4 The delegate of Lebanon made the same request in respect of MOD 676.

3.5 The delegate of Yemen, referring to MOD 676, said that his country's name had been deleted inadvertently and should be reinserted: its earlier request had been for a correction of the name, not a deletion.

3.6 The delegate of Cuba asked for the name of his country to be included in both MOD 675 and MOD 678.

3.7 The delegates of Pakistan and Djibouti requested the inclusion of their countries in MOD 659.

3.8 Subject to those amendments, the modifications to Article 8 contained in Document 224 were approved.

3.9 The delegate of Italy said that his delegation would express its reservations, with regard to SUP 682, in a Plenary meeting.

3.10 The Chairman, replying to requests by the delegates of Gabon and Cote d'Ivoire for the inclusion of their countries in MOD 697, which had been approved at an earlier meeting of the Committee, said that their requests would have to be raised at a Plenary meeting.

The meeting rose at 1050 hours.

The Secretary: The Chairman:

T. GAVRILOV I.R. HUTCHINGS

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 261-E
25 February 1992
Original: English

COMMITTEE 4

SUMMARY RECORD

OF THE

TENTH MEETING OF COMMITTEE 4
(FREQUENCY ALLOCATION)

Tuesday, 25 February 1992, at 1510 hours

Chairman: Mr. I.R. HUTCHINGS (New Zealand)

Subjects discussed		Documents
1.	Report of ad hoc Group 3 (continued)	236 + Add.1
2.	Note from the Chairman of Working Group 4B concerning item 2.2.3a	258

1. Report of ad hoc Group 3 (Document 236 + Add.1) (continued)

1.1 The delegate of the United States, reporting on informal discussions held since that morning's meeting of Committee 4, said it was proposed that the Committee should endeavour to reach an agreement of principle concerning co-primary allocation for the fixed-satellite service (FSS) and the mobile-satellite service (MSS) on a worldwide basis, in the bands 20.1 - 20.2 GHz and 29.9 - 30.0 GHz, as well as co-primary FSS and MSS allocations in Region 2 in the bands 19.7 - 20.1 GHz and 29.5 - 29.9 GHz, including footnotes for interregional sharing, corresponding changes in the draft Resolution annexed to Document 236, and general consideration of the ability of the fixed and mobile services to operate.

1.2 The delegate of Algeria, supported by the delegate of Saudi Arabia, referring to Footnote 873, requested assurance that the new satellite service would not impose any limitation on the power flux-density of space stations in the fixed-satellite service. He suggested that a sentence to that effect be inserted in Footnote 873.

1.3 The delegate of France suggested that, as the two bands concerned were not subject to any limitation of power flux-density, the possibility should be examined of allocating part of each band, on a shared basis, to the FSS and the MSS, another part of each band being retained for the FSS.

1.4 With regard to the question of whether consequential amendments to Footnote 873 would be required, the delegate of Canada pointed out that the fixed and mobile services were already designed so as not to constrain power flux-density, and that applied also to new services. The delegate of the Netherlands said that the upgrading of the MSS in Regions 1 and 3 would affect only a limited part of the band, namely, 100 MHz out of the 500 MHz available in the 19.7 and 21.2 GHz bands. The delegate of the United States said that the type of service envisaged was not a normal mobile-satellite service but should consist of very narrow spot beams which should cause no problem for allocations under Footnote 873.

1.5 The delegate of Japan, expressing concern that the footnote made no mention of the MSS, considered that a careful study should be made of the appropriateness of amending Footnote 873.

1.6 The observer for the International Telecommunications Satellite Organization (INTELSAT), responding to a request by the delegate of Ecuador for clarification concerning the implications for INTELSAT of the proposed changes, taking into account the differences between Regions 1 and 2, expressed concern about the upgrading of the MSS service. The type of service that INTELSAT foresaw using in that frequency band was unlikely to be compatible with mobile-satellite services. INTELSAT envisaged using television carriers, large bandwidth digital carriers and the operation of VSAT services in the satellite which would come into use towards the end of the decade. The MSS was seen as composed of mainly smaller-aperture antennas with lower gain. That tended to cause spectrum-sharing difficulties and could lead to band segmentation or the use of wider spacing between satellites in the geostationary orbit, thereby reducing efficiency. Past experience in FSS/MSS coordination had shown that a disparity between the different size of carriers would certainly cause difficulties in Ka band operation. He considered that the MSS upgrading might be premature and required detailed further study. He urged that the Conference consider a smaller part of the band, as in Region 2 the wholesale application of the band for MSS upgrading would cause difficulties in the future.

1.7 The delegate of Canada considered, on the contrary, that the systems could be developed in a compatible way to achieve the desired efficiency from the orbit resource. The agreement reached by a number of administrations, after lengthy discussions, to allocate mobile satellites over 500 MHz in each direction in Region 2, and 100 MHz in each direction in Regions 1 and 3, was not intended to develop L-band type mobile-satellite operations in the Ka band. The Working Group had indicated that orbital spacings would not be large (of the order of 10°) and the type of system envisaged would use high-gain antennas aimed at increasing the efficiency of the geostationary orbit. He stressed that the concerns that had been expressed should not prevent the allocations from being made at the present Conference.

1.8 The delegate of Argentina said that Argentina, as an INTELSAT signatory, was in favour of the alignment of the 100 MHz band for Regions 1, 2 and 3 but expressed concern over the extension to 500 MHz in Region 2.

1.9 The Chairman invited the Committee to consider the draft Recommendation in the Annex to Document 236, which might be helpful for further considerations of the allocation itself.

1.10 In the absence of any objection, the principle of producing a draft Recommendation was approved.

1.11 The delegate of Liechtenstein suggested inserting a new paragraph to the effect that the Voluntary Group of Experts was studying new approaches for radio service definitions and that the results of both the CCIR and the VGE studies should be taken into account. He also suggested making the title more general, to read: "Relating to Service and Multi-Service Satellite Networks Using the Geostationary-Satellite Orbit".

1.12 The Chairman suggested that he himself should produce a document which would include the allocations already agreed to and footnotes reflecting the concerns expressed during the meeting, together with any further inclusions which delegates might wish to transmit to him.

1.13 It was so agreed.

2. Note from the Chairman of Working Group 4B concerning agenda item 2.2.3a (Document 258)

2.1 The Chairman of Working Group 4B, introducing Document 258, said that after lengthy discussions in the Working Group and in ad hoc Group 6 it had proved impossible to reach agreement within the time available. Document 258 was therefore transmitted to Committee 4 for discussion. It consisted of an introductory extract from Document DT/100, the report of ad hoc Group 6B, and a number of conclusions of ad hoc Group 6, the understanding being that Document DT/100 was to be regarded as an integral part of the document. The main divergence of views between countries concerned the choice of allocation either around 1.5 GHz or around 2.5 GHz, with a smaller group of countries in favour of a 2.3 - 2.4 GHz allocation. A number of points of convergence were set out in Annex 1. Some proposals had been made in an attempt to move towards a compromise solution; they were reflected in Annex 2.

2.2 The delegate of Japan did not approve of either Document 258 or of Document DT/100, as they did not reflect the views that had been expressed on technical and economic feasibility nor the fact that there were different requirements for BSS (Sound) relating to the quality of sound, from compact disc level to monophonic broadcasting. He pointed out that Annex 2 was merely indicative and had in no way been endorsed even as a basis for compromise. He stressed the importance of protecting existing services and the practical problems relating to sharing, which would have to be overcome.

2.3 The delegate of Mexico welcomed the document, which was the result of considerable work in the ad hoc Group and in his view could form a basis for compromise. His Administration considered that about 60 MHz between 1 441 - 1 515 MHz should be allocated to the terrestrial and satellite digital sound broadcasting service. He requested clarification as to how the dates 2000 and 2010 in Annex 2 could be taken into account.

2.4 The delegates of Morocco, Thailand, Zimbabwe and Ecuador expressed concern over the suggested allocations and bandwidths, as their Administrations made intensive use of the 1.4 - 1.5 GHz band for the purposes of rural communication and development. It was important for those services to be protected if the band was to be used for BSS (Sound).

2.5 The delegate of India said that his country foresaw making considerable use of BSS (Sound) to meet its multilingual and wide area requirements. It was therefore essential to give more consideration to the different quality options. He also pointed out that it would only be possible to find substantial slots in the spectrum between 1 and 3 GHz to accommodate BSS (Sound) and MSS if both services were willing to reduce their requirements.

2.6 The delegate of the United States, endorsing the views of the delegates of Japan, Thailand and India, said that his country also made intensive use of the 1.5 GHz band for aeronautical telemetry. As several speakers had expressed concern over the use of that band for broadcasting, he suggested that the Committee might concentrate on the area above 2 GHz. Regarding bandwidth, and taking into account the need for different qualities of signal, his delegation had proposed 50 MHz around 2.3 GHz.

2.7 The delegate of Algeria said that his Administration's position concerning bandwidth was reflected in Document 40. His country also made extensive use of the 1.5 GHz band, but in the interests of rational and optimal future development, the band 1.7 - 2.7 GHz would be more appropriate and economical in the long term, despite the fact that many countries had made considerable investments in the 1.5 GHz band. It might be useful to have some indication of how many delegations were in favour of 1.5 GHz and how many in favour of 2.5 GHz.

2.8 The delegate of Canada pointed out that sharing difficulties were present in both the 1.5 and the 2.5 GHz bands and were indeed greater in the latter band which covered fixed- and mobile-satellite sound services, television broadcasting and space research. It should be taken into account that the use of the 1.5 GHz band would be more efficient and economical.

2.9 The delegate of Italy recalled that in Document 20, some 19 European countries had proposed selecting the 2.5 GHz band. In the interests of clarity, he suggested that the sentence "One of these proposals is given below for discussion" should replace the second sentence in Annex 2 to Document 258.

2.10 The delegate of Mexico felt that further examination of technical considerations which had not been discussed in the Working Group was required, a view which was endorsed by the delegate of Burkina Faso who requested further information on whether the new service would operate without interfering with existing fixed services, which in his country were vital for rural areas, and without causing major economic problems.

2.11 In order to facilitate the discussion, the Chairman requested delegates to indicate, by a show of hands, their preference for allocations either below or above 2 GHz. It emerged that a majority of countries were in favour of an allocation above 2 GHz.

2.12 The Chairman, recognizing that the majority of delegates appeared to be in favour of an allocation above 2 GHz, suggested that an ad hoc Group should be set up to deal with all the related issues and endeavour to seek an acceptable allocation in that range. The Group should report to the Committee the following day on the results of its work.

2.13 The delegate of Mexico objected to the Chairman's suggestion for two main reasons. In the first place, delegates had not had the opportunity to indicate their preference with regard to all three options; by grouping together the options for allocations at 2.3 and 2.5 GHz respectively, an inaccurate picture of the delegations' respective positions had emerged. The preference they had expressed for one of the two options suggested by the Chairman should therefore not be interpreted as being the view of the majority. Secondly, doubts had been expressed with regard to the time-scale for the implementation of the service. The technical and economic considerations of the various options, as outlined in Document DT/100, should be discussed before any ad hoc Group could be set up.

2.14 The delegate of Canada endorsed the delegate of Mexico's initial remarks. Since it was generally recognized that the proponents of the allocation at 2.3 GHz would be unwilling to accept an allocation at 2.5 GHz, it had made little sense for the Chairman to group them as the second option. He emphasized that the results of the exercise conducted by the Chairman should not be construed as reflecting the majority view.

2.15 The delegate of the Russian Federation saw little point in discussing the matter further within the Committee. As at Working Group level, efforts to reconcile the views of the two main groups appeared to be fruitless; it was clear that the show of hands was not representative of delegations' actual positions. In order not to delay matters any further, he proposed that the Committee should conclude discussion of the matter and submit the document to the Plenary Meeting with options for two frequency bands only placed between square brackets. In the meantime, delegations should take advantage of the opportunity to exchange views on the subject, although the final decision should be taken by the Plenary Meeting.

2.16 The delegate of Spain, referring to Tables 1 and 2 of Document DT/51(Rev.2) prepared by the Chairman of Drafting Group 4B3, drew attention to the fact that proposals for allocations below 2 GHz varied far more than those for allocations above 2 GHz. That element should be borne in mind in any future work, in particular with respect to the protection of existing services about which many delegates had expressed concern.

2.17 The delegate of Finland considered that an opportunity should be provided to discuss the merits of the 2.3 and 2.5 GHz allocations, since they were two distinctly different proposals.

2.18 The delegate of the United Kingdom observed that the European countries were contemplating lowering their MSS allocation in the 2.5 GHz range. In that event, they would be considering 35 MHz instead of 50 MHz, thereby permitting the accommodation of ARABSAT. On the assumption that the European countries agreed to that modification, it would be interesting to know whether any of the delegates who had stated their preference for 1.5 GHz would reconsider their position.

2.19 The delegate of Australia stressed the gravity of the issue under discussion and endorsed the comments made by the delegates of Mexico and Canada. If an ad hoc Group was set up, it should examine the various options and related issues, and not merely one option as suggested by the Chairman.

2.20 The delegate of Brazil shared the delegate of Australia's concern, but endorsed the proposal by the delegate of the Russian Federation. Only two frequency bands should be selected: 1.5 GHz and another in the region of 2.3 - 2.5 GHz. It was up to the delegates favouring an allocation above 2 GHz to select a suitable allocation in that range.

2.21 The delegates of Côte d'Ivoire, Saudi Arabia and Singapore also endorsed the proposal by the delegate of the Russian Federation.

2.22 The delegate of the Netherlands disagreed. The possibility of reaching a compromise solution should not be ruled out and an ad hoc Group should be set up for that purpose.

2.23 The delegate of Germany stressed that it was important for any ad hoc Group that might be set up to consider detailed proposals on all the options. All related issues must be given proper treatment before the matter was referred to the Plenary.

2.24 The delegate of Finland observed that there were fixed services operating on the basis of channelling arrangements recommended by the CCIR up to 2.3 GHz. There was also an extensively used channelling arrangement between 2.5 and 2.7 GHz. However, there was relatively little use of the 2.3 - 2.5 GHz range by the fixed service, which was an important consideration when examining the options for an allocation around 2 GHz. Another disadvantage of an allocation in the 2.3 - 2.5 GHz range for the fixed and mobile services was the ISM designation at 2 450 ±50 MHz, which might seriously restrict the use of the upper part of the 2.3 - 2.5 GHz range. In view of the foregoing, perhaps an allocation at 2.3 GHz would be more appropriate.

2.25 The delegate of Algeria agreed that an ad hoc Group should be set up to seek a solution, with detailed proposals being elaborated before the matter was taken up by the Plenary, in order to facilitate the latter's task. He shared the concern expressed by the delegate of Canada with regard to the option for an allocation above 2 GHz but having heard the proposal by the delegate of the Russian Federation agreed that only two bands should be selected. His delegation would have preferred a worldwide allocation, but an allocation in both bands might have to be retained as a compromise solution.

2.26 The delegate of the United Arab Emirates said that it was essential to understand the reasons behind delegations' preferences for a given allocation. He endorsed the remarks by the United Kingdom delegate to the effect that an adjustment of the MSS allocation might increase support for an allocation above 2 GHz.

2.27 The delegate of the United States endorsed the Chairman's suggestion for the creation of an ad hoc Group to examine a specific allocation above 2 GHz. There were too many options to be discussed in a Committee meeting. A smaller Group could deal with the time-scale aspect, consider the relative merits of a 2.3 or 2.5 GHz allocation and elaborate detailed proposals as suggested by previous speakers.

2.28 He endorsed the comments by the delegate of Finland concerning channelling arrangements. His delegation had investigated sharing possibilities between BSS at 2.3 GHz and ISM operations at 2 450 ±50 MHz and had concluded that they were satisfactory. An allocation at 2.3 GHz would meet the concerns of ARABSAT and INSAT and could be phased in gradually.

2.29 The Chairman requested delegates to indicate, by a show of hands, their preference for either the establishment of an ad hoc Group or the submission of the text directly to the Plenary. It emerged that the overwhelming majority favoured the setting up of an ad hoc Group.

2.30 The delegate of Canada, supported by the delegate of Mexico, observed that support for an allocation above or below 2 GHz appeared at that juncture to be equally divided. He therefore suggested that the ad hoc Group should seek a compromise solution between the 1.5 and 2.5 GHz allocations.

2.31 The Chairman suggested that an ad hoc Group should be set up to examine all three options with a view to seeking a compromise solution. The Group should be composed of representatives from the three regions supporting each of the three options. It should report to the Committee the following day on the outcome of its work.

2.32 On that understanding, the Committee decided to set up ad hoc Group 4 to Committee 4, under the chairmanship of Mr. Broere (Netherlands), composed of the representatives of Algeria, Germany, Australia, Brazil, Canada, the United States, the Russian Federation, India, Indonesia, the Islamic Republic of Iran, Italy, Japan, Mexico, Syria and Senegal.

The meeting rose at 1810 hours.

The Secretary: The Chairman:

T. GAVRILOV I.R. HUTCHINGS

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 262-E
25 February 1992
Original: English/ French

COMMITTEE 4

SUMMARY RECORD OF THE ELEVENTH MEETING OF COMMITTEE 4 (FREQUENCY ALLOCATION)

Tuesday, 25 February 1992, at 2010 hours

Chairman: Mr. I.R. HUTCHINGS (New Zealand)

Subjects discussed		Documents
1.	Draft new Recommendation [COM4/A2]	230
2.	Proposal for the work of the Conference (draft Recommendation)	241
3.	Note by the Chairman of Working Group 4B (Article 8)	268
4.	Note by the Chairman of Working Group 4B (agenda item 2.2.4c)	259
5.	Approval of the summary record of the fourth meeting of Committee 4	168
6.	Notes by the Chairman of the Working Group of the Plenary	223 + Corr.1, 233
7.	Proposals for the work of the Conference (MOD 697, MOD 658)	90(Rev.2), 101(Add.2)

1. Draft new Recommendation [COM4/A2] (Document 230)

1.1 The Chairman drew attention to the draft Recommendation relating to the elimination of HF broadcasting on frequencies outside the HF bands allocated to the broadcasting service (Document 230).

1.2 The title, introductory section and **considering** a), b), c) and d) were approved without comment.

1.3 In response to a suggestion by the Member of the IFRB concerning the **recommends** paragraph, the delegate of Switzerland proposed that the beginning of the text should be amended to read "that administrations shall take practicable steps".

1.4 It was so agreed.

1.5 The draft new Recommendation as a whole, as amended, was approved.

2. Proposal for the work of the Conference (draft Recommendation) (Document 241)

2.1 The Chairman said that the Committee had already agreed to the allocations in the Table, thus maintaining the allocations regarding the frequency bands 7.1 - 7.3 MHz where there were sharing difficulties between the amateur service in Region 2 and the broadcasting service in Regions 1 and 3. He drew attention to the draft Recommendation concerning the alignment of allocations in the 7 MHz band allocated to the amateur service, submitted by the Mexican delegation in Document 241.

2.2 The delegates of Malaysia, Canada and Japan supported the draft Recommendation.

2.3 The delegate of Nigeria, recognizing that the amateur services played a leading role in providing disaster communications, regretted that WARC-92 was unable to address their requirements in the 7 MHz band; he therefore supported the draft Recommendation. He also commended the Chairman of Working Group 4A for the excellent manner in which the work of that Group had been conducted.

2.4 The delegate of Singapore supported the principle of having worldwide exclusive allocations for amateur services. He could approve the draft Recommendation provided that the wording did not imply in any way allocation of the band 7 100 - 7 300 MHz to amateur services in Region 3.

2.5 The Chairman invited the meeting to consider the draft Recommendation paragraph by paragraph.

Title

2.6 Approved.

considering a)

2.7 Approved, subject to replacement of the words "in band 7" by "in the bands around 7 MHz".

considerings b), c) and d)

2.8 Approved.

recommends

2.9 Approved, subject to the addition of a further **recommends** paragraph requesting the Administrative Council to place the item on the agenda of a future competent WARC.

invites the Secretary-General

2.10 Approved.

2.11 The draft Recommendation as a whole, as amended, was approved.

3. Note by the Chairman of Working Group 4B (Article 8) (Document 268)

3.1 The Chairman of Working Group 4B, introducing the document, drew attention to a number of corrections which should be made to the text and pointed out that the proposed changes in the frequency bands would require consequential changes to Articles 27 and 28.

3.2 The delegate of the United States expressed his delegation's concern about the upgrading of the mobile service from secondary to primary in the band between 1 700 and 2 450 MHz in Region 1. There were a number of critical reasons for his concern, but he would be prepared to remove his objection on the understanding that interrelated issues such as allocations for the mobile-satellite service and appropriate treatment of the FPLMTS would be satisfactorily accommodated.

3.3 The delegate of Germany, supported by the delegate of Switzerland, said that Region 1, like Regions 2 and 3, should in principle have primary status for the mobile services in the frequency ranges in question.

3.4 It was agreed that a statement expressing the concerns of the United States would be transmitted to the Plenary, together with the modifications in that part of the Table, as agreed to at the present meeting.

3.5 The Chairman suggested that the Committee should agree in principle that mobile service allocations for Region 1 should have primary status although that part of the Table of Frequency Allocations would need to be reconsidered later to take into account mobile-satellite issues and FPLMTS.

3.6 It was so agreed.

3.7 In response to queries from the delegates of France and Spain, the Chairman said that the French and Spanish texts would be aligned with the English where necessary. He invited the Committee to consider Annex 1 item by item.

MOD 663

3.8 Approved.

ADD 723B

3.9 Approved with a minor typographical correction.

MOD 1 700 - 1 710 MHz

3.10 Approved with a reservation by the Russian Federation relating to compatibility of meteorological satellites operating in that band.

MOD 1 710 - 2 025 MHz

3.11 Approved.

MOD 2 025 - 2 110 MHz, MOD 2 200 - 2 290 MHz and SUP 747

3.12 Approved with a reservation by Argentina concerning the upgrading of the space service without ensuring adequate protection of the fixed and mobile services.

ADD 747A

3.13 Approved with "in the mobile service" replaced by "for the mobile service".

SUP 750, ADD 750A, MOD 2 110 - 2 120 MHz, SUP 748, SUP 749

3.14 Approved.

MOD 2 290 - 2 300 MHz

3.15 Approved with a reservation by the United States in respect of the upgrading of the mobile, except aeronautical mobile, service to primary status in Region 1.

MOD 2 300 - 2 450 MHz

3.16 Approved subject to deletion of the reference to Footnote 743A.

3.17 In response to a question from the delegate of Germany, the Chairman of Working Group 4B explained that the frequency range 2 120 - 2 200 MHz should also have been included in the document. The mobile service for Region 1 should be upgraded to primary status in that band also.

3.18 It was agreed.

3.19 The delegate of the Netherlands said that Footnotes 722, 743A, 744, 746, 747, 748 and 750 should be deleted in connection with the band 2 120 - 2 200 MHz.

3.20 The Chairman suggested that the meeting should review Annexes 2 and 3 to Document 268. The amendments to Articles 27 and 28 were in keeping with the instructions received from the Working Group of the Plenary, their purpose being to apply power limits to facilitate frequency sharing between space and terrestrial radiocommunication services.

3.21 The Chairman of Working Group 4B read out the following revised text of No. 2509.2: "Trans-horizon systems in the 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, administrations are urged to keep the number of trans-horizon systems in these bands to a minimum."

3.22 The delegate of the United States proposed that the words "and in keeping with Recommendation No. 100" be inserted after "other services".

3.23 The delegate of Spain called for the bands added to Articles 27 and 28 to be accompanied by a reference to No. 2509.2.

3.24 Both proposals were approved.

3.25 The text of Articles 27 and 28, as amended, was approved.

Resolution [COM4-B1]

3.26 The text of Resolution [COM4-B1] in Annex 4 was approved subject to the following amendment suggested by the Chairman of the IFRB: under **noting**, "with the relevant space services in these bands" should be added after the word "share".

3.27 The delegate of Argentina announced that his Administration was considering the possibility of raising Annex 4 again at the Plenary Meeting: under **resolves** 1, the Committee appeared to have reversed the intention of item 2.9.1 of the Conference agenda by protecting space research services against possible interference from existing mobile services.

3.28 That reservation was noted.

Resolution [COM4-B2]

3.29 The delegate of Syria referred to the title of the draft Resolution in Annex 5 and said that it should refer to space research services, not missions.

3.30 The delegate of the United States, supported by the delegate of Switzerland, said he would prefer the word "missions" to be replaced by "telecommunication links".

3.31 The delegate of Brazil recalled that the Working Groups had discussed the Resolution at length. The transfers had been made not by the ITU but by administrations themselves, and the purpose of the Resolution was not to modify the allocation but, if possible, to transfer to higher bands certain missions originally intended for the 2 GHz band. That was why the word "missions" appeared in the text; its deletion might raise problems and he preferred the text to be left unchanged.

3.32 The title: "Relating to possible relocation of frequencies assigned to certain space missions from the 2 GHz bands to bands above 20 GHz", proposed by the Chairman, was approved.

3.33 **Considerings** a), b) and c) were approved, c) being redrafted in keeping with the amended title.

3.34 The Chairman suggested that the word "idea" be replaced by "intent" in the English text of **resolves** 1.

3.35 It was so decided.

3.36 The delegate of Syria, noting that the Resolution called for certain space research services to be transferred to bands above 20 GHz, said that the matter should be reconsidered by the Plenary Meeting. Space research should be defined in the Radio Regulations to ensure that the services in question could not be used for other purposes.

3.37 The delegate of Saudi Arabia said he would prefer the last line of **invites the Secretary-General** to refer to "a" future competent conference since it was for the Administrative Council to establish the agenda for future conferences.

3.38 The Chairman replied that the wording was consistent with the terminology normally used by the ITU and would be modified if necessary in accordance with the customary editing practices.

4. Note from the Chairman of Working Group 4B (agenda item 2.2.4c) (Document 259)

4.1 The Chairman of Working Group 4B drew attention to the main points of Annexes 1, 2 and 3 to Document 259 concerning the terrestrial component of the FPLMTS, and said that four countries, namely Japan, Canada, Brazil and Israel, should be added to those mentioned on page 1. A draft Recommendation had been prepared and would be submitted at the next meeting under the following approximate title: "Adjustments to the fixed service as a consequence of changes to the frequency allocations within the range 1 - 3 GHz".

4.2 The delegate of Japan requested that the names of the four countries added in page 1 should be included in paragraph 4 of Annex 1.

4.3 Responding to a suggestion by the Chairman, the delegate of the United States, supported by the delegate of Canada, said it would be preferable to postpone consideration of the document until the next meeting, since the question was highly complex and was related to that of the mobile-satellite service.

4.4 It was so decided.

5. Approval of the summary record of the fourth meeting of Committee 4 (Document 168)

5.1 Document 168 was approved without amendment.

6. Notes by the Chairman of the Working Group of the Plenary (Documents 223 + Corr.1 and 233)

6.1 The above two documents were noted.

7. Proposals for the work of the Conference (MOD 697, MOD 658) (Document 90(Rev.2), Document 101(Add.2))

7.1 The delegate of Turkey submitted proposal TUR/101/12 and requested that the name of his country be included in Footnote 658.

7.2 It was so agreed.

7.3 The proposal in Footnote 697 to add Burkina Faso, Cameroon and Côte d'Ivoire in the band 790 - 830 MHz and those three countries plus Gabon in the band 830 - 862 MHz (Document 90(Rev.2)) was approved.

The Secretary: The Chairman:

T. GAVRILOV I.R. HUTCHINGS

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 263-E
25 February 1992
Original: English

COMMITTEE 5

SUMMARY RECORD
OF THE
EIGHTH MEETING OF COMMITTEE 5
(REGULATORY)

Tuesday, 25 February 1992, at 0935 hours

Chairman: Mr. E. GEORGE (Germany (Federal Republic of))

Subjects discussed		Documents
1.	Modification to Footnote 404 of the Radio Regulations (continued)	101(Add.1)
2.	Draft Resolution relating to changes in frequency bands (continued)	65
3.	Report by the Chairman of Working Group 5B	217, 218(Rev.1), 254, 255, 257, DT/96, 97, 98

1. Modification to Footnote 404 of the Radio Regulations (Addendum 1 to Document 101) (continued)

1.1 The Chairman reminded the Committee that it had already agreed in principle to approve the modification to RR 404 submitted by the Administration of Turkey in Addendum 1 to Document 101 (TUR/101/11) subject to an explanation from the IFRB regarding certain problems in relation to adjacent areas.

1.2 The member of the IFRB confirmed his previous statement to the effect that there were no implications for other administrations in the Turkish proposal. He also noted that the Administration of Turkey had made a commitment to ensure the protection of the services of other administrations.

1.3 The delegate of Turkey read out the following statement:

"The Turkish Administration will take all necessary measures on the implementation of this modified definition of provision 404 of the Radio Regulations in order not to affect the existing and planned systems of the neighbouring countries to the subject area."

1.4 The delegate of the Islamic Republic of Iran said he was satisfied by the explanation of the IFRB and the statement by the Administration of Turkey.

1.5 The modification to RR 404 in proposal TUR/101/11 was approved.

2. Draft Resolution relating to changes in frequency bands (continued) (Document 65)

2.1 The Chairman informed the Committee that, as requested, he had consulted the Secretary-General, who had stated that he had no difficulties with draft Resolution No. AA submitted by the Administration of Cuba in Document 65.

2.2 The Deputy Secretary-General, after drawing attention to financial responsibilities of administrative conferences, said that the draft Resolution should be amended to include a request to the IFRB and the Telecommunications Development Bureau (BDT) to take the necessary steps for its implementation, since it was more concerned with frequency problems than with development as such. Once the draft Resolution had been approved, it would be transmitted to Committee 3 for an assessment of its financial implications, which would be forwarded to the Administrative Council.

2.3 The delegate of Morocco, after endorsing the draft Resolution, said that he had some concern about its financing. The Conference's financial assessment of the Resolution would be submitted to the Administrative Council, which in all likelihood would conclude that insufficient resources were available to put it into effect. In his view, however, the Resolution was not primarily concerned with frequencies, but with development, and should therefore be addressed to the BDT, to which, of course, the IFRB should provide assistance. As he saw it, the chief responsibility for implementing the Resolution lay with the BDT, which had a budget for that purpose. The Conference would not be taking effective action if it confined the Resolution within the framework of its own financial responsibilities.

2.4 The member of the IFRB recalled that the Conference had already adopted a Resolution on the reaccommodation of assignments in bands that were being reallocated to the broadcasting service. That Resolution gave the Board some very specific tasks which it was in the process of costing. As far as the present draft Resolution was concerned, the Board would have no difficulty in cooperating with the BDT in helping the developing countries to make the necessary transition, but the costs involved could not be diverted from the reaccommodation Resolution.

2.5 The Deputy Secretary-General said it was of the utmost importance that the draft Resolution should specify clearly the tasks assigned to each body concerned. In particular, the BDT should be invited to explore all the possibilities available under the Special Voluntary Programme for Technical Cooperation.

2.6 The delegate of the United Kingdom welcomed the assurance from the Secretary-General that the approach to the new mechanism established by the Nice Plenipotentiary Conference was on the right lines. The advice of the IFRB would always be of the greatest assistance to the BDT or to a world development conference. He had no objections to the draft Resolution under discussion.

2.7 The delegate of Algeria said that the draft Resolution was of crucial importance to the developing countries and enjoyed his full support.

2.8 The delegate of Argentina noted that the draft Resolution invited the Administrative Council to include the question in the agenda of the next world development conference, which meant that the Council would have to consider its budgetary implications. The draft Resolution was of the utmost importance to the developing countries and it should be noted that the entire cost of implementing it would not fall to the ordinary budget of the Union; recognized private operating agencies and other bodies were urged to support the Special Voluntary Programme for that purpose. Consequently, implementation of the Resolution was not confined to the financial responsibilities of the present Conference and the Argentine delegation fully supported it.

2.9 The delegate of Morocco recalled that he had supported the approval in principle of the draft Resolution on the understanding that it would be substantially modified later on. In that connection he pointed out that the present Conference could only make recommendations to a future world development conference. In his view, one of those recommendations should be that the BDT give priority to the implementation of the decisions of the present Conference in the developing countries. In that context, the BDT might call upon the Special Voluntary Programme, for which contributions could be solicited from administrations and private operating agencies, in addition to its own budget. A further modification to the draft Resolution concerned the agenda for a future world development conference, which would be prepared by the Director of the BDT for approval by the Administrative Council. The Director should be instructed to include the present draft Resolution in that agenda.

2.10 The delegate of Guinea, after recalling the decision to establish the BDT at the Nice Plenipotentiary Conference, said that the transfer of assignments referred to in the draft Resolution was of vital importance to the developing countries and had to be adequately dealt with in the text.

2.11 The delegate of Mexico urged that the needs of the developing countries for access to new services and technologies should be fully taken into account in the final wording of the draft Resolution.

2.12 The delegate of Canada, after expressing his support in principle for the draft Resolution, drew attention to the importance of laying down appropriate procedures, as stated in **considering** c), in order to minimize the impact of transfers on the developing countries. That paragraph required some amendment, since in its present form it implied that no new stations could be opened until the entire process had been completed. He supported the establishment of a small group to draft a text acceptable to all concerned.

2.13 The Committee decided to establish a Group (ad hoc 2), composed of the delegates of Algeria, Argentina, Cuba, Ecuador, Mali, Mexico, Morocco and Nigeria, under the chairmanship of Mr. Fernandez (Cuba), to redraft draft Resolution No. AA with the assistance of a legal adviser from the Secretariat and a representative of the IFRB, in the light of the debate.

3. Report by the Chairman of Working Group 5B (Documents 217, 218(Rev.1), 254, 255, 257, DT/96, 97, 98)

3.1 The Chairman invited the Chairman of Working Group 5B to report on progress, indicating those documents in which items were still outstanding. On the basis of that report, he would review the remaining issues on which the Committee had still to come to a decision.

3.2 The Chairman of Working Group 5B recalled that the Working Group's terms of reference had been to examine all proposals concerning Articles 11, 12, 13, 27, 28, 29 and 30 and Appendices 30 and 30A, as well as recommendations and resolutions. It had set up five sub-groups and had considered all the issues before it. Seven reports had been submitted to Committee 5, but some items closely related to the work of Committee 4 had not been completed: such was the case of the Resolution on the introduction of systems in the broadcasting-satellite service (sound) (Document DT/96) and the Resolution in the Annex to Document 257. The proposals concerning Articles 27 and 28 in Document DT/98 as well as Documents 217 and 218(Rev.1) had been referred to ad hoc Group 1. In reply to a question by the delegate of Bahamas, he pointed out that the outstanding issues in Document DT/97 would now be found in Document 257. In conclusion, he thanked everyone concerned for their efforts.

3.3 In reply to a question by the delegate of the United Kingdom, the Chairman said that matters relating to the general-satellite service would be taken up when a clearer picture had emerged from the work of Committee 4. He further recalled some outstanding issues in the draft Resolution relating to terrestrial digital sound broadcasting. The Committee need only take note of Document 254 concerning sharing criteria in Articles 27 and 28, while Document 255 made it possible to remove the square brackets around the coordination distance in the footnote on page 10 of Document 257.

3.4 In the light of that information, he suggested that ad hoc Group 1 should, at an appropriate time, take up Document DT/98 and Documents 217, 218(Rev.1) and 254, while Committee 5 itself should proceed to consider Documents 30(Corr.1), 257, DT/96 and 192 (Annex 2).

3.5 It was so agreed.

The meeting rose at 1030 hours.

The Secretary: The Chairman:

J. LEWIS E. GEORGE

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 264-E
25 February 1992
Original: French

COMMITTEE 5

SUMMARY RECORD

OF THE

NINTH MEETING OF COMMITTEE 5
(REGULATORY)

Tuesday, 25 February 1992, at 1500 hours

Chairman: Mr. E. GEORGE (Germany)

Subjects discussed		Documents
1.	Seventh and last report of Working Group 5B	257

1. Seventh and last report of Working Group 5B (Document 257)

The Chairman of Working Group 5B, after describing the background to the preparation of the document, which had been approved as a whole, pointed out that some parts remained between square brackets pending Committee 4's decisions and said that his Group had spent a long time discussing Footnote 1 to the draft Resolution, which concerned the question of when a satellite was considered as non-geostationary and hence when the procedure referred to in the Resolution should be applied. As there had not been time to consider Footnote 2, he suggested that the Committee should take it as a starting point.

1.2 The Chairman proposed that the last report of Working Group 5B should be discussed, beginning with the Annexes to Resolution COM5/8, leaving the footnotes to be considered at the end of the meeting.

1.3 The delegate of Morocco, after receiving confirmation from the Chairman that the parts of the texts in square brackets would be discussed in the course of the meeting, stated that the procedure for the coordination of terrestrial services with space stations was not acceptable to his delegation, whether the Committee 4 allocations included power flux-density limitations or not. The existing Radio Regulations settled the question of sharing between space stations and terrestrial services by adopting power flux-density limits. However, in the case of LEO satellites, administrations worldwide would need to supply information on their terrestrial stations for consideration as part of the coordination procedure. But such information was not always available, which was why a solution needed to be found to the sharing problem, either by adopting a power flux-density limit or by some other means.

1.4 The delegate of Mexico said that the Master International Frequency Register did not contain all the terrestrial station assignments.

1.5 The delegate of the United Kingdom, while sympathizing with Morocco's position, said that according to the report by the Chairman of Working Group 5B, coordination between transmitting terrestrial stations and receiving satellite stations was impossible and therefore had to be eliminated. The procedure in question was aimed at coordinating transmitting space stations and receiving terrestrial stations. Since terrestrial assignments in many frequency bands in that part of the spectrum did not have to be notified, the IFRB had no data base and there could be no question of forcing either administrations or the Board to establish one. The IFRB would therefore have no means of identifying those administrations or services which might be affected. In the absence of any power flux-density limits for those bands, it was hard to see how terrestrial services could be protected unless a coordination procedure was adopted. If both space and terrestrial services had allocations on a primary basis enjoying equal rights, both would be authorized to operate in those bands. Unless Committee 4 established power flux-density limits, which he doubted, the only solution, as suggested in Document 257, would consist in compelling administrations with satellite systems and those with terrestrial services which might be affected to carry out coordination within a reasonable time. He suggested that countries which were not equipped to perform calculations of the level of interference caused to their terrestrial services should ask the administration requesting coordination to do so.

1.6 For the delegate of the United States, the approach in Document 257 consisted, for administrations, in identifying themselves, since they were under no obligation to communicate their national data bases to the IFRB, this being the case for the bands above 30 MHz. There was no point in notifying an astronomical number of terrestrial assignments, since the purpose was neither to burden the Board with more work, nor to extend the Master Register, nor to increase the workload of administrations. Moreover, it had always been possible to identify technically "sensitive" terrestrial assignments and to carry out technical coordination in frontier areas. To sum up, in the absence of any power flux-density limit and since there was no question of administrations notifying a large number of terrestrial assignments to the IFRB, the only alternative was to share the new bands allocated to the primary services between primary space assignments and primary terrestrial assignments, in other words, to adopt the suggested coordination procedure.

1.7 The delegate of Morocco said that it was not a matter of coordinating earth stations but of coordinating space stations with terrestrial stations. However, the CCIR had not prepared any technical criteria which might be used to calculate interference by space stations to terrestrial stations. According to the existing text of the procedure, all administrations throughout the world, regardless of their level of development, would need to devise a complicated method of calculation in order to decide whether they might be affected by the launching of a new LEO system. That was impossible. Until such time as the CCIR should report its findings in that respect for a future administrative conference, he proposed the replacement of Section II concerning coordination with respect to terrestrial stations by the following text: "An administration planning to introduce a non-geostationary network shall coordinate that network with any other administration which, following the publication referred to in 1.3, indicated that its existing or planned terrestrial stations may be affected."

1.8 The Member of the IFRB and the Chairman thought that the suggestion put forward by the delegate of Morocco did not differ substantially from the procedure proposed in the document, since administrations had six months to undertake the coordination procedure on a bilateral basis.

1.9 The delegate the United Kingdom, supported by the delegate of the United States, recommended maintaining a balance between space and terrestrial services and leaving the text as it stood.

1.10 There being no support for the proposal by the delegate of Morocco, the Chairman proposed that the general debate on the item should be closed and that the Committee should take up the Annex to Resolution COM5/8 in detail.

1.11 It was so decided.

Section A

1.12 Section A was approved, with paragraph A.3 put in square brackets pending the outcome of the consideration of Document 271.

Section I

1.13 Section I was approved, with the square brackets kept in paragraph 1.4 pending decisions by Committee 4 and with the words "stations or" added after the words "adjustment to" in paragraph 1.5A, as proposed by the delegate of Morocco.

Section II

1.14 Paragraphs 2.1, 2.2, 2.3 and 2.4 were approved without comment.

1.15 With reference to paragraph 2.5, the Chairman pointed out that the Committee had to decide whether to keep or delete the phrase in square brackets.

1.16 The delegate of Morocco proposed that the square brackets should be deleted and the words between them kept, so as to bring the wording into line with Article 11.

1.17 The delegate of the United States did not agree. His Administration was not willing to undertake coordination between a service with a primary allocation and a service with a secondary allocation, as the primary service would then no longer have priority, which would not be logical.

1.18 The delegate of the United Kingdom saw no point in keeping the phrase in square brackets, because if all satellite services had primary allocations, there would then be no higher category of allocation, primary being the highest.

1.19 The Member of the IFRB pointed out that if allocations to space services were made on a secondary basis, administrations with such allocations would, were the text to remain as it stood, be obliged to coordinate their frequency assignments with administrations having primary allocations which would be contrary to the provisions of No. 420 et seq. He therefore proposed that the phrase should be deleted.

1.20 The delegate of France thought that the square brackets should be removed and the phrase kept, because if the services in question had secondary allocations, coordination would have to be effected between the primary and secondary services, the primary one of course being the right to indicate whether it was suffering interference or not.

1.21 The Chairman, noting the position taken by the delegate of the United States, suggested that the square brackets in paragraph 2.5 should be deleted.

1.22 The Member of the IFRB maintained the view that the text as it stood implied an obligation for administrations to undertake coordination, which could entail technical examination by the IFRB if the necessary adjustments were not made. He thought it would be unwise to envisage technical examination as between a primary and a secondary service.

1.23 The delegate of Morocco proposed that the IFRB should include a procedure for that purpose in its Rules of Procedure.

1.24 The delegate of the United Kingdom having pointed out that the phrase could become pointless in the light of the frequency allocations to be made by Committee 4, it was decided to keep the expression in square brackets pending a decision by Committee 4.

1.25 Sub-paragraphs 2.5.1, 2.5.2 and 2.5.3 were approved without comment.

1.26 The delegate of Mexico proposed that sub-paragraphs 2.5.4, 2.5.5 and 2.5.6, which were in square brackets, should be deleted.

1.27 The Chairman thought that sub-paragraph 2.5.4 should be kept, because it seemed to him necessary to indicate that the frequency assignments to be taken into account in the application of paragraphs 2.1 and 2.2 were in conformity with No. 1240. The delegate of Mexico then pointed out that No. 1240 was linked to Nos. 1241 and 1242.

1.28 The Member of the IFRB said that two kinds of frequency assignments were involved: those entered in the Master Register and those which were not notified. He pointed out, in addition, that No. 1240 implied that there would be a favourable finding. He suggested that the three sub-paragraphs should be combined.

1.29 After informal consultations, the Member of the IFRB read out a compromise text to replace sub-paragraphs 2.5.4 and 2.5.5, as follows: "recorded in the Master Register with a favourable finding under No. 1240, or". Paragraph 2.5.6, which would be kept as it was, would be renumbered accordingly.

1.30 The delegate of the United States wanted to be sure that if the assignments in question had been notified, they would have been in conformity. The Chairman having replied in the affirmative, said that he could accept the proposed text.

1.31 Sub-paragraphs 2.5.4, 2.5.5 and 2.5.6, as amended, were approved.

1.32 Paragraphs 2.6 and 2.7 were approved.

1.33 The delegate of Mexico considered that the phrase in square brackets at the end of paragraph 2.8 should be deleted.

1.34 It was so decided.

1.35 The delegate of Morocco proposed that the paragraph and the footnote should be slightly amended. He would, for example, prefer to dispense with the compulsory element and make the information optional by stating that the administration could also send technical details on the terrestrial stations concerned. He also pointed out that paragraph 2.8 read "it shall, within the same period send to the administration", i.e., it was to send, within the same period, technical details of the stations, and that was compulsory. He could agree with regard to space networks, but not at all with regard to terrestrial networks.

1.36 The delegate of the United Kingdom considered that coordination implied a meeting of views between administrations and wondered how they would reach agreement without precise information. The compulsory element was perhaps excessive, and the concern of the delegate of Morocco was understandable; perhaps the text could be slightly amended, because the expression "technical details" seemed to him somewhat excessive. It might be better to speak of "detailed characteristics" of the stations.

1.37 After further discussion, it was decided to amend the fourth sentence of the paragraph to read as follows: "If, however, the administration with which coordination is sought does not agree, it shall, within the same period, send to the administration seeking coordination the technical details of the networks or information on its terrestrial stations concerned upon which its disagreement is based, including those characteristics contained in section C of Appendix 1 or in Appendix 3 ...".

1.38 As thus amended, paragraph 2.8 was approved.

1.39 Paragraphs 2.8A, 2.9, 2.10 and 2.11 were approved.

Section III

1.40 With reference to paragraph 3.1, the delegate of Morocco said that in some Committee 4 documents the allocation of frequencies to non-geostationary satellite systems depended on a power flux-density limit. It did not seem to him necessary to apply both that limit and a coordination procedure at one and the same time.

1.41 It was decided to revert to that point once Committee 4 had completed its work on the related issues.

1.42 The delegate of France proposed that the words "with equal rights" should be added after the words "allocated to space and terrestrial radiocommunication services".

1.43 It was so decided.

1.44 The Chairman suggested that the footnote should be reworded on the basis of Document 255 submitted by the Working Group of the Plenary, due account also being taken of ADD 608X in Document 223.

1.45 It was so decided.

1.46 Paragraphs 3.2, 3.3, 3.4, 3.5 and 3.6 were approved.

1.47 Paragraph 3.7 was approved with the deletion of the second sentence.

1.48 Paragraph 3.8 was approved without change.

Section IV

1.49 Paragraphs 4.1, 4.2, 4.3, 4.4, 4.5 and 4.6 were approved.

1.50 The Chairman said that the footnote on page 12 would be considered at the same time as the one on page 10.

Section V

1.51 Paragraph 5.1 was approved.

1.52 Paragraph 5.2 was approved with the deletion of the second sentence.

1.53 Paragraph 5.3 was approved.

Draft Resolution COM5/8

1.54 The title and **considering** a), b), and c) were approved.

1.55 **Considering** d) was approved with the deletion of the word "more" before "permanent procedure".

1.56 The **considering also** part was approved.

1.57 Referring to **considering further** i), the delegate of Mexico said that the Spanish text should be aligned on the English and French.

1.58 The Mexican delegate's comment was noted.

1.59 Operative paragraph 1 was approved with the deletion of the word "more" in the first line.

1.60 Operative paragraphs 2-8 were approved.

1.61 The Chairman said that the text of the footnote would be different, as the delegate of Morocco had pointed out, depending on whether it related to Article 11, 12 or 13. Article 11 was concerned with coordination and notification, whereas Articles 12 and 13 were concerned with notification and recording of frequencies. Replying to the delegate of the United States, who wanted to use some term other than "status" in the footnote, he said that all such drafting questions would be considered at the next meeting.

The meeting rose at 1800 hours.

The Secretary: The Chairman:

J. LEWIS E. GEORGE

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 265-E
25 February 1992
Original: English

COMMITTEE 5

SUMMARY RECORD

OF THE

TENTH MEETING OF COMMITTEE 5 (REGULATORY)

Tuesday, 25 February 1992, at 2005 hours

Chairman: Mr. E. GEORGE (Germany)

Subjects discussed		Documents
1.	Seventh and last report of Working Group 5B (continued)	257, 271
2.	Resolution COM5/3	212

1. Seventh and last report of Working Group 5B (continued) (Documents 257, 271)

1.1 The Chairman invited comments on Footnotes 1 and 2 to the draft Resolution relating to 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, Annexed to Document 257.

1.2 The delegate of Morocco pointed out that administrations might consider that the use of the footnotes was not limited to the bands not listed in Footnote 2. In such cases, administrations with even a one- or two-degree latitude excursion might prefer to use the procedure in the Resolution rather than Article 11. Moreover, the choice of procedures to be applied was limited to the country having the non-geostationary satellite network. That facility should be given to both administrations and to others concerned. He would prefer Footnote 1 to be deleted, as he believed had been advocated by the delegate of the Russian Federation at a previous meeting.

1.3 The delegate of the United Kingdom said that it would be most unwise to delete the footnote since that would mean that there was no guidance in the Conference texts or the Radio Regulations as to what was meant by "non-geostationary-satellite network", of which there were many.

1.4 The delegate of the Russian Federation explained that he had wished to delete the former footnote. The new one created no difficulties. Even if a geosynchronous satellite with an inclination of 0.5° or 1° were termed non-geostationary - thus avoiding the Article 11 coordination procedure - he did not believe that any administration would wish to dispense with that procedure, since No. 2613 would then apply. He believed the footnote should be maintained.

1.5 The delegate of Canada said that the footnote would make the situation clear. However, the Conference had clarified the fact that No. 2613 applied only to the fixed-satellite service. He was concerned that an administration wishing to proceed without coordination might indicate that its satellite with an inclination of half a degree was non-geosynchronous or non-geostationary, and thus jump ahead of another satellite already in the coordination process. The advice of the IFRB should be sought in that matter.

1.6 The delegate of the United States said it must be assumed that all administrations would abide by the rules established by the Conference. Although No. 2613 applied only to the fixed-satellite service, other situations were governed by the basic Convention. The footnote should be maintained. The intention was to give the IFRB an indication of which regulatory process was to be applied.

1.7 The delegate of Morocco, responding to an enquiry by the Chairman, suggested that, if the majority were in favour of retaining the footnotes, it should be made clear that Footnote 1 applied only to the bands to be indicated in Footnote 2. Instead of leaving the decision on which procedure should be applied to one administration alone, he would prefer the wording "The administrations concerned may agree on the procedure to be applied for a given network."

1.8 The Chairman pointed out that difficulties might arise since a satellite might be geostationary in one situation and non-geostationary in another. He suggested that it would suffice for the notifying administration to decide whether the satellite was geostationary or non-geostationary.

1.9 The delegate of Morocco said that under Article 28 of the Radio Regulations a geostationary satellite had to observe given power flux-density limits. No such limits had been decided for non-geostationary satellites. It could not be left to the discretion of an administration to decide on the procedure to be applied.

1.10 The Member of the IFRB said that if the Conference did not provide an answer the Board would have to develop its own rule as to which procedures were applicable. Its conclusion might be challenged and need to be discussed either by the CCIR or by another radio conference. The Board would thus prefer a definite answer. It would be better to say that the administration would decide whether the geostationary or non-geostationary procedures applied, without mentioning the geostationary-satellite orbit at all.

1.11 The delegate of the United Kingdom proposed to combine the two footnotes which would read: "This Resolution shall apply only to the frequency bands [. . .MHz]. For the purpose of application of these procedures an administration when providing information in the form of Appendices 3 or 4 shall state whether it relates to a geostationary or a non-geostationary satellite and shall provide the appropriate orbital information."

1.12 The delegate of Canada said that he could accept that solution but wished it placed on record that the intention was for administrations to define whether their network was geostationary or non-geostationary. Neither should that principle constitute a precedent and be extended to other bands and space services not contemplated in the Resolution.

1.13 The Member of the IFRB agreed that the intention should be so recorded; however, the wording still left open the question of other bands and services, in respect of which the Board would have to rule if necessary.

1.14 In reply to a question by the delegate of Argentina, the Chairman said that the "certain space services and other services to which the bands are allocated" in the title of the Resolution would only be decided when the results of the work of Committee 4 were available. However, Committee 5 still had to decide whether the procedures would apply only to the new bands allocated to space services - mainly mobile-satellite services - or also to the existing MSS bands.

1.15 The delegate of Morocco said that all the bands being allocated to the MSS by Committee 4 would be relatively limited in size, and that complex non-geostationary-satellite systems would occupy almost exclusively the spectrum being made available. If the other MSS bands were opened to non-geostationary systems, there was a risk of their all being occupied by a handful of such systems. Some administrations were planning to use the MSS bands for spot beams covering their territory, and such geostationary-satellite systems might be incompatible with non-geostationary ones. The CCIR Report indicated that sharing between geostationary and non-geostationary systems was not absolutely satisfactory. It would therefore be reasonable not to extend the use of LEOs to all the bands so that administrations wishing for national coverage from geostationary systems could obtain this without interference from non-geostationary ones.

1.16 At the suggestion of the Chairman, it was agreed that any decision to exclude non-geostationary systems from any bands should be left to Committee 4.

1.17 On the question whether it should also be left to Committee 4 to designate the bands where LEO systems should be accommodated, the delegate of the United States said that in the view of his Administration the new procedures should apply to the primary services and to bands newly allocated by the Conference. Existing processes had proved to work well with regard to other bands.

1.18 The Chairman of Working Group 5B said that the procedures had been developed to plug a gap in the Regulations as regards coordination. They were, however, only interim procedures and, as foreseen in **considering** d), of the Resolution, a future conference would be able to adopt more permanent ones on the basis of practical experience.

1.19 The delegate of Australia endorsed that view. The interim procedure should be applied to the new bands to be allocated. Moreover, at another meeting the issue of technical consequences in connection with Appendix 29 would have to be addressed.

1.20 The delegate of the United Kingdom said that the question of filling in the gaps in Footnote 2 should be set aside until the final package of provisions was available, including service allocations, their status and interaction, and any technical limitations that might be applied. If the Committee agreed in principle that the scope of the Resolution and the associated procedure needed to be limited in terms of frequency bands, and that an authoritative statement on defining geostationary and non-geostationary networks was required, Footnotes 1 and 2 should be combined and the text improved.

1.21 The delegate of Canada said that Committee 4 and perhaps Committee 5 had to decide what was meant by "newly allocated bands". If the procedures did not cover the existing L-band, for instance, non-geostationary mobile-satellite systems could enter the existing L-band without coordination and possibly jump ahead into the MIFR before the coordination procedure for geostationary systems had been completed.

1.22 The delegate of Morocco agreed that it was important for either Committee 4 or Committee 5 to take a decision on what was meant by "newly allocated bands".

1.23 The Chairman said that there seemed to be agreement that he should contact the Chairman of Committee 4 to inform him of the need for such a decision.

1.24 The delegate of India pointed out that certain frequency bands allocated for space research were also being considered for the MSS. That point should be borne in mind by Committee 4.

1.25 The Chairman drew attention to the title of the Resolution and observed that as soon as an allocation was made, the procedure would apply automatically to all other services in the relevant band.

1.26 After further discussion, the following wording for the footnote was approved:

> "This Resolution shall be applied only to the frequency bands [to be decided by Committee 4]. For the purpose of application of the interim procedures annexed to this Resolution, an administration providing information on the form of Appendices 3 or 4 shall state whether it relates to a geostationary satellite or a non-geostationary satellite and shall provide the appropriate orbital information."

1.27 The delegate of Morocco suggested that the following footnote be added to Sections I and II of the Annex to the Resolution: "This section does not apply to the coordination of frequency assignments to space stations with respect to terrestrial services in all cases where a power flux-density limit exists for the space station," and that the following footnote be added to Section III: "This section does not apply to the coordination of frequency assignments to earth stations with respect to terrestrial services in all cases where an e.i.r.p. limit exists at the border of the territory of the neighbouring country."

1.28 The delegate of the Russian Federation said that the question of power flux-density limits and e.i.r.p. values had not yet been agreed. It would be better for the Committee to see the proposals in writing.

1.29 The delegate of the United States requested that the three proposed footnotes be kept in square brackets pending the decision of Committee 4. The delegate of Morocco agreed to that course.

1.30 After further discussion in which the delegates of the United Kingdom and Morocco took part, it was agreed to defer further discussion of the matter until the outcome of the deliberations in Committee 4 was known.

1.31 The Chairman drew attention to Section A.3 of the Annex to the Resolution, observing that sub-paragraph iii) of the additional information provided in Document 271 should now read: "Active service arc: The part of the orbit where the satellite is active (transmitting/receiving), to be described by, e.g., a minimum orbital altitude above the Earth's surface." He asked whether the Committee agreed to include the definitions in the Annex to the Resolution or whether it would suffice if they formed part of the Rules of Procedure of the IFRB.

1.32 The delegate of Morocco was in favour of including the definitions in the Resolution.

1.33 The delegate of the Russian Federation, supported by the delegate of Australia, saw no need to include the definitions in the Resolution. They could not be exhaustive in any case.

1.34 The Chairman pointed out that in any event **resolves** 7 invited the CCIR to study and develop recommendations on the coordination methods, the necessary orbital data relating to non-geostationary systems, and the sharing criteria. He asked whether the delegate of Morocco could agree that the terms in sub-paragraphs i), ii) and iii) be retained but the definitions omitted, subject perhaps to the addition of a footnote requesting the IFRB to establish them.

1.35 The delegate of Morocco agreed that the definitions could be omitted. There was, however, no need for a footnote. Mention of the point in the summary record would suffice.

1.36 The Chairman then referred the Committee to the text for a new **recognizing** paragraph, to be inserted after **considering further**, as follows:

> "that the operation of telecommunication systems in the MSS bands must be in conformity with the International Telecommunication Constitution, the International Telecommunication Convention and the Administrative Regulations, in particular their respective preambles and, in this respect:
>
> a) the sovereign 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 under legal, financial and regulatory requirements of any Member concerned".

1.37 He observed that the reference to the International Telecommunication Constitution was presumably to be deleted, since that instrument was not yet in force, and that the words "in force" should be inserted after "Administrative Regulations".

1.38 The delegate of Australia, referring to sub-paragraph b), asked whether the intent would not be more clearly expressed if the words "the Member concerned" were substituted for "any Member concerned".

1.39 The delegate of the United States said that the text, as amended by the Chairman, was an accurate reflection of his delegation's position.

1.40 The delegate of Morocco said that he understood the intent to be that systems could only be operated if they met the requirements of any Member of the Union, whether or not that Member participated in the system. Essentially, the text was meant to cater for cases where a country decided not to participate and needed to have its interests protected.

1.41 The delegate of the United Kingdom could agree to the two changes suggested by the Chairman. On the other hand, he failed to understand the meaning of sub-paragraph b) which, on the face of it, went much too far.

1.42 The delegate of the Russian Federation observed that sub-paragraph a) attempted to define national sovereignty, a matter which, in his view, was not within the purview of the present Conference. Neither did he consider that an administrative radio conference could recognize the type of obligation referred to in sub-paragraph b).

1.43 The delegate of Morocco said he did not agree that the Conference was not authorized to consider the question of sovereignty. The delegations present had been empowered by their Governments to discuss an international treaty, and one of the main elements in such a discussion was precisely the safeguarding of sovereignty. If the Conference was not competent to discuss the matter now before the Committee, then neither could it discuss the allocation of frequencies in respect of systems which affected national sovereignty.

1.44 The delegate of Mexico said that the proper forum for such discussions was no doubt the United Nations itself; nevertheless, the Conference based its work on the sovereign right of each State to manage its own telecommunications. Consequently, the point made by the delegate of Morocco should be included in the draft Resolution, since it responded to a concern which had been expressed by many administrations.

1.45 The delegate of the United Kingdom considered that sub-paragraph a) covered all the points raised by the delegate of Morocco.

1.46 The delegate of Canada said that the text of sub-paragraph b) would be clearer if the last line was amended to read: "...regulatory requirements of the Member in whose territory they are operating".

1.47 The delegate of Morocco said that he could not accept that suggestion, since the text was intended precisely to cater for non-participating countries.

1.48 The delegate of the Russian Federation recalled the terms of Article 7 of the Convention regarding administrative conferences. The issue currently being discussed was not on the agenda and, in his view, the document under consideration was one which would more appropriately be dealt with by a Plenipotentiary Conference.

1.49 The delegate of the United Kingdom said that his delegation had similar reservations about references to such matters in a technical forum of the Union. However, if adoption of the interim procedures would be facilitated by the adoption of a text such as the one under disucssion, his delegation would not raise any objections at the present juncture. Sub-paragraphs a) and b) seemed to complement one another and should perhaps be combined.

1.50 Following further discussion in which the delegates of Mexico, Argentina, Australia and Morocco took part, the Chairman suggested that an ad hoc Group should be set up under the chairmanship of the delegate of Australia, composed of Mexico, the United Kingdom, the Russian Federation, Morocco, Argentina and the United Arab Emirates, to consider the text and produce a compromise proposal for discussion at the next meeting.

1.51 It was so agreed.

1.52 The Chairman invited the Committee to resume consideration of the footnotes in Sections III and IV, which had been deferred from the previous meeting.

1.53 The delegate of Canada reported that a small group had studied Document 255 from the Working Group of the Plenary and, as a result, proposed to the Committee that the square brackets should be deleted from the text of both footnotes and a second sentence added, as follows: "For a service area involving aircraft earth stations the coordination area is the service area extended by 1,000 km".

1.54 It was so agreed.

2. Resolution COM5/3 (Document 212)

2.1 The Chairman drew attention to the question, raised in the Plenary, of a regional versus a world conference to deal with the Plans for Regions 1 and 3 in Appendices 30 and 30A. The delegations of Brazil, Mexico, Argentina, Ecuador and Canada had called for a regional conference but the delegate of Morocco had pointed out that Appendices to the Radio Regulations could only be amended by a world conference. He asked whether the concerns of the Region 2 delegations were covered by the present wording of the **resolves** part of the Resolution, which referred to preservation of the integrity of the Region 2 Plans and their associated provisions.

2.2 The delegate of Canada said that they were not. He proposed that the **recommends the next Plenipotentiary Conference** paragraph should be amended to read: "to consider the convening of a regional administrative radio conference to prepare revisions to those parts of the Plans in Appendices 30 and 30A...". Second, the word "revising" in the first line of **resolves** 1) should be replaced by "preparing revisions to". Third, in the **instructs the Secretary-General** paragraph, the word "regional" should be inserted before "conference" in the second line and the words "any necessary revision" replaced by "to prepare a revision ...".

2.3 Those amendments were supported by the delegates of Argentina, Brazil, Mexico and the United States.

2.4 The delegate of the Russian Federation observed that if a regional conference were held, the same subject would have to be placed on the agenda of a future world conference. It might be advisable to retain the text of the Resolution as it stood in Document 212, subject only to the deletion of the word "world" in the **recommends the next Plenipotentiary Conference** paragraph, thus leaving it to the Plenipotentiary Conference to decide which type of conference to convene and allowing administrations more time to prepare their positions.

2.5 The delegate of Morocco supported the Canadian amendments, provided a further **resolves** paragraph were added stating that the results should be included without modification in the Radio Regulations. If that was not acceptable, the delegate of the Russian Federation's suggestion might offer the best solution.

2.6 The delegate of the United Kingdom said it had emerged quite clearly from the 1977, 1983 and 1988 Conferences that a satellite Plan simply could not be drawn up or altered on a regional basis. He therefore supported the suggestion by the delegate of the Russian Federation.

2.7 The delegate of Israel supported the views expressed by the delegates of the Russian Federation and the United Kingdom.

2.8 The delegate of Canada, referring to the point made by the delegate of Morocco, said he could agree to the spirit of the proposal by the Russian Federation. Given the support his own amendments had commanded, however, he would welcome further debate on the issue.

2.9 The Chairman said that the matter would be taken up again at the next meeting.

The meeting rose at 2305 hours.

The Secretary: The Chairman:

J. LEWIS E. GEORGE

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 266-E
27 February 1992
Original: English

PLENARY MEETING

MINUTES
OF THE
SIXTH PLENARY MEETING

Tuesday, 25 February 1992, at 1110 hours

Chairman: Mr. J. BARRIONUEVO PEÑA (Spain)

Subjects discussed		Documents
1.	Proposal to set up a special Working Group	-
2.	Fourth series of texts submitted by the Editorial Committee for first reading (B.4)	212
3.	Fifth series of texts submitted by the Editorial Committee for first reading (B.5)	237 + Add.1
4.	Statement by the Chairman of Committee 4	-
5.	Sixth series of texts submitted by the Editorial Committee for first reading (B.6)	238

1. Proposal to set up a special Working Group

1.1 The delegate of Morocco expressed concern at the lack of progress made by the Conference and the apparent unwillingness on the part of certain delegations to compromise in order to reach solutions acceptable to all. Surely the purpose of the Conference was to allow for negotiation between all countries, not to enable a particular group of countries to dictate their terms. Many important matters remained to be resolved and examined as a whole before definitive decisions could be taken. He therefore asked the Chairman to consider setting up a special Contact Group to assist in the formulation of a compromise package that would accommodate the requirements of all countries, both large and small.

1.2 The delegates of Algeria, Cameroon, Ecuador, Ghana, Mali, Niger, Oman, Tanzania and Zimbabwe supported the views expressed by the delegate of Morocco. The delegates of Ecuador and Oman commented, in particular, on the lack of progress in Committee 4 despite the setting up of numerous Working Groups and Sub-Groups. The former also noted that the participation of his delegation had been hindered because of a lack of interpretation into Spanish.

1.3 The Chairman of Committee 4 stressed that his mandate was to take into account the interests of all countries and that he would continue to do so. Various Working Groups and Sub-Groups of Committee 4 had been set up in an attempt to resolve the difficult issues with which the Committee was faced. The Group discussing the mobile-satellite service was small, being composed only of 12 administrations plus the Chairman of Committee 4, but he felt that it was representative. It was, of course, up to the Chairman of the Conference to decide whether or not to establish a special group, but it might be advisable first to consider reports on progress already achieved. It was ultimately up to delegates themselves to advance the work of the Conference; the Committees and Working Groups simply provided a framework in which progress could be made.

1.4 The Chairman said that he viewed the proposal to set up a special Contact Group in a positive light but that he would reflect on the matter before communicating his decision to the Plenary. It was his understanding that the proposed Group would not take on the tasks assigned to the various Committees, but deal with topics of concern to several Committees that could not be adequately addressed within the Committee framework because of time constraints.

1.5 The delegate of Morocco endorsed that interpretation of his proposal.

2. Fourth series of texts submitted by the Editorial Committee for first reading (B.4) (Document 212)

Article 1

2.1 In order to facilitate the work of the Conference and in a spirit of compromise, the delegates of Brazil, Canada and the Russian Federation withdrew the reservations of their respective delegations with regard to MOD 24.

2.2 The provisions of Article 1 set out on page B.4/1 were approved.

Article 29 (MOD 2613)

2.3 Approved.

Resolution COM5/3

2.4 The Chairman of Committee 6 informed the meeting that Resolution COM5/3 was going to be discussed again by Committee 5 and would therefore be submitted to the Plenary at a later stage. It should not, therefore, be considered as part of the fourth series of texts submitted by the Editorial Committee.

2.5 The delegate of Brazil, supported by the delegates of Argentina, Ecuador and Mexico, considered that, in order to reduce costs, a regional rather than a world administrative radio conference should revise the Plans for Regions 1 and 3.

2.6 The delegate of Argentina, supported by the delegate of Canada, said that such a substantive proposal should be discussed in Committee 5; it should not be left to the Editorial Committee for decision.

2.7 The delegate of Morocco pointed out that the Plans for Regions 1 and 3 were part of the Radio Regulations, which could only be modified by a world administrative radio conference.

2.8 The Chairman said that when Committee 5 discussed the draft Resolution, it should take account of the views just expressed.

Resolution COM5/4

2.9 Approved.

2.10 The fourth series of texts submitted by the Editorial Committee (B.4) (Document 212) was approved on first reading.

3. Fifth series of texts submitted by the Editorial Committee for first reading (B.5) (Document 237 and Addendum 1)

3.1 The Chairman of Committee 6, introducing Document 237, drew attention to editorial errors on the cover page and in the French and English texts of ADD 822B.

MOD 24.25 - 31.3 GHz

3.2 The Chairman of Committee 4 suggested that consideration of bands 27.5 - 30 GHz be deferred, since they were still being discussed by Committee 4.

3.3 It was so agreed.

3.4 The delegate of the United States said that, given the contents of ADD 881A concerning the use of the 25.25 - 27.5 GHz band by the inter-satellite service, the allocation to the earth exploration-satellite service (space-to-space) was unnecessary and should be deleted in all three boxes for all Regions. Discussion of the fixed-satellite service in the bands 27 - 27.5 GHz in Region 2 should also be deferred pending discussion of issues related to HDTV feeder links.

3.5 The delegation of Japan likewise observed that further discussions were required on feeder links for HDTV in the band 27 - 27.5 GHz.

3.6 The Chairman of Committee 4 supported the two previous speakers, although those matters had not been taken up by Committee 4. He suggested that consideration of the band 27 - 27.5 GHz be deferred for all Regions.

3.7 It was so agreed.

3.8 The boxes for the bands 25.25 - 25.5 and 25.5 - 27 GHz, as amended, were approved.

ADD 881A

3.9 Approved.

ADD 882A, ADD 882B, ADD 882C

3.10 The delegate of the United Kingdom suggested that, for the sake of clarity, the text of ADD 882C should be amended to read: "... and is not intended for the primary collection of information ...".

3.11 The Chairman of Committee 4 supported that suggestion. However, since discussion of the bands 27 - 30 GHz had been deferred, consideration of ADD 882A, 882B and 882C should also be deferred, account being taken as appropriate of the suggested amendment.

3.12 It was so agreed.

MOD 31.3 - 33.4 GHz,
SUP 890, SUP 891, MOD 893

3.13 Approved.

MOD 33.4 - 40.5 GHz

3.14 The Chairman of Committee 6 said that, under the band 34.2 - 34.7 GHz, the reference to Footnote 896 should be deleted.

3.15 MOD 33.4 - 40.5 GHz, as amended, was approved.

SUP 895

3.16 Approved.

MOD 896

3.17 The delegate of Poland requested that his country be deleted from the footnote.

3.18 The delegate of the Russian Federation requested that MOD 896 be placed between square brackets since his delegation wished to seek advice regarding the precise names of countries, in particular that of the former USSR.

3.19 MOD 896 was approved on that understanding.

MOD 33.4 - 40.5 GHz (continued)

3.20 The delegate of Finland asked whether the asterisks against SPACE RESEARCH (space-to-Earth) and the related footnote would appear in the Radio Regulations.

3.21 The Chairman of Committee 4 said he hoped that the asterisks would be deleted. The one under the band 37.5 - 38 GHz could perhaps be removed immediately since existing power flux-density limits in the Radio Regulations covered that band. With regard to the asterisk under the band 37 - 37.5 GHz, the extension of existing limits to cover that band was being discussed by Committee 5.

3.22 The Chairman of Committee 5 having confirmed the previous speaker's comments, the Chairman of Committee 6 suggested that the asterisk under the band 37 - 37.5 GHz and the footnote be retained but placed between square brackets pending the outcome of discussions in Committee 5.

3.23 It was so agreed.

3.24 MOD 33.4 - 40.5 (continued), as amended, was approved.

SUP 899,
MOD 66 - 86 GHz,
MOD 151 - 185 GHz

3.25 Approved.

MOD 446, MOD 447, MOD 449, MOD 457, SUP 464A, SUP 481, SUP 551, MOD 555, SUP 569, MOD 571, MOD 581, MOD 587 (Mob-87)

3.26 The Chairman of Committee 6 said that all those modifications should be placed between square brackets in view of the note on the cover page of the document.

3.27 The Chairman of Committee 4 said that the note was concerned with a question of principle and that there was no disagreement on the substance of the footnotes.

3.28 The delegate of the Russian Federation said that his delegation, which had raised the question of principle, wished to seek further advice on the matter.

3.29 The delegate of Poland requested the deletion of his country's name from Footnotes 446 and 447.

3.30 The delegate of Lebanon requested that his country's name be included in Footnote 587. He also suggested that delegations be given the opportunity of making modifications to footnotes in Committee meetings.

3.31 The delegate of Israel requested the inclusion of his country's name in Footnote 581.

3.32 The above-mentioned provisions, as amended, were approved.

MOD 777

3.33 Approved.

MOD 779

3.34 Approved subject to the addition of Brunei Darussalam to the list of countries.

MOD 780, SUP 782

3.35 Approved.

MOD 797B

3.36 Approved subject to the addition of Lebanon to the list of countries.

MOD 798, MOD 800

3.37 Approved.

MOD 803

3.38 Approved subject to the addition of Brunei Darussalam and Oman to the list of countries.

MOD 804

3.39 Approved.

MOD 819

3.40 Approved subject to the addition of Brunei Darussalam and Lebanon to the list of countries.

MOD 826

3.41 Approved subject to the addition of Brunei Darussalam to the list of countries.

MOD 830, MOD 834

3.42 Approved.

MOD 857, MOD 866

3.43 Approved subject to the addition of Brunei Darussalam to the list of countries.

MOD 885, MOD 889

3.44 Approved.

3.45 The fifth series of texts submitted by the Editorial Committee (B.5) (Document 237 and Addendum 1) as amended, was approved on first reading.

4. Statement by the Chairman of Committee 4

4.1 Having been requested to comment on the subject of footnotes and their approval, the Chairman of Committee 4 said that certain proposals made at the present meeting concerned either footnotes which were not the subject of formal proposals submitted to the Conference or footnotes which had not been discussed at the Conference. Administrations should take all the necessary precautions before adding their names to certain footnotes: for example, Footnote 769 referred only to equipment in operation prior to 1 January 1985. In his capacity as Vice-President of the VGE responsible for simplifying the Radio Regulations, he was conscious of a need to introduce modifications which improved flexibility, and considered that every effort should be made to avoid creating a situation which would prove unmanageable in the future. Administrations should be urged to accommodate services on a national basis where possible, as was already often the case, without the need for formal international recognition. He would endeavour to find time in Committee 4 to consider footnotes which were not the subject of formal proposals to the Conference, as well as requests for the inclusion of individual countries' names in specific footnotes.

5. Sixth series of texts submitted by the Editorial Committee for first reading (B.6) (Document 238)

5.1 The Chairman of Committee 6 said that the underlining of certain words in the Spanish-language version of Document 238 would be deleted in the pink version.

5.2 The delegate of Senegal said that at a meeting of the Working Group of the Plenary, his delegation had expressed reservations concerning Resolution No. 703, in particular the implications of **resolves** 5 and 6. He was particularly concerned about the non-cooperative response which the modifications to that part of the Resolution might elicit from certain administrations. However, he was prepared to accept those modifications if other administrations saw no objection to them.

5.3 The delegate of Morocco requested that the discussion of Document 238 be deferred in view of its importance and since clarification was still required in respect of certain elements of the compomise package.

5.4 It was so agreed.

The meeting rose at 1300 hours.

The Secretary-General: The Chairman:

P. TARJANNE J. BARRIONUEVO PEÑA

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 267-E
25 February 1992
Original: English

COMMITTEE 6

Source: Document 101(Add.1)

SEVENTH SERIES OF TEXTS FROM COMMITTEE 5
TO THE EDITORIAL COMMITTEE

Committee 5 has approved the following text to be submitted to the Editorial Committee for consideration and subsequent transmission to the Plenary session:

MOD **404** § 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 ~~and~~, Jordan and that part of the territory of Turkey lying outside of the above limits are included in the European Broadcasting Area.

E. GEORGE
Chairman of Committee 5

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 268-E
25 February 1992
Original: English

Source: Add.1 to DT/71(Rev.1)
Documents 7/57, 20 (Nos. 82-83)
DT/93(Rev.2)

COMMITTEE 4

Note from the Chairman of Working Group 4B

Attached are the texts concerning modifications to Article 8 of the Radio Regulations as approved by Working Group 4B.

The document also contains consequential modifications to Articles 27 and 28 and related Resolutions. The text of RR 2509.2 is referred to Committee 4 for further considerations.

The delegation of the United States reserved its position with regard to the Table on 2 025 - 2 110 MHz and the delegation of Argentina with regard to the Tables on 2 025 - 2 290 MHz.

G. JENKINSON
Chairman

Annexes: 5

ANNEX 1

MOD 663 Additional allocation: in ~~Brazil, France and~~ the French Overseas Departments in Region 2, and India, the band 433.75 - 434.25 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis, ~~until 1 January 1990, subject to agreement obtained under the procedure set forth in Article 14. After 1 January 1990, the band 433.75 - 434.25 MHz will be allocated in the same countries to the same service on a secondary basis.~~ In France and in Brazil the band is allocated to the same service on a secondary basis.

ADD 723B Additional allocation: in Belarus, the Russian Federation and Ukraine, the band 1 429 - 1 535 MHz is also allocated to the aeronautical mobile service on a primary basis exclusively for the pruposes of aeronautical telemetry within the national territory.

MHz
1 700 - 2 025

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**1 700 - 1 710** FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile ~~Mobile except aeronautical mobile~~ 671 722~~-743A~~	**1 700 - 1 710** FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 671 722 743	
MOD	**1 710 - ~~2 290~~2 025** FIXED MOBILE ~~Mobile~~ 722~~-743A~~ 744 ~~746-747~~ ~~748-750~~	**1 710 - ~~2 290~~2 025** FIXED MOBILE 722 744 745 746 ~~747-748~~ ~~749-750~~	

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	~~1 710~~2 025 - ~~2 290~~2 110 FIXED 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) MOBILE 747A ~~722 743A 744 746 748 750~~ 750A	~~1 710~~2 025 - ~~2 290~~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) ~~722 744 745 746 747 748 749 750~~ 750A	
MOD	~~1 710~~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 ~~722 743A 744 746 747 748 750~~ 750A	~~1 710~~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 ~~722 744 745 746 747 748 749 750~~ 750A	

SUP 747

ADD **747A** In making assignments in the mobile service in the bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz, administrations shall take into account Resolution [COM4-B1].

SUP **750**

ADD **750A** Administrations are urged to take all practicable measures to ensure that 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 between geostationary satellites and non-geostationary satellites in those services and bands.

MHz
2 110 - 2 120

MOD

Allocation to Services		
Region 1	Region 2	Region 3
~~1 710~~2 110 - ~~2 290~~2 120	~~1 710~~2 110 - ~~2 290~~2 120	
FIXED	FIXED	
[MOBILE]	MOBILE	
SPACE RESEARCH (deep space) (Earth-to-space)	SPACE RESEARCH (deep space) (Earth-to-space)	
~~722 743A 744 746 747 748 750~~	~~722 744 745 746 747 748 749 750~~	

SUP **748**

SUP **749**

MOD

2 290 - 2 300	**2 290 - 2 300**
FIXED	FIXED
SPACE RESEARCH (deep space) (space-to-Earth)	MOBILE except aeronautical mobile
~~Mobile~~MOBILE except aeronautical mobile	SPACE RESEARCH (deep space) (space-to-Earth)
~~743A~~	

MOD

2 300 - 2 450	**2 300 - 2 450**
FIXED	FIXED
Amateur	MOBILE
~~Mobile~~MOBILE	Radiolocation
Radiolocation	Amateur
664 743A 752	664 751 752

ANNEX 2

ARTICLE 27

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

Section II. Power Limits

MOD **2509** (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 and the mobile-satellite service, the space operations service, the space research service and the earth exploration-satellite service for reception by space stations, where these bands are shared with equal rights with the fixed or mobile service:

1 626.5 - 1 645.5 MHz	(for countries mentioned in No. 730)
1 646.5 - 1 660 MHz	(for countries mentioned in No. 730)
2 025 - 2 110 MHz	
2 200 - 2 290 MHz	
2 655 - 2 690 MHz[1]	(for Regions 2 and 3)
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 **2509.2** Troposcatter systems operating in the frequency bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz may exceed the limits given in Nos. 2505, 2506 and 2507. Considering the difficult sharing conditions with other services, administrations are urged to keep the number of troposcatter systems to a minimum.

ANNEX 3

ARTICLE 28

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

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

MOD **2558** **Mob-87** b) The limits given 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 and space-to-space);
- space operation service (space-to-Earth and space-to-space);
- earth exploration-satellite service (space-to-Earth and space-to-space);

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

- radiodetermination-satellite service (space-to-Earth).

MOD **2559** **Mob-87**

1 525 - 1 530 MHz[1]	(for Regions 1 and 3)
1 530 - 1 535 MHz[1]	(for Regions 1 and 3 up to 1st January 1990)
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~~2 290~~ - 2 300 MHz	
2 483.5 - 2 500 MHz	

ANNEX 4

RESOLUTION [COM4-B1]

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

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

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 into 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 aeronautical telemetry systems for many years;

f) that the introduction into Article 27 of suitable limits on the characteristics of mobile systems may be an appropriate way to facilitate the expansion of mobile systems in these bands without harmful interference to the space services;

g) that the CCIR is currently studying such 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,

resolves

1. to invite the CCIR to urgently continue studying 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 into 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 into the above bands, should only permit 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 is possible in these bands,

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,

invites the Secretary-General

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

ANNEX 5

RESOLUTION [COM4-B2]

Relating to Possible Relocation of Certain Space Missions from the 2 GHz Bands 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 could lead to more efficient usage of the spectrum,

c) the possibility that some space missions could be relocated in bands above 20 GHz,

resolves

1. that it is desirable to review the present and planned usage of the frequency bands 2 025 - 2 110 MHz and 2 200 - 2 290 MHz, with the idea, when practicable, of assigning 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 WARC should consider this matter, taking into account the results of the relevant CCIR studies, from which it may be possible to revise the Radio Regulations; so that no new 2 GHz assignments would be permitted after a date in the near future to be determined by that Conference for those space missions which could be accommodated in the bands above 20 GHz; so that if appropriate, to accommodate, in an equitable manner, the spectrum needs of the mobile and space service 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 space research, space operations and earth exploration-satellite and the mobile services in the bands available to each service near 2 GHz and on the compatibility between these services in the 2 GHz bands;

3. to report to the next competent conference the amount of spectrum required by each service in the bands mentioned in 2 above, and where necessary, the sharing criteria between these services,

urges Administrations

to participate actively in these studies,

invites 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.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 269(Rev.1)-E
26 February 1992
Original: English

COMMITTEES 3, 4, AND 5

Note by the Secretary-General

NOTE OF THE IFRB

FINANCIAL IMPLICATIONS OF THE DECISIONS OF WARC-92

At the request of the Chairman of the IFRB, I have the honour to submit to the Conference the note prepared by the IFRB on the financial implications of the decisions of WARC-92.

Pekka TARJANNE
Secretary-General

Annex: 1

Note from the Chairman, IFRB

FINANCIAL IMPLICATIONS OF THE DECISIONS OF WARC-92

1. On the basis of the work being carried out in Committees 4 and 5, the Board foresees post-Conference activities which it would be required to carry out and which would require additional resources.

2. At the present stage of the Conference, it is obviously not possible for the Board to make precise estimates of the financial implications of all the decisions that the Conference may take. In spite of the fact that the resources available to the Board will continue to decrease during the period 1992-1994, the Board will make every effort to use its available manpower in the most efficient manner, thus limiting the need for additional requirements. However, the Board has identified the items under consideration by WARC-92 that will require additional resources to be available to the Board to enable it to carry out the resulting post-Conference work. They are:

2.1 actions to be taken for the preparation of Part III of Appendix 26(Rev.) (Document 239);

2.2 actions to be taken for the development of the accelerated application of the RR 1218 procedure (Resolution COM5/7, Document 276);

2.3 actions to be taken in the application of the procedures for various space radiocommunication services.

3. The estimated requirements are as follows:

3.1 for actions relating to the preparation of Part III of Appendix 26(Rev.), the following resources are required:

- 12 person-months (8 person-months of engineer and 4 person-months of system analyst) at P4 level;
- 8 person-months at G5/G6 level;

3.2 for the development of the accelerated application of the RR 1218 procedure, it would be necessary to foresee 12 person-months of P4 system analyst to fully automate the present semi-automatic procedure;

3.3 for the actions arising from the decisions relating to space radiocommunication services, at present the Board considers that they can be implemented without any additional resources; this will need to be reviewed after the decisions of the Conference are known with more precision;

3.4 thus, the overall resource requirements, as far as they can be estimated at present, are:

- 24 person-months at the P4 level (engineer and system analyst), and 8 person-months at the G5/G6 level.

At the current levels of salary scales and inclusive of the accessory expenses of office accommodation, office equipment and hardware/software, this would amount to 500,000.- Swiss francs spread over the calendar years of 1992-1994.

4. The Board wishes to emphasize that these estimates need to be refined after very careful study of the full implications of all Conference decisions which the Board will carry out before the 47th session of the Administrative Council to be held in June/July 1992.

5. The Conference is kindly requested to consider these estimates, note their provisional nature and agree that the Board develop more precise estimates for submission to the 47th session of the Administrative Council.

W.H. BELLCHAMBERS
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 269-E
25 February 1992
Original: English

COMMITTEES 4, 5 AND 6

Note by the Secretary-General

NOTE OF THE IFRB

FINANCIAL IMPLICATIONS OF THE DECISIONS OF WARC-92

At the request of the Chairman of the IFRB, I have the honour to submit to the Conference the note prepared by the IFRB on the financial implications of the decisions of WARC-92.

Pekka TARJANNE
Secretary-General

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2.1 actions to be taken for the preparation of Part III of Appendix 26(Rev.);

2.2 actions to be taken for the development of the accelerated application of the RR 1218 procedure;

2.3 actions to be taken in the application of the procedures for various space radiocommunication services.

3. The estimated requirements are as follows:

3.1 for actions relating to the preparation of Part III of Appendix 26(Rev.), the following resources are required:

- 12 person-months (8 person-months of engineer and 4 person-months of system analyst) at P4 level;
- 8 person-months at G5/G6 level;

3.2 for the development of the accelerated application of the RR 1218 procedure, it would be necessary to foresee 12 person-months of P4 system analyst to fully automate the present semi-automatic procedure;

3.3 for the actions arising from the decisions relating to space radiocommunication services, at present the Board considers that they can be implemented without any additional resources; this will need to be reviewed after the decisions of the Conference are known with more precision;

3.4 thus, the overall resource requirements, as far as they can be estimated at present, are:

- 24 person-months at the P4 level (engineer and system analyst), and 8 person-months at the G5/G6 level.

At the current levels of salary scales and inclusive of the accessory expenses of office accommodation, office equipment and hardware/software, this would amount to 500,000.- Swiss francs spread over the calendar years of 1992-1994.

4. The Board wishes to emphasize that these estimates need to be refined after very careful study of the full implications of all Conference decisions which the Board will carry out before the 47th session of the Administrative Council to be held in June/July 1992.

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W.H. BELLCHAMBERS
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 270-E
25 February 1992
Original: English

COMMITTEE 4

Source: Document DT/71(Rev.1)

Note from the Chairman of Working Group 4B

CONSIDERATION OF AGENDA ITEM 2.2.4 (MSS)

After in-depth discussions, Working Group 4B presents the remaining part of Document DT/71(Rev.1) on possible allocations of frequency bands below 1 GHz to MSS for consideration at Committee 4.

G.F. JENKINSON
Chairman of WG 4B

Annex: 1

ANNEX

Down-link Allocations

MHz
137 - 137.175

Allocation to Services		
Region 1	Region 2	Region 3
137 - ~~138~~137.025	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) Fixed Mobile except aeronautical mobile (R) 596 597 598 599 599A	
~~137~~137.025 - ~~138~~137.175	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Mobile-Satellite (space-to-Earth) Fixed Mobile except aeronautical mobile (R) 596 597 598 599 599A	

MHz
137.175 - 138

Allocation to Services		
Region 1	Region 2	Region 3
~~137~~137.175 - ~~138~~137.825	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) Fixed Mobile except aeronautical mobile (R) 596 597 598 599 599A	
~~137~~137.825 - 138	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Mobile-Satellite (space-to-Earth) Fixed Mobile except aeronautical mobile (R) 596 597 598 599 599A	

ADD

599A Coordination of mobile satellite systems will be in accordance with the provisions [of Resolution ....] The mobile-satellite service will be limited to a power flux-density of -120 dBW/m^2/4 kHz, at the surface of the Earth. This power flux-density limit shall not be exceeded for more than 1% of the time. The mobile-satellite service will limit out-of-band emissions in the band 150.05 - 153 MHz to [-223 dB(W/m^2/4 kHz)].

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) Space Operation (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 647 647X	

ADD

647X Coordination of mobile satellite systems will be in accordance with the provision of [Resolution ....]. The mobile-satellite service will be limited to a power flux-density of -120 dBW/m²/4 kHz at the surface of the Earth. This power flux-density limit shall not be exceeded for more than 1% of the time. The mobile-satellite service will limit out-of-band emissions in the band 406.1 - 410 MHz to [-223 dB(W/m²/4 kHz)].

Up-link Allocations

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) 608 608X	**148 - 149.9** FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 608 608X	
149.9 - 150.05	RADIONAVIGATION-SATELLITE MOBILE-SATELLITE (Earth-to-space) 608Y 609 609A 609B	

ADD

608X The mobile-satellite service shall not constrain the development and use of fixed, mobile and space operations services in this allocation. MSS mobile earth station transmitters will not cause a power flux-density in excess of -150 dBW/m²/4 kHz outside of national boundaries more than 1% of any 1 hour period.

ADD

609B The mobile-satellite service shall be secondary in this allocation until 1 January 1997.

ADD

608Y The mobile-satellite service shall not constrain the development and use of the band 149.9 - 150.05 MHz by the radionavigation-satellite service. Mobile earth station transmitters shall not exceed a power flux-density of -150 dBW/m²/4 kHz outside of national boundaries.

MHz
273 - 322

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	273 - ~~322~~312	FIXED MOBILE MOD 641	
MOD	~~273~~312 - ~~322~~315	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 641A	
MOD	~~273~~315 - 322	FIXED MOBILE MOD 641	

MHz
335.4 - 399.9

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	335.4 - ~~399.9~~387	FIXED MOBILE MOD 641	
MOD	~~335.4~~387 - ~~399.9~~390	FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 641A	
MOD	~~335.4~~390 - 399.9	FIXED MOBILE MOD 641	

MOD **641** Subject to agreement obtained under the procedure set forth in Article 14, the bands 235 - 312 MHz, 315 - 322 MHz ~~and~~, 335.4 - 387 MHz and 390 - 399.9 MHz may be used by the mobile-satellite service, on condition that stations in this service do not cause harmful interference to those of other services operating or planned to be operated in accordance with the Table.

ADD **641A** The frequency bands 312 - 315 MHz (Earth-to-space) and 387 - 390 MHz (space-to-Earth) in mobile-satellite service may also be used by low-Earth orbit satellites links.

MHz
610 - 890

Allocation to Services		
Region 1	Region 2	Region 3
470 - 790	**608 - 614**	**610 - 890**
		FIXED
	614 - 806	MOBILE
	BROADCASTING	BROADCASTING
790 - 862	Fixed	
FIXED	Mobile	
BROADCASTING		
	675 692 692A 693	
MOD 694 695 695A 696 697 700A 702	**806 - 890**	
	FIXED	
	MOBILE	
862 - 890	BROADCASTING	
FIXED		
MOBILE except aeronautical mobile		
BROADCASTING 703		
MOD 700A 704	692A 700	677 688 689 690 691 693 701

ADD **700A** Additional allocation: in Region 1, 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 this service is subject to special agreements between administrations concerned.

The modifications in section 4 are proposed under agenda item 2.2.4a.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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COMMITTEE 5

Note from the Chairman of Committee 5

Regarding the additional information to be provided in notices relating to non-geostationary satellites, the following explanatory notes are submitted for consideration (see Section A.3 in the Annex to Resolution COM5/[ ] in Document 257). The definitions relate to parameters as measured in the inertial coordinate system.

i) **right ascension (of the ascending node)** (Ω): This is the angular separation (in degrees) between the ascending node (point where the orbit crosses the plane of the Equator in the northward sense) and the vernal equinox (first point of Aries).

ii) **argument of the perigee** (ω): This is the angular separation (in degrees) between the ascending node and the perigee of an elliptical orbit. This parameter defines the orientation of the orbit in the orbit plane.

iii) **active service arc**: [This is the projection in the Earth's surface of the orbit described by the satellite.]

E. GEORGE
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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COMMITTEE 4

Canada

PROPOSALS FOR THE WORK OF THE CONFERENCE

EXTENSION OF EXISTING ALLOCATIONS TO THE MOBILE-SATELLITE SERVICE

The course of this Conference to date has verified what had been clear from the outset, namely that the existing mobile-satellite service allocations in the bands 1 530 - 1 559 MHz and 1 626.5 - 1 660.5 MHz are inadequate to satisfy the needs of existing and about to be implemented mobile-satellite systems.

During the intense debate on whether or not the existing allocations in the above bands should be made more flexible, there was considerable discussion on the technical, implementation and coordination dimensions of the issue. However, it appeared that the main underlying reason behind the debate was the realization, by all sides, that the total available spectrum is not sufficient to satisfy all foreseen requirements. Furthermore, any allocations made in other parts of the 1 - 3 GHz bands will provide much needed future opportunity for the expansion of mobile-satellite services in general, but will do nothing towards ensuring the continuous viability and expansion of existing and about to be implemented mobile-satellite systems.

Therefore, an adjacent or nearby extension, over and above the balancing at 1 525 - 1 530 MHz becomes a matter of high priority. It is realized that in the candidate bands for such expansion, namely the bands below 1 525 MHz paired with parts of the band 1 610 - 1 626.5 MHz and/or parts of the band 1 670 - 1 700 MHz, there exist services which are of great importance to individual administrations or even Regions. Notwithstanding this fact, and in recognition of the need to provide some protection to existing allocations, it would be exceedingly unfortunate if the opportunity is not taken at WARC-92 to provide at least some modest expansion to the mobile-satellite service in the 1.5 - 1.6 GHz range. Such an expansion would constitute only a small portion of all the reallocations expected to be made by the end of this Conference. An expansion of this nature would be of benefit, not only to administrations, but also to ICAO, INMARSAT and the aeronautical and maritime communities as a whole.

In light of the above, Canada requests that the Conference provides the maximum amount of expansion possible of the existing mobile-satellite service bands, taking into account the time-scale of such an expansion and invites all administrations, ICAO and INMARSAT to endorse this request by declaring their support.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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25 February 1992
Original: French

COMMITTEE 3

Note by the Secretary-General

SITUATION OF THE ACCOUNTS OF THE CONFERENCE AS AT 25 FEBRUARY 1992

I have the honour to submit herewith for examination by the Budget Control Committee an estimate of the expenditures of the Conference as at 25 February 1992.

The situation as at 25 February 1992 shows that the estimated expenditure of the Conference remains globally unchanged in relation to the budget approved by the Administrative Council and adjusted to allow for changes in salaries and allowances under the common system. This situation may of course alter with regard to Subhead I - Staff expenditures (including overtime not compensated by time off) - depending on the Conference workload up to 3 March 1992.

Pekka TARJANNE
Secretary-General

Estimate of expenditure for WARC-92, Torremolinos 25.2.1992

Recapitulation	Budget value 1.1.91	Adjusted budget 1.2.1992	Actual expenditure 25.2.92	Committed and estimated expenditure	Total expenditure charged to reg.budget		Total expenditure charged to Host Admin.
				Swiss francs			
Salaries and related expenses							
- Meeting staff	1,532,000	1,648,000	298,000	1,383,000	1,681,000		-298,000
- Travel expenses (recruitment)	167,000	167,000	167,000		167,000		-167,000
- Insurance	17,000	17,000	4,000	13,000	17,000		-4,000
Sub-total I	1,716,000	1,832,000	469,000	1,396,000	1,865,000		-469,000
Cost of travel outside Geneva							
- Subsistance allowance							2,316,000
- Travel expenses							353,000
- Transport and dispatch costs							75,000
- Travel for the preparation of the Conf.							35,000
Sub-total II							2,779,000
Premises and equipment							
- Premises, furniture, machines	150,000	150,000	150,000		150,000		-150,000
- Document production	305,000	305,000	47,748	232,252	280,000		
- Supplies and office expenses	50,000	50,000	43,470	16,530	60,000		
- PTT	112,000	112,000	3,358	103,642	107,000		
- Technical installations	20,000	20,000	1,600	18,400	20,000		
- Sundry and unforeseen	20,000	20,000		25,000	25,000		
Sub-total III	657,000	657,000	246,176	395,824	642,000		-150,000
Finals Acts of the Conference	108,000	108,000		90,000	90,000		
Post Conference work of the IFRB	100,000	100,000		100,000	100,000		
TOTAL	2,581,000	2,697,000	715,176	1,981,824	2,697,000		2,160,000
Less : Staff made available to the WARC-92							-253,000
TOTAL	**2,581,000**	**2,697,000**	**715,176**	**1,981,824**	**2,697,000**		**1,907,000**

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

Document 274-E
25 February 1992
Original: English

MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

COMMITTEE 4
COMMITTEE 5

Note by the Chairman of the Working Group to the Plenary
to the Chairmen of Committees 4 and 5

TRANS-HORIZON RADIO-RELAY SYSTEMS IN THE 2025-2110 MHz AND 2200 - 2290 MHz BANDS

In response to a request from the Chairman of Working Group 4B (see Annex 1), the Working Group to the Plenary offers the following comment.

The Working Group to the Plenary has noted that Annex 2 to Document DT/93 (Rev. 2) proposes to add 2509.2 and is of a view that this footnote will be acceptable if modified as follows, because it is important to protect the geostationary-satellite orbit from the harmful interference from trans-horizon radio-relay systems:

ADD 2509.2 Trans-horizon systems in the 2025-2110 MHz and 2200-2290 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, administrations are urged to keep the number of trans-horizon systems in these bands to a minimum.

M. MUROTANI
Chairman, Working Group to the Plenary

ANNEX 1

Request to the Working Group to the Plenary from WG-4B

Subject:

Limits on Article 27

Working Group 4B is addressing proposals to add the Space Operations, Space Research and Earth Exploration-satellite services to the Table of Allocations in the bands 2 025-2 110 MHz and 2 200-2 290 MHz. One outstanding question relates to the limits given in Article 27 for this frequency range.

Could the Working Group to the Plenary review the limits in RR2505, RR2506 and RR2507 of Article 27 with respect to their applicability to the operation of troposcatter systems in the bands 2 025-2 110 MHz and 2 200-2 290 MHz?

G.F. Jenkinson
Chairman, Working Group 4B

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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COMMITTEE 4

Note from the Chairman of ad hoc 1 to Committee 4

The attached draft tables for the frequency range 17.3 - 30 GHz reflect a carefully coordinated package developed by ad hoc 1 C4 for allocations to the BSS (HDTV) and associated feeder links as well as the consequential modifications to Article 8 of the Radio Regulations.

The proposed deletion of the allocation to the broadcasting-satellite service in Regions 2 and 3 in the band 22.5 - 23 GHz is a consequence of the new allocation to that service in the band 21.4 - 22 GHz.

The new allocations for the mobile service in the band 24.25 - 25.25 GHz are consequential to the limitation of the mobile service in the band 21.4 - 22 GHz in Region 3 when the broadcasting-satellite service comes into operation.

The tables relating to the 27 - 30 GHz band reflect the decisions already taken in Committee 4 (see Document 237) with the addition of Footnote 882W.

R.A. BEDFORD
Chairman of ad hoc 1 C4

GHz
17.3 - 18.1

Allocation to Services		
Region 1	Region 2	Region 3
17.3 - 17.7 FIXED-SATELLITE (Earth-to-space) 869 Radiolocation 868	**17.3 - 17.7** FIXED-SATELLITE (Earth-to-space) 869 BROADCASTING-SATELLITE 869A Radiolocation 868 868A	**17.3 - 17.7** FIXED-SATELLITE (Earth-to-space) 869 Radiolocation 868
17.7 - 18.1 FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 869 MOBILE	**17.7 - 17.8~~18.1~~** FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 869 ~~MOBILE~~ BROADCASTING-SATELLITE 869A 869B Mobile 868A	**17.7 - 18.1** FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 869 MOBILE
	17.8 - 18.1 FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 869 MOBILE	

ADD **868A** 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 17.3 - 17.8 GHz band shall be effective from 1 April 2005.

ADD **869B** Broadcasting-satellite service receiving stations in this band shall not claim protection from interference from the operations of stations in the fixed service. Broadcasting-satellite service space stations operating in the 17.7 - 17.8 GHz band shall not exceed the power flux-density limits at the surface of the Earth specified in No. 2578.

ADD **869A** In Region 2 the allocation to the broadcasting-satellite service in the 17.3 - 17.8 GHz band shall be effective from 1 April 2005. After 1 April 2005 use of the fixed and fixed-satellite (space-to-Earth) services 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.

GHz
18.1 - 18.6

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

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

GHz
21.4 - 22

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

ADD **873A** The use of the band 21.4 - 22 GHz by the broadcasting-satellite service is subject to the provisions of Resolution COM5/5 (Document 249).

ADD **873B** In Japan, the band 21.4 - 22 GHz is also allocated to the broadcasting service on a primary basis.

GHz
22.5 - 23

Allocation to Services		
Region 1	Region 2	Region 3
22.5 - 22.55 FIXED MOBILE	**22.5 - 22.55** FIXED MOBILE ~~BROADCASTING-SATELLITE 877~~ ~~878~~	
22.55 - 23 FIXED INTER-SATELLITE MOBILE 879	**22.55 - 23** FIXED INTER-SATELLITE MOBILE ~~BROADCASTING-SATELLITE 877~~ ~~878~~ 879	

SUP **877, 878**

GHz
24.25 - 25.25

Allocation to Services		
Region 1	Region 2	Region 3
24.25 - ~~25.25~~24.45 ~~RADIONAVIGATION~~ FIXED	**24.25 - ~~25.25~~24.45** RADIONAVIGATION	**24.25 - ~~25.25~~24.45** RADIONAVIGATION FIXED MOBILE
~~24.25~~24.45 - ~~25.25~~24.65 ~~RADIONAVIGATION~~ FIXED INTER-SATELLITE	~~24.25~~24.45 - ~~25.25~~24.65 RADIONAVIGATION INTER-SATELLITE 882X	~~24.25~~24.45 - ~~25.25~~24.65 RADIONAVIGATION FIXED INTER-SATELLITE MOBILE 882X
~~24.25~~24.65 - ~~25.25~~24.75 ~~RADIONAVIGATION~~ FIXED INTER-SATELLITE	~~24.25~~24.65 - ~~25.25~~24.75 ~~RADIONAVIGATION~~ INTER-SATELLITE RADIOLOCATION-SATELLITE (Earth-to-space) 882X	~~24.25~~24.65 - ~~25.25~~24.75 ~~RADIONAVIGATION~~ FIXED INTER-SATELLITE MOBILE 882X 882Y
~~24.25~~24.75 - 25.25 ~~RADIONAVIGATION~~ FIXED	~~24.25~~24.75 - 25.25 ~~RADIONAVIGATION~~ FIXED-SATELLITE (Earth-to-space) 882Z	~~24.25~~24.75 - 25.25 ~~RADIONAVIGATION~~ FIXED FIXED-SATELLITE (Earth-to-space) 882Z MOBILE 882Y

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

ADD **882Y** In Japan, the band 24.65 - 25.25 GHz is also allocated to the radionavigation service on a primary basis until 2008.

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

GHz
27 - 30

Allocation to Services		
Region 1	Region 2	Region 3
27 - 27.5 FIXED MOBILE INTER-SATELLITE 881A Earth Exploration-Satellite (space-to-space)	**27 - 27.5** FIXED [FIXED-SATELLITE (Earth-to-space)] MOBILE INTER-SATELLITE 881A Earth Exploration-Satellite (space-to-space)	
27.5 - 28.5~~29.5~~	FIXED FIXED-SATELLITE (Earth-to-space) 882W MOBILE 882A 882B	
~~27.5~~28.5 - 29.5	FIXED FIXED-SATELLITE (Earth-to-space) 882W MOBILE Earth Exploration-Satellite (Earth-to-space) 882C 882B	
29.5 - 30	FIXED-SATELLITE (Earth-to-space) 882W Mobile-Satellite (Earth-to-space) Earth Exploration-Satellite (Earth-to-space) 882C 882A 882B 882 883	

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

BLUE PAGES

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 276-E
25 February 1992

B.7

PLENARY MEETING

SEVENTH SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for first reading:

Source	Document	Title
SG	DT/84(Rev.1)	Preamble
COM 5	249	Article 1 (Section VIII)
		Resolution COM5/5
		Resolution COM5/6
		Resolution COM5/7

P. ABOUDARHAM
Chairman of Committee 6

Annex: 9 pages

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 No. 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 No. 995 making the necessary arrangements for convening such a world administrative radio conference. In Resolution No. 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 Nos. 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 [..... 199. at ..... hours UTC], [except for those elements of the partial revision for which a different date of entry into force is specifically stipulated therein].

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 copy to each Member of the International Telecommunication Union.

Done at Malaga-Torremolinos, [3] March 1992

ARTICLE 1

Terms and Definitions

Section VIII. Technical Terms Relating to Space

NOC **181**

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

RESOLUTION COM5/5

Introduction of High-Definition Television (HDTV) Systems of the Broadcasting-Satellite Service (BSS) in the Band [21.4 - 22.0] GHz [in Regions ...]

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 to the broadcasting-satellite service to be implemented after [1 April 2005] and that under No. [ADD 873A] of the Radio Regulations this reallocation is intended for use by the BSS for wide RF-band high-definition television (HDTV);

b) that until [1 April 2005] the existing services operating in the band [21.4 - 22.0] GHz 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 2005] 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 2005] without affecting the continued operation of existing services;

e) that after [1 April 2005] 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;

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 COM5/5

Interim Procedures for the Introduction of BSS (HDTV) Systems in the Band [21.4 - 22.0] GHz [in Regions ...]

Section I. General Provisions

1. It shall be understood that prior to [1 April 2005] all existing services in the band [21.4 - 22.0] GHz 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 only on the basis of [No. 873A] of the Radio Regulations; 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 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 2005]

2. For the purpose of introducing experimental BSS (HDTV) systems in the band [21.4 - 22.0] GHz before [1 April 2005] under the provisions of Article 34 of the Radio Regulations, the procedures contained in Resolution 33 shall be applied.

Section III. Interim Procedure Relating to Operational BSS (HDTV) Systems Introduced Before [1 April 2005]

3. For the purpose of introducing operational BSS (HDTV) systems in the band [21.4 - 22.0] GHz before [1 April 2005], the procedure contained in Resolution 33 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 only shall be applied.

Section IV. Interim Procedure Relating to BSS (HDTV) Systems Introduced After [1 April 2005]

5. For the purpose of introducing and operating BSS (HDTV) systems in the band [21.4 - 22.0] GHz after [1 April 2005], and before a future conference has taken decisions on definitive procedures, the procedure in Sections B and C of Resolution 33 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 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 COM5/6

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 band [ ] GHz 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 2005] to regulate the introduction of experimental or operational BSS (HDTV) systems (see Resolution COM5/5);

d) that in the longer term regulatory provisions designed to ensure flexible and equitable use of the BSS (HDTV) [and associated feeder-link] allocation[s] 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 [ ] GHz band, 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 COM5/7

Implementation of Changes in Frequency Allocations Between [4 000 kHz and 20 000 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 [4 000 kHz and 20 000 kHz] which were previously allocated on an exclusive or shared basis to the fixed [and mobile] service[s] 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 [or amateur] service[s];

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 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] service[s] 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 the 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;

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 [4 000 kHz and 20 000 kHz] which have been reallocated to the broadcasting [or amateur] service[s], to make every effort to find replacement assignments in the bands allocated to the fixed [and mobile] service[s] concerned.

UNION INTERNATIONALE DES TELECOMMUNICATIONS

CAMR-92 **CAMR CHARGEE D'ETUDIER LES ATTRIBUTIONS DE FREQUENCES DANS CERTAINES PARTIES DU SPECTRE**

Corrigendum 1 au
Document 277-F/E/S
26 février 1992
Original: anglais

MALAGA-TORREMOLINOS, FEVRIER/MARS 1992

COMMISSION 4
COMMITTEE 4
COMISION 4

Danemark, France, Liban, Niger, Pologne, Royaume-Uni, Singapour

PROPOSITIONS POUR LES TRAVAUX DE LA CONFERENCE

Ajouter "Algérie, Cameroun, République centrafricaine, Lettonie, Lituanie, Sénégal, Swaziland et Tchad" dans la liste des pays cosignataires de ce document.

Add "Algeria, Cameroon, Central African Republic, Latvia, Lithuania, Senegal, Swaziland and Chad" in the list of countries co-sponsoring this document.

Añádanse "Argelia, Camerún, República Centroafricana, Letonia, Lituania, Senegal, Swazilandia y Chad" en la lista de los países cofirmadores de este documento.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 277-E
25 February 1992
Original: English

COMMITTEE 4

Denmark, France, Lebanon, Niger, Poland, Singapore, United Kingdom

PROPOSALS FOR THE WORK OF THE CONFERENCE

1. Introduction

The Administrations submitting these comments and proposed compromise solutions do so to facilitate the work of the Conference in order to arrive at solutions to which the majority of delegations can subscribe.

Two principal objectives have been incorporated into the proposed framework. Firstly, the need to facilitate the introduction of new technologies to the benefit of both developing and developed countries and secondly, and perhaps most importantly, to protect existing systems and services as appropriate.

This document essentially addresses mobile and mobile-satellite solutions in the range 30 MHz to 3 GHz (with the exception of bands at 1.5/1.6 GHz allocated to various mobile-satellite services) in accordance with item 2.2.4 of the Conference agenda. However, some comments are in addition offered on item 2.2.3a.

2. Summary of proposals

It is clear that proposals to establish LEO systems above and below 1 GHz are likely to be a vital element in the provision of telecommunications in many parts of the world. Amendments to Article 8 are proposed to provide worldwide primary and secondary bands for LEO systems operating below 1 GHz; see section 3 of this document. Existing services receive protection by the addition of appropriate footnotes covering inter alia appropriate power flux-density limits. LEO systems operating in the mobile-satellite service in bands above 1 GHz are covered in section 4. It is suggested that primary worldwide allocations in bands near 1.6 and 2.5 GHz be adopted. Protection for existing services operating at 2 483.5 - 2 500 MHz can be achieved by appropriate regulatory and coordination procedures, however at 1 610 - 1 626.5 MHz a number of important services are in existence where such provisions are not considered adequate and further footnotes are required.

Another area of new technology which CCIR has reported as being appropriate for consideration for worldwide telecommunications applications is FPLMTS. To achieve economy of scale it is first necessary to provide a primary mobile allocation in all Regions over the appropriate frequency range and secondly to designate a sufficiently wide frequency band which allows appropriate standards to be developed and administrations to select from this band an appropriate amount for national implementation. Section 5 covers suggestions to standardize the mobile allocation between 1 700 - 2 450 MHz in Regions 1, 2 and 3 and section 6 mentions that sub-bands in the range 1 850 - 2 200 MHz would be a suitable designation for FPLMTS.

It is envisaged that space techniques will also be utilized by FPLMTS and hence this package, in section 4, also provides for the general use of space applications in support of FPLMTS within the designated band. In addition, two further primary MSS bands are proposed adjacent to the "space operation" bands at 2 GHz which in addition to providing for FPLMTS could also be used for other MSS applications. Further, in order to take account of the considerable interest in MSS expansion, two bands of 35 MHz in the band 2 500 - 2 690 MHz are suggested, to be chosen to have minimal impact on existing terrestrial and broadcasting-satellite applications.

It is also believed that smaller MSS allocations at 2.5 GHz may facilitate final Conference decisions concerning the choice between 1.5 and 2.5 GHz for the broadcasting-satellite (sound) service.

The designation of worldwide frequency bands for the provision of telephones in aircraft is covered in section 7. Since this will be a public service it is considered necessary to use eventually the same frequency bands on a global basis. The bands 1 670 - 1 675 MHz and 1 800 - 1 805 MHz seem to offer the best solution for this application.

The final element in the package will be to adopt the provisions for space services and other services operating in the bands 2 025 - 2 120 MHz and 2 200 - 2 290 MHz outlined in Document DT/93(Rev.2).

3. LEO MSS allocations below 1 GHz

Although many of the co-signatories have not made any proposals in relation to the new possible allocations for MSS using LEO satellites, the work presented in Document DT/71(Rev.1) seems a reasonable and acceptable answer to the agenda item 2.2.4d of the Conference:

- MSS primary allocation in the bands 137 - 137.025 MHz (space-to-Earth); 137.175 - 137.825 MHz (space-to-Earth); 148 - 149.9 MHz (Earth-to-space); 149.9 - 150.05 MHz (Earth-to-space) (restricted to land mobile-satellite service); 400.15 - 401 MHz (space-to-Earth).
- MSS secondary allocation in the bands:

  137.025 - 137.175 MHz (space-to-Earth);
  137.825 - 138 MHz (space-to-Earth).
- Safeguards for existing allocations by allocation of four footnotes: ADD 599A and ADD 647X (from Document DT/71(Rev.1)).

- **ADD 608X** Stations of the mobile-satellite service shall not cause interference to, or claim protection from fixed and mobile services in [countries] operating in accordance with the table.

- **ADD 608Y** The land mobile-satellite service shall be secondary in this allocation until 1 January 1997. Use of the band 149.9 - 150.05 MHz by the land mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service. Earth stations of the land mobile-satellite service shall not exceed a power flux-density of [-150 dBW/m2/4 kHz] outside of national boundaries.

4. Additional allocations for MSS

According to agenda item 2.2.4a of the Conference some additional spectrum should be made available for MSS. An answer to this request seems difficult to achieve in one single band. Therefore we propose to study in particular the following possibilities leading to a supplementary bandwidth of around 130 MHz:

A. Introduction of MSS in bands 1 610 - 1 626.5 MHz/2 483.5 - 2 500 MHz subject to the following conditions:

- no change to the current RDSS allocations, nor footnotes (except adding or suppressing country names if they wish to);
- MSS primary in the bands 1 610 - 1 626.5 MHz (Earth-to-space) and 2 483.5 - 2 500 MHz (space-to-Earth);
- MSS secondary in the band 1 613.8 - 1 626.5 MHz (space-to-Earth);
- Radio astronomy primary in the band 1 610.6 - 1 613.8 MHz (MOD 734);
- Protection of existing services or systems by the addition of Footnote 731X as below, the introduction of MSS in Footnote 733E and RR 2558 (Article 28) and the development by this Conference of a coordination procedure concerning both terrestrial and satellite services;

- **ADD 731X** Stations of the mobile-satellite service shall not cause harmful interference to, or claim protection from stations in the fixed service operating in the countries listed in No. 730 and stations of the aeronautical radionavigation service operating in accordance with No. 731.

B. Determination of new MSS bands above 2.5 GHz

In order to take care of existing systems (in particular INSAT and ARABSAT), we propose to the Conference the following approach:

- allocate on a primary basis the bands 2 500 - 2 535 MHz (space-to-Earth) and 2 655 - 2 690 MHz (Earth-to-space) to the MSS in two steps; 2 x 20 MHz after the year 2005 and 2 x 15 MHz after the year 2015. The provisions of Articles 27 and 28 of the Radio Regulations should be expanded to these new bands to ensure compatibility between fixed and mobile-satellite services.

C. Identification of 2 x (10 to 15) MHz for MSS in the frequency band designated for the FPLMTS, for instance in the bands 2 010 - 2 025 MHz (Earth-to-space) and 2 185 - 2 200 MHz (space-to-Earth), subject to further studies to be carried out by the CCIR on sharing conditions.

5. Upgrading of the mobile service in the frequency bands 1 700 - 2 450 MHz to primary status in Region 1

The last decade showed an explosion of the demand for mobile services, including personal communications. It is agreed that the requirements for mobile services will continue to grow dramatically on a worldwide basis. This was foreseen by a number of countries which took the necessary provisions at the WARC MOB-87 by adding the Footnote Radio Regulations 743A under which within their territories the land mobile service achieved primary status from 1 700 - 2 450 MHz under the provisions of Article 14.

Taking this background into account and after intensive studies on how best to meet the future requirements, it is proposed to upgrade the mobile service in the bands 1 700 - 2 450 MHz to primary status in Region 1. Details of the proposed changes of Article 8 of the Radio Regulations can be taken from Document 20 as well as Document 268.

6. FPLMTS

The proposal to designate frequency bands for FPLMTS is based on the studies undertaken by the CCIR and the conclusion that a minimum of 230 MHz should be designated for the FPLMTS of which 170 MHz are for mobile stations and 60 for personal stations. For the international use of FPLMTS a common worldwide frequency band should be designated. To start the introduction of FPLMTS a considerable part of the wanted frequency spectrum shall be made available from the year 2000. The development of such a system must be supported by a designation of a suitable frequency band on a worldwide basis to give the advantages of compatibility, access and, most important, cost reduction due to large scale of production to the system.

Against this background it is therefore proposed to add to the table a footnote with the frequency bands and dates when these frequency bands shall be made available. As a consequence of designating frequency bands for the FPLMTS and the additional fact that these frequency bands are for the time being heavily used by the fixed services, substantial adjustments to the fixed services are necessary. These adjustments must take into account sharing criteria and co-channelling arrangements for the fixed services. Against this background [Resolution COM4/5] which invites the CCIR and CCITT to continue their studies for the developments for Recommendations for the FPLMTS on technologies including space techniques and Recommendations on sharing criteria between FPLMTS and the fixed service, as well as co-channel arrangements for the fixed service are proposed. The footnote reads as follows:

"The frequency band 1 910-1 990 MHz is designated and shall be made available from the year 2000 as required for terrestrial components of the future public land mobile telecommunication system (FPLMTS) in accordance with the Recommendations of the CCIR and CCITT. The frequency bands 1 885 - 1 910 MHz, 1 990 - 2 025 MHz and 2 110 - 2 200 MHz are also designated for this purpose and shall be made available from the year 2010, as required for the development and operation of the FPLMTS. The frequency band 1 850 - 1 885 MHz is also designated for the purpose and shall be made available from the year 2020, as required for the development and operation of FPLMTS.

The designation does not preclude the use of these bands for services to which these bands are allocated. Use of these bands by FPLMTS has priority over other mobile applications in these bands.

In the bands designated for FPLMTS, a combination of terrestrial and space techniques may also be used in accordance with the relevant Recommendations of the CCIR and the CCITT to ensure efficient use of the radio spectrum."

See also Resolution COM4/5.

7. APC/TFTS

As far as the Aeronautical Public Correspondence (APC) is concerned it is proposed to add to the table a footnote which should mention the designated frequency bands and contains a cross reference to a recommendation for further CCIR investigation for the sharing criteria.

The Footnote 739A should read as follows:

The bands 1 670 - 1 675 MHz and 1 800 - 1 805 MHz are designated on a worldwide basis for terrestrial aeronautical correspondence. The use of the frequency band 1 670 - 1 675 MHz is for transmissions from aeronautical stations; the use of the 1 800 - 1 805 MHz frequency band is limited to transmissions from aircraft stations. See also Recommendation PPP.

8. Conclusions

The suggestions for a framework for future Conference discussion outlined in this document will, if acceptable to the Conference, require appropriate changes to Article 8 and associated provisions. At least some of the countries submitting this document would be willing to assist in this process.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 278-F/E/S
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SEANCE PLENIERE
PLENARY MEETING
SESION PLENARIA

Royaume du Maroc
Kingdom of Morocco
Reino de Marruecos

PROPOSITIONS POUR LES TRAVAUX DE LA CONFERENCE
PROPOSALS FOR THE WORK OF THE CONFERENCE
PROPUESTAS PARA LOS TRABAJOS DE LA CONFERENCIA

reconnaissant

que l'exploitation de systèmes de télécommunication dans les bandes attribuées au SMS doit être conforme à la Convention de l'Union internationale des télécommunications et aux règlements administratifs en vigueur, en particulier à leurs préambules respectifs, et, à cet égard:

a) le droit souverain de chaque Membre de décider de faire partie desdits systèmes ou de décider des modalités de sa participation et de déterminer les conditions d'accès à ces systèmes depuis son territoire;

b) l'obligation pour les entités et organisations assurant, par des réseaux à satellite non géostationnaire, des services de télécommunication internationaux ou nationaux de se conformer aux prescriptions juridiques, financières et réglementaires de tout Membre.

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 sovereign 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 under legal, financial and regulatory requirements of any Member.

reconociendo

que la explotación de sistemas de telecomunicación en las bandas del SMS debe ajustarse al Convenio de la Unión Internacional de Telecomunicaciones y a los Reglamentos Administrativos vigentes, en particular a sus respectivos preámbulos, y a este respecto:

a) el derecho soberano de cada Miembro a decidir su participación o las formas de la misma en los mencionados sistemas y a determinar las condiciones y modalidades de acceso a tales sistemas desde su territorio;

b) la obligación de las entidades y organizaciones que proporcionan servicios internacionales o nacionales de telecomunicación por redes de satélites no geoestacionarios a operar ajustándose a las prescripciones jurídicas, financieras y reglamentarias de cualquier Miembro.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 279-E
26 February 1992
Original: Russian

COMMITTEE 4

Republic of Belarus, Russian Federation, Ukraine

PROPOSAL FOR THE WORK OF THE CONFERENCE

Agenda item 2.2.4a Allocation of frequency bands to the MSS and associated feeder links in the range 1 - 3 GHz

The Russian Federation is in favour of allocating the following bands to the mobile-satellite service (MSS):

1 559 - 1 563 MHz (Earth-to-space on a primary basis)

1 587 - 1 595 MHz (Earth-to-space on a primary basis)

1 622.5 - 1 626.5 MHz (Earth-to-space on a primary basis)

2 483.5 - 2 500 MHz (space-to-Earth on a primary basis)

This proposal is based on the use of frequency bands non-occupied by GPS and GLONASS in the range 1 559 - 1 625.6 MHz.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 280-E
26 February 1992
Original: English

COMMITTEE 4

Note from the Chairman of Working Group 4B

CONSIDERATION OF AGENDA ITEM 2.2.4 (MSS)

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)
MARITIME MOBILE-SATELLITE (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)	Land Mobile-Satellite (space-to-Earth)
FIXED	Earth Exploration-Satellite	FIXED
Earth Exploration-Satellite	Fixed	Earth Exploration-Satellite
Mobile except aeronautical mobile 724	Mobile 723	Mobile 723 724
722 725	722 723A	722

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	
722 726 726A	722 726 726A	

NOC

MHz
1 533 - 1 559

	Allocation to Services		
	Region 1	Region 2	Region 3
NOC	**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 722 726 726A	**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 722 726 726A	
NOC	**1 535 - 1 544**	MARITIME MOBILE-SATELLITE (space-to-Earth) Land Mobile-Satellite (space-to-Earth) 726B 722 726A 727	
NOC	**1 544 - 1 545**	MOBILE-SATELLITE (space-to-Earth) 722 727 727A	
NOC	**1 545 - 1 555**	AERONAUTICAL MOBILE-SATELLITE (R) (space-to-Earth) 722 726A 727 729 729A 730	
NOC	**1 555 - 1 559**	LAND MOBILE-SATELLITE (space-to-Earth) 722 726A 727 730 730A	

MHz
1 626.5 - 1 660

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

MHz
1 660 - 1 660.5

	Allocation to Services		
	Region 1	Region 2	Region 3
NOC	**1 660 - 1 660.5**	RADIO ASTRONOMY LAND MOBILE-SATELLITE (Earth-to-space) 722 726A 730A 736	

G.F. JENKINSON
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

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COMMISSION 5
COMMITTEE 5
COMISION 5

TEXTE PROPOSE POUR LA RESOLUTION COM5/[ ] (DOCUMENT 257)
PROPOSED TEXT FOR RESOLUTION COM5/[ ] (DOCUMENT 257)
TEXTO PROPUESTO PARA RESOLUCION COM5/[ ] (DOCUMENTO 257)

reconnaissant

que l'exploitation de systèmes de télécommunication dans les bandes attribuées au SMS doit être conforme à la Convention de l'Union internationale des télécommunications et aux règlements administratifs en vigueur, en particulier à leurs préambules respectifs, et, à cet égard:

a) le droit souverain de chaque Membre de décider de faire partie desdits systèmes ou de décider des modalités de sa participation et de déterminer les conditions d'accès à ces systèmes depuis son territoire;

b) l'obligation pour les entités et organisations assurant, par des réseaux à satellite non géostationnaire, des services de télécommunication internationaux ou nationaux de se conformer, au point de destination, aux prescriptions juridiques, financières et réglementaires du Membre de l'Union sur le territoire duquel ces services sont autorisés.

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 sovereign 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.

reconociendo

que la explotación de sistemas de telecomunicación en las bandas del SMS debe ajustarse al Convenio Internacional de Telecomunicaciones vigente, así como a los Reglamentos Administrativos, en particular a sus respectivos prEámbulos, y a este respecto:

a) el derecho soberano de cada Miembro a decidir su participación o las formas de la misma en los mencionados sistemas y a determinar las condiciones y modalidades de acceso a tales sistemas desde su territorio;

b) la obligación de las entidades y organizaciones que proporcionan servicios internacionales o nacionales de telecomunicación por redes de satélites no geoestacionarios a operar en el punto de transmisión, ajustándose a los requisitos jurídicos, financieros y reglamentarios del Miembro de la Unión en cuyo territorio están autorizados dichos servicios.

D. HARTLEY
Président/Chairman/Presidente

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Corrigendum 2 to
Document 282-E
2 March 1992
Original: French

PLENARY MEETING

AMENDMENTS TO THE REPORT BY COMMITTEE 2 TO THE PLENARY MEETING

(CREDENTIALS)

Further to the presentation of the Report by Committee 2 to the ninth Plenary Meeting, the following amendment should be made to the Annex to Document 282:

Section 1:

Insert "Bangladesh (People's Republic of)".

Section 4:

Delete "Bangladesh (People's Republic of)".

J.A. PADILLA LONGORIA
Chairman of Committee 2

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Corrigendum 1 to
Document 282-E
28 February 1992
Original: French

PLENARY MEETING

AMENDMENTS TO THE REPORT BY COMMITTEE 2 TO THE PLENARY MEETING

(CREDENTIALS)

Further to the presentation of the Report by Committee 2 to the ninth Plenary Meeting, the following amendments should be made to the Annex to Document 282:

Section 1:

Delete the asterisk after "Ethiopia (People's Democratic Republic of)" and the related footnote.

Delete after Mexico the words "Provisional accreditation in accordance with No. 383 of the Nairobi Convention".

Insert "Malawi"
"Pakistan (Islamic Republic of)"
"Zambia (Republic of)".

Section 4:

Delete "Malawi"
"Pakistan (Islamic Republic of)"
"Zambia (Republic of)".

Insert "Namibia".

J.A. PADILLA LONGORIA
Chairman of Committee 2

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 282-E
27 February 1992
Original: French

PLENARY MEETING

REPORT BY COMMITTEE 2 TO THE PLENARY MEETING

(CREDENTIALS)

1. Terms of reference

The terms of reference of the Committee are described in Document 66.

2. Meetings

The Committee met twice, on 6 and 26 February 1992.

At its first meeting, it set up a Working Group comprised of the Chairman and Vice-Chairman of the Committee and a delegate from each of the following countries: Italy, the Philippines, Poland and Senegal, to verify the credentials of delegations in accordance with Article 67 of the International Telecommunication Convention (Nairobi, 1982).

3. Transfer of powers

In accordance with the provisions of No. 391 of the International Telecommunication Convention (Nairobi, 1982), transfers of powers were approved at the first meeting of Committee 2 and at the meetings of Working Groups.

4. Conclusions

The Committee's conclusions are given in the Annex to the present document and are submitted to the Plenary Meeting for approval.

5. Closing remarks

The Committee recommends to the Plenary Committee to authorize the Chairman and the Vice-Chairman of Committee 2 to verify the credentials received after the date of this report and to submit their conclusions in that respect to the Plenary Meeting.

J.A. PADILLA LONGORIA
Chairman

Annex: 1

1. Credentials deposited by the delegations of countries having the right to vote and found to be in order

Algeria (People's Democratic Republic of)
Germany (Federal Republic of)
Saudi Arabia (Kingdom of)
Argentine Republic
Australia
Austria
Bahamas (Commonwealth of the)
Bahrain (State of)
Belarus (Republic of)
Belgium
Benin (Republic of)
Bhutan (Kingdom of)
Botswana (Republic of)
Brazil (Federative Republic of)
Brunei Darussalam
Bulgaria (Republic of)
Burkina Faso
Burundi (Republic of)
Cameroon (Republic of)
Canada
Cape Verde (Republic of)*
Central African Republic
Chile
China (People's Republic of)
Cyprus (Republic of)
Vatican City State
Colombia (Republic of)
Congo (Republic of the)
Korea (Republic of)
Côte d'Ivoire (Republic of)
Denmark
United Arab Emirates
Ecuador
Spain
United States of America
Ethiopia (People's Democratic Republic of)*

* Transfer of powers to the Republic of Senegal with effect from 18 February 1992.

Russian Federation
Finland
France
Gabonese Republic
Gambia (Republic of the)
Ghana
Greece
Guinea (Republic of)
Honduras (Republic of)
Hungary (Republic of)
India (Republic of)
Indonesia (Republic of)
Iran (Islamic Republic of)
Ireland
Iceland
Israel (State of)
Italy
Japan
Jordan (Hashemite Kingdom of)
Kenya (Republic of)
Kuwait (State of)
Lebanon
Lithuania (Republic of)
Luxembourg
Madagascar (Democratic Republic of)
Malaysia
Mali (Republic of)
Malta (Republic of)
Morocco (Kingdom of)
Mexico (Provisional accreditation in accordance with No. 383 of the Nairobi Convention)
Monaco
Mongolia
Mozambique (Republic of)
Niger (Republic of)
Nigeria (Federal Republic of)
Norway
New Zealand
Oman (Sultanate of)
Panama (Republic of)
Papua New Guinea

Netherlands (Kingdom of the)
Philippines (Republic of the)
Poland (Republic of)
Portugal
Qatar (State of)
Syrian Arab Republic
Democratic People's Republic of Korea
Romania
United Kingdom of Great Britain and Northern Ireland
San Marino (Republic of)
Senegal (Republic of)
Singapore (Republic of)
Sri Lanka (Democratic Socialist Republic of)
Sweden
Switzerland (Confederation of)
Suriname (Republic of)
Swaziland (Kingdom of)
Tanzania (United Republic of)
Czech and Slovak Federal Republic
Thailand
Togolese Republic
Tunisia
Turkey
Ukraine
Uruguay (Eastern Republic of)
Venezuela (Republic of)
Yemen (Republic of)
Yugoslavia (Socialist Federal Republic of)
Zimbabwe (Republic of)

Conclusion

The delegations of the above countries are entitled to vote and to sign the Final Acts.

2. Credentials deposited by the delegations of countries without the right to vote and found to be in order (see Document 60(Rev.3))

Cuba
Guatemala (Republic of)
Libya (Socialists People's Libyan Arab Jamahiriya)
Nicaragua
Uganda (Republic of)
Chad (Republic of)

Conclusion

The delegations of the above countries are not entitled to vote but may sign the Final Acts.

3. Transfer of powers deposited by countries unable to send their own delegations to the Conference (No. 391 of the Convention), found to be in order

Column 1 (FROM)	Column 2 (TO)
Liechtenstein (Principality of)	Switzerland (Confederation of)
Latvia (Republic of)	Lithuania (Republic of)
Belize	Bahamas (Commonwealth of the)

Conclusion

The delegations of the countries mentioned in column 2 above are entitled to vote and to sign on behalf of the countries listed in column 1, as detailed in Conference Documents 114, 125 and 155.

4. Delegations participating in the Conference which have not deposited credentials

Angola (People's Republic of)
Bangladesh (People's Republic of)
Djibouti (Republic of)
Egypt (Arab Republic of)
Malawi
Mauritania (Islamic Republic of)*
Pakistan (Islamic Republic of)
Paraguay (Republic of)
Peru*
Tonga (Kingdom of)
Zambia (Republic of)

Conclusion

The delegations of the above countries are not entitled to vote or to sign the Final Acts.

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* Included in the list of countries which have lost their right to vote (see Document 60(Rev.3)).

BLUE PAGES

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 283-E
26 February 1992

B.8

PLENARY MEETING

EIGHTH SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for first reading:

Source	Document	Title
COM4	252	Article 8
COM5	267	Article 8
COM4	252	Resolution COM4/1

Note by Committee 4

The delegation of the United States reserved its position with respect to the allocations, and the delegation of Niger reserved its position with respect to Resolution COM4/1.

Note by the Chairman of Committee 4

In the light of further discussions which took place after the meeting of Committee 4, an alternative version for 855B has been proposed, which would settle the problems with the first version.

P. ABOUDARHAM
Chairman of Committee 6

Annex: 5 pages

ARTICLE 8

MOD

GHz
13.75 - 14

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

ADD **855A** 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 COM4/1).

ADD **855B** In the band 13.75 - 14 GHz, geostationary space stations in the space research satellite 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 [until 1 January 2000, after which date they shall retain their secondary status in relation to the fixed-satellite service].

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.

ADD **855B** In the band 13.75 - 14 GHz geostationary space stations in the space research satellite 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.

ADD	**855C**	Alternative allocation: in the United States, the band 13.75 - 14 GHz is allocated to the radiolocation service on a primary basis, and to the standard frequency and time-signal satellite (Earth-to-space) and space research services on a secondary basis.

MOD **404** § 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.

RESOLUTION COM4/1

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 the footnotes 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 the footnotes on the agenda of the next world administrative radio conference.

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INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 284-E
26 February 1992

R.2

PLENARY MEETING

SECOND SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for second reading:

Source	Document	Title
COM 6	212/B.4	Article 1
	237/B.5	Article 8 (page R.2/6*)
	212/B.4	Article 29
	199/B.3	Article 55
		Article 56
	212/B.4	Resolution COM5/4

* Note by Committee 4:

Within the Committee there was no disagreement of substance on the modifications and they should therefore be considered by the Plenary. Committee 4 agrees to request the Plenary to decide in principle whether such footnotes, which may not be on the agenda of the Conference, should be amended.

P. ABOUDARHAM
Chairman of Committee 6

Annex: 13 pages

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CHAPTER I

Terminology

ARTICLE 1

Terms and Definitions

Section I. General Terms

NOC **3, 4, 7**

Section III. Radio Services

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

NOC **26**

NOC **36**

MOD **48** 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, 111, 112, 117**

Section VII. Frequency Sharing

NOC **163**

ARTICLE 8

MOD

GHz
31.3 - 33.4

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

SUP 891

MOD 893 In designing systems for the inter-satellite and radionavigation services 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).

MOD

GHz
33.4 - 40.5

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

MOD 896 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

33.4 - 40.5 (continued)

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**

* This allocation is provisional pending confirmation by Committee 5 that the existing power flux-density limits in Article 28 should be extended to cover this band.

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MOD

GHz
66 - 86

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 - 185

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	

MOD **446** 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** 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** 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** Additional allocation: in Bulgaria, Mongolia, Poland, the German Democratic Republic, Roumania, 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**

SUP **481**

SUP **551**

MOD **555** Additional allocation: in Angola, Cameroon, the Congo, Madagascar, 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**

MOD **571** Additional allocation: in Bulgaria, China, Mongolia, Poland, 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 **581** 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.

MOD **587** **Mob-87** 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 **777** Additional allocation: in Bulgaria, Canada, Cuba, Mongolia, Poland, the German Democratic Republic, Roumania, 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, Bangladesh, Brunei, China, the Congo, the United Arab Emirates, India, Indonesia, Iran, Iraq, Israel, Japan, Kuwait, the Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Dem. People's Rep. of Korea, Syria, Singapore, Sri Lanka and Thailand, 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 German Democratic Republic, Roumania, 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**

MOD **797B** **Mob-87** Additional allocation: in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, France, Finland, Greece, Israel, Italy, Japan, Jordan, Lebanon, Luxembourg, 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, the German Democratic Republic, Roumania, 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** Additional allocation: in Afghanistan, Austria, Bulgaria, Iran, Mongolia, Poland, the German Democratic Republic, Roumania, 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.

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MOD **803** Additional allocation: in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Brunei, 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, Malta, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Dem. People's Rep. of Korea, Syria, Singapore, Sri Lanka, 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** 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** Additional allocation: in Saudi Arabia, Bahrain, Bangladesh, Brunei, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guinea, Guyana, Indonesia, Iran, Iraq, Israel, Jamaica, 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, Tanzania, Chad, Thailand, Togo and Tunisia, the band 8 500 - 8 750 MHz is also allocated to the fixed and mobile services on a primary basis.

MOD **826** Different category of service: in Afghanistan, Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei, 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, 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** 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, China, Colombia, the Republic of Korea, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, Iran, Iraq, Israel, Japan, Kuwait, the Lebanon, Mongolia, Pakistan, Poland, Qatar, the German Democratic Republic, Dem. People's Rep. of Korea, Roumania, Czechoslovakia, the U.S.S.R. 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.

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MOD **857** Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Australia, Bahrain, Bangladesh, Botswana, Brunei, Cameroon, China, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Kenya, Kuwait, Lesotho, the Lebanon, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Niger, 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 **866** Additional allocation: in Afghanistan, Algeria, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei, Cameroon, Costa Rica, Egypt, El Salvador, the United Arab Emirates, Finland, Guatemala, India, Indonesia, Iran, Kuwait, Libya, Malaysia, Malawi, Malta, Morocco, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan, Sri Lanka, Sweden, 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 **885** 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 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 German Democratic Republic, Roumania, 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).

ARTICLE 29

MOD **2613** § 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.

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ARTICLE 55

NOC **Mob-87**

Certificates for Personnel of Ship Stations and Ship Earth Stations

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

Note by the Editorial Committee

No. 3873 is modified in the French text only.

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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 § 4. Administrations shall ensure that the personnel of ship stations and ship earth stations are adequately qualified to enable efficient operation of the station, and shall take steps to ensure the operational availability and maintenance of equipment for distress and safety communications in accordance with the relevant international agreements.

NOC 3988 Mob-87 § 5. An adequately qualified person shall be available to act as a dedicated communications operator in cases of distress.

MOD 3989 Mob-87 § 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 Mob-87 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 Mob-87

MOD 3992 Mob-87 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 Mob-87 § 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.

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RESOLUTION COM5/4

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 No. 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).

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 285-E
26 February 1992
Original: Spanish

COMMITTEE 5

Colombia, Cuba, Ecuador, Spain, Panama

DRAFT RESOLUTION

Relating to the Establishment of Standards for the Operation of Low-Orbit Systems

considering

a) that the radio-frequency spectrum is a limited natural resource, to which all ITU Members should have access on equal 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 full advantage being taken of their possibilities;

c) that one of the purposes of the Union 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 taking into account the necessity for maintaining independent financial administration of telecommunication on a sound basis;

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 in both the regional and international fields;

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

f) that Resolution No. 15 of the Plenipotentiary Conference of Nice (1989), relating to the role of the International Telecommunication Union in the development of world telecommunications, established that the ITU should ensure that all its work reflected 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,

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 systems offering worldwide coverage could coexist in any given frequency band,

resolves

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

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

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 286-E
27 February 1992
Original: English

Note by the Secretary-General

FOR INFORMATION

FINAL DAYS OF THE CONFERENCE

1. Final Acts

The copies of the Final Acts will be distributed, in principle one copy per delegate, in the document distribution boxes before the signing ceremony.

Note - Delegates who leave the Conference before the signing ceremony are requested to fill in a form available at the Document Distribution Service to enable the Secretariat to dispatch their copies after the Conference.

2. Declaration and reservations concerning the Final Acts

When the last text to be included in the Final Acts of the Conference has been approved in second reading by the Plenary Meeting, a time limit will be set for the deposit of declarations and reservations concerning the Final Acts.

The declarations and reservations concerning the Final Acts are to be handed in to the Documents Control Service (Office 417, Level 4) for publication in a consolidated document.

The Plenary Meeting will take note (without debate) of the declarations and reservations concerning the Final Acts and fix a second deadline for the deposit of additional declarations and reservations having regard to the first set of declarations and reservations.

A subsequent Plenary Meeting will take note (without debate) of the additional declarations and reservations.

3. Signing ceremony

Between the final adoption, in second reading, of the last texts of the Final Acts and the signing ceremony, a period of 24 hours is required:

- for the preparation and printing of the Final Acts, and
- for the deposit and publication of the declarations and reservations and additional declarations and reservations, as well as for the Plenary Meetings held to take note of them.

The time of the opening of the signing ceremony will therefore depend on when the last text is cleared in Plenary.

It should be noted that delegations (or members thereof) wishing to sign the Final Acts before the signing ceremony may do so by application to the office of the Executive Secretary (Ms. H. Tulloch, Office 324).

Pekka TARJANNE
Secretary-General

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 287-E
26 February 1992
Original: English

COMMITTEE 6

Source: Docs. 212, 243, DT/111

EIGHTH SERIES OF TEXTS FROM COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 has approved the annexed texts to be submitted to the Editorial Committee for consideration and subsequent transmission to the Plenary Session:

- Resolution COM5/3 (Rev)
- Resolution COM5/9

The modifications to Resolution COM5/3 take into account the text included in Document 243 as well as further consideration of the Resolution in Committee 5 following the decision of the Plenary to return the text.

A number of Region 2 delegations (Argentina, Bahamas, Brazil, Canada, Cuba, Equator, Mexico and the United States of America) were of the view that the revised text of Resolution COM5/3 should refer to the convening of a Regional Administrative Radio Conference for Regions 1 and 3. The delegation of the Bahamas expressed in this context their concern about the expenses involved for developing countries which attend a Conference of limited interest to their Region.

E. George
Chairman of Committee 5

Annexes: 2

ANNEX 1

RESOLUTION COM5/3

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 provides for requirements until January 1994;

b) that WARC Orb-88 in Resolution No. 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 utilization 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 rate 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.

ANNEX 2

RESOLUTION COM5/9

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 necessitate the transfer of existing frequency assignments to stations of the services in the reallocated bands;

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 in a satisfactory manner;

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, the developing countries still lack the resources needed for investment in various sectors of development;

b) that the Nice Plenipotentiary Conference 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 arrangements 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 or priority the introduction of specific modifications in their telecommunication networks, coordinating the necessary technical advice activities with the IFRB and the CCIR;

2. that a future world development conference should consider, when defining the priorities of the BDT, 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.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 288-E
26 February 1992
Original: English

COMMITTEE 6

Source: Documents 224, 268, 230, 241, 140, 90(Rev.2), 101(Add.2)

SIXTH SERIES OF TEXTS FROM COMMITTEE 4 TO THE EDITORIAL COMMITTEE

At its ninth, tenth and eleventh meetings, Committee 4 adopted the following texts:

1) Modifications to Article 8 of the Radio Regulations, as contained in Document 224, with amendments to RR 596, 659, 675, 676 and 678; however, the delegation of Italy reserved its position with respect to SUP 682 (see Attachment 1 to this document).
2) Modifications to Article 8 of the Radio Regulations, as contained in Annex 1 to Document 268 with amendments. The delegations of Argentina, the United States and the Russian Federation reserved their positions with respect to some modifications (see Attachment 2 to this document).
3) Modifications to Article 8 of the Radio Regulations as contained in Documents 41, 90(Rev.2), 101(Add.2), and 140 (proposals related to RR 719, 724, 746 and 769) (see Attachment 3).
4) Two new Resolutions (Annexes 4 and 5 of Document 268) with amendments. The delegation of Argentina had reservations about Resolution COM4/2.
5) Two new Recommendations (Documents 230 and 241) with amendments.

The above texts are submitted to the Editorial Committee for consideration and subsequent transmittal to the Plenary Meeting.

I. HUTCHINGS
Chairman

Attachment 1

MOD **635** Alternative allocation: in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, ~~and~~ 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.

MHz
410 - 420

MOD

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

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

MHz
400.15 - 401

MOD

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 Space Operation (space-to-Earth) 647	

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

MHz
942 - 960

MOD

Allocation to Services		
Region 1	Region 2	Region 3
942 - 960	**942 - 960**	**942 - 960**
FIXED	FIXED	FIXED
MOBILE except aeronautical mobile	~~Mobile~~ MOBILE	MOBILE
BROADCASTING 703		BROADCASTING
704	~~708~~	701

SUP **708**

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

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

SUP **614**

MOD **621** **Mob-87** Additional allocation: in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Monaco, Norway, the Netherlands, the United Kingdom, Sweden, and Switzerland ~~and Yemen (P.D.R. of)~~, 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, nor 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, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Luxembourg, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Sweden, and Switzerland ~~and Yemen (P.D.R. of)~~, 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, nor claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote.

SUP **633**

SUP **634**

MOD **675** Different category of service: in Chile, Colombia, Cuba, Ecuador, the United States, Guyana ~~and~~, 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, Israel, Kenya, Lebanon, Libya, 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 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**

MOD **659** Additional allocation: in Angola, Bulgaria, Cameroon, the Congo, Djibouti, Gabon, Hungary, Mali, Mongolia, Niger, Poland, the German Democratic Republic, Dem. People's Rep. of Korea, Pakistan, 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 **627** In Region 2, ~~the band 216 - 225 MHz is allocated to~~no new stations in the radiolocation service ~~on a primary basis until 1 January 1990~~may be authorized in the band 216 - 225 MHz. ~~On and after 1 January 1990, no new stations in that service may be authorized.~~ Stations authorized prior to 1 January 1990 may continue to operate on a secondary basis.

MOD **703** In Region 1, in the band 862 - 960 MHz, stations of the broadcasting 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. ~~Such operations shall be in accordance with the Final Acts of the African VHF/UHF Broadcasting Conference, Geneva, 1963.~~

MOD **672** Different category of service: in Afghanistan, Bulgaria, China, Cuba, ~~Hungary,~~ 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.

Attachment 2

MOD **663** Additional allocation: in ~~Brazil, France and~~ the French Overseas Departments in Region 2, and India, the band 433.75 - 434.25 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis, ~~until 1 January 1990, subject to agreement obtained under the procedure set forth in Article 14. After 1 January 1990, the band 433.75 - 434.25 MHz will be allocated in the same countries to the same service on a secondary basis.~~ In France and in Brazil the band is allocated to the same service on a secondary basis.

ADD **723B** Additional allocation: in Belarus, the Russian Federation and Ukraine, 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.

MHz
1 700 - 2 290

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**1 700 - 1 710** FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile ~~Mobile except aeronautical mobile~~ 671 722 ~~743A~~	**1 700 - 1 710** FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 671 722 743	
MOD	**1 710 - ~~2 290~~2 025** FIXED MOBILE ~~Mobile~~ 722 ~~743A~~ 744 746 ~~747~~ ~~748 750~~	**1 710 - ~~2 290~~2 025** FIXED MOBILE 722 744 745 746 ~~747 748~~ ~~749 750~~	

MHz
1 700 - 2 290 (continued)

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	~~1 710~~2 025 - ~~2 290~~2 110 FIXED 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) MOBILE 747A ~~Mobile~~ ~~722 743A 744 746 747 748 750~~ 750A	~~1 710~~2 025 - ~~2 290~~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) ~~722 744 745 746 747 748 749 750~~ 750A	
MOD	~~1 710~~2 110 - ~~2 290~~2 120 FIXED MOBILE SPACE RESEARCH (deep space) (Earth-to-space) ~~Mobile~~ ~~722 743A 744 746 747 748 750~~	~~1 710~~2 110 - ~~2 290~~2 120 FIXED MOBILE SPACE RESEARCH (deep space) (Earth-to-space) ~~722 744 745 746 747 748 749 750~~	
MOD	2 120 - 2 200 FIXED MOBILE ~~Mobile~~ ~~722 743A 744 746 747 748 750~~	2 120 - 2 220 FIXED MOBILE ~~722 744 745 746 747 748 749 750~~	

MHz
1 700 - 2 290 (continued)

MOD

Allocation to Services		
Region 1	Region 2	Region 3
~~1 710~~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 ~~Mobile~~ ~~722 743A 744 746 747 748 750~~ 750A	~~1 710~~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 ~~722 744 745 746 747 748 749 750~~ 750A	

SUP **747**

SUP **748**

SUP **749**

ADD **747A** 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 [COM4/2].

SUP **750**

ADD **750A** Administrations are urged to take all practicable measures to ensure that 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 between geostationary satellites and non-geostationary satellites in those services and bands.

MHz
2 290 - 2 450

	Allocation to Services		
	Region 1	Region 2	Region 3
MOD	**2 290 - 2 300** FIXED SPACE RESEARCH (deep space) (space-to-Earth) ~~Mobile~~MOBILE except aeronautical mobile ~~743A~~	**2 290 - 2 300** FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)	
MOD	**2 300 - 2 450** FIXED Amateur ~~Mobile~~MOBILE Radiolocation 664 ~~743A~~ 752	**2 300 - 2 450** FIXED MOBILE RADIOLOCATION Amateur 664 751 752	

[SUP 743A]

Attachment 3

TUR/101/12

MOD **658** Additional allocation: in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei, 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, ~~and~~ Togo and Turkey, 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.

BFA/CME/CTI/GAB/90/1

MOD **697**
Mob-87 Additional allocation: in the Federal Republic of Germany, Burkina Faso, Cameroon, Côte d'Ivoire, Denmark, Egypt, Finland, Israel, Kenya, Libya, Liechtenstein, Monaco, Norway, the Netherlands, Sweden, Switzerland and Yugoslavia, the band 790 - 830 MHz, and in these same countries and in Spain, France, the Gabonese Republic, Malta 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 **719** In Bulgaria, ~~Hungary,~~ Mongolia, Poland, the German Democratic Republic, Roumania, 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.

HNG/140/9

MOD **724** Different category of service: in Afghanistan, Saudi Arabia, Bahrain, Bulgaria, Cameroon, Egypt, the United Arab Emirates, France, ~~Hungary,~~ Iran, Iraq, Israel, Kuwait, the Lebanon, Morocco, Mongolia, Oman, Poland, Qatar, Syria, the German Democratic Republic, Roumania, Czechoslovakia, the U.S.S.R., Yemen ~~(P.D.R. of)~~ 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).

HNG/140/10

MOD **746** Additional allocation: in Bulgaria, Cuba, ~~Hungary,~~ Mali, Mongolia, Poland, the German Democratic Republic, Roumania, 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.

HNG/140/11
MOD 769

Additional allocation: in Afghanistan, Saudi Arabia, Bahrain, Bulgaria, Cameroon, the Central African Republic, the Congo, the Ivory Coast, Cuba, Egypt, the United Arab Emirates, Ethiopia, Gabon, Guinea, Guinea-Bissau, ~~Hungary,~~ Iran, Iraq, Israel, the Lebanon, Malaysia, Malawi, Mali, Morocco, Mauritania, Mongolia, Nigeria, Oman, Pakistan, the Philippines, Poland, Qatar, Syria, the German Democratic Republic, Roumania, Singapore, Somalia, Sri Lanka, Czechoslovakia, Thailand, Tunisia, the U.S.S.R., Yemen ~~A.R., Yemen (P.D.R. of)~~, 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.

Attachment 4

RESOLUTION [COM4/2]

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

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

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 into 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 aeronautical telemetry systems for many years;

f) that the introduction into Article 27 of suitable limits on the characteristics of mobile systems may be an appropriate way to facilitate the expansion of mobile systems in these bands without harmful interference to the space services;

g) that the CCIR is currently studying such 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 urgently continue studying 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 into 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 into the above bands, should only permit 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 is possible in these bands,

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,

invites the Secretary-General

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

RESOLUTION [COM4/3]

Relating to Possible Relocation of Frequency Assignments to Certain Space Missions from the 2 GHz Bands 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 could 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 usage 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 into account the results of the relevant CCIR studies, from which it may be 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 could be accommodated in the bands above 20 GHz; so that if appropriate, to accommodate, in an equitable manner, the spectrum needs of the mobile and space service 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 space research, space operations and earth exploration-satellite and the mobile services in the bands available to each service near 2 GHz and on the compatibility between these services in the 2 GHz bands;

3. to report to the next competent conference the amount of spectrum required by each service in the bands mentioned in 2 above, and where necessary, the sharing criteria between these services,

urges administrations

to participate actively in these studies,

invites 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.

Attachment 5

RECOMMENDATION COM4/B

Relating to the 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 transmitters 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 present Conference has allocated additional spectrum for 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.

MEX/241/1
ADD

RECOMMENDATION COM4/C

The 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 worldwide exclusive allocations for 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 be avoided;

c) that a number of administrations have made proposals to the Conference for the alignment of the allocations to the amateur service around 7 MHz;

d) that the 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.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 289-E
26 February 1992
Original: English

COMMITTEE 4

SUMMARY RECORD OF THE TWELFTH MEETING OF COMMITTEE 4 (FREQUENCY ALLOCATION)

Wednesday, 26 February 1992, at 0935 hours

Chairman: Mr. I.R. HUTCHINGS (New Zealand)

Subjects discussed		Documents
1.	Texts related to frequency bands 19.7 - 20.2 GHz and 29.5 - 30 GHz	236(Add.2)
2.	Texts related to MSS and FPLMTS	DT/104, DT/105 223, 234, 259, 270 272, 277
3.	Statement by the delegate of the Islamic Republic of Iran	-

1. Texts related to frequency bands 19.7 - 20.2 GHz and 29.5 - 30 GHz (Addendum 2 to Document 236)

1.1 The Chairman invited the Committee to consider the texts in Addendum 2 to Document 236.

Table: 19.7 - 20.2 GHz

1.2 In reply to the delegate of Venezuela who voiced concerns regarding the status of the MSS in certain bands, the Chairman gave a brief summary of the discussions that had taken place in the Committee the previous day and of the factors taken into account in the preparation of the tables and footnotes.

1.3 The delegate of Venezuela said that his country required more time to consider the issue and therefore reserved its position. Certain problems, for example relating to coordination, might arise from the proposed modifications, especially in view of INTELSAT's possible plans to use the band in question. The MSS should therefore continue to have secondary status in the band 19.7 - 20.2 GHz. The delegates of Ecuador and Mexico supported those views and also reserved their position.

MOD 873

1.4 The delegates of Oman, Brunei Darussalam, Jordan and Lebanon asked for their countries' names to be included in the footnote.

1.5 The Chairman said that the square brackets at the end of the text could be removed.

1.6 The delegate of Algeria expressed concern regarding the modification, since the inclusion of the MSS meant that the original intention of the footnote was no longer accurately reflected.

1.7 The Chairman suggested that the last sentence should end: "... the power flux-density of space stations in the FSS or space stations in the MSS where this service is allocated on a primary basis."

1.8 The delegate of the United States said that the reference concerning the MSS should apply only to the band 20.1 - 20.2 GHz.

1.9 The delegate of Japan said that the footnotes under particular Regions in the table should also be reviewed.

1.10 The Chairman said that those matters would be dealt with at the editorial level.

1.11 MOD 873, as amended, was approved.

ADD 873A

1.12 The delegate of the Netherlands suggested that the text in the first alternative should be retained and the square brackets removed.

1.13 ADD 873A, as amended, was approved.

ADD 873B

1.14 The delegate of the United Kingdom suggested that the words "which are both" should be inserted after "networks", and that "accommodate" be replaced by "include".

1.15 The delegate of Brazil suggested that the footnote should end: "for point-to-point and point-to-multipoint communications."

1.16 ADD 873B, as amended, was approved.

ADD 873C

1.17 Approved subject to the addition of the words "in respect of the MSS" at the end of the footnote and alignment of the French version with the English.

ADD 873D

1.18 The Chairman, replying to a question by the delegate of Japan, said that the footnote was not intended to place unnecessary restrictions on administrations but to provide general guidelines.

1.19 The delegate of Saudi Arabia said that the words "all practicable measures" were not specific enough. The text should read: "... countries shall take all necessary measures ...".

1.20 Following a discussion in which the delegates of the United States, Argentina and the United Kingdom took part, the Chairman suggested that the text should read: "... shall take all practicable steps ...", with the other language versions aligned.

1.21 It was so agreed.

1.22 At the suggestion of the delegate of the United Kingdom, it was agreed that the footnote should refer to the whole of the band from 19.7 to 20.2 GHz.

1.23 In reply to a comment by the delegate of Saudi Arabia, the Chairman said that the meaning of the footnote would be made clearer if the words: "in the band 19.7 - 20.1 GHz in Region 2 and" were inserted after "mobile-satellite service".

1.24 The delegate of Japan said that in view of the change made to Footnote 873, some form of protection should be referred to in Footnote 873D under consideration.

1.25 The delegate of the United Kingdom having proposed the addition to the footnote of a new first sentence, the text of which caused the delegate of the United States difficulties, the Chairman suggested the following wording as a compromise: "The mobile-satellite allocation is intended for use by networks using narrow spot-beam antennas and other advanced technology on space stations."

1.26 It was so agreed.

1.27 ADD 873D, as amended, was approved.

Table: 29.5 - 30 GHz

1.28 The Chairman, replying to the delegates of the Netherlands and Japan, said that references to footnotes would be deleted where they were unnecessary and included where relevant.

1.29 On that understanding the Table for 29.5 - 30 GHz was approved.

MOD 883

1.30 Approved subject to inclusion of Bangladesh, Brunei Darussalam, Congo, Egypt, Guinea, Jordan and Niger.

Draft Recommendation [COM4/...]

1.31 The title and **considering** a), b), c), d) and e) were approved.

1.32 The **recognizes** paragraph, reheaded **recognizing**, was approved.

1.33 Following proposals by the delegates of the United Kingdom, the United States and Brazil in respect of the **recommends** paragraph, it was agreed to replace the words "multiservice satellites" in the second line by "multiservice satellite networks using the geostationary-satellite orbit encompassing mobile-satellite and fixed-satellite applications".

1.34 The **requests the CCIR** and **recommends further** parts were approved.

1.35 The Chairman suggested the addition of the following paragraph: "**invites the Administrative Council** to place this matter on the agenda of a future competent administrative conference".

1.36 It was so agreed.

1.37 The delegate of Saudi Arabia, with the support of the Director of the CCIR, proposed the addition of a paragraph inviting administrations to participate in the studies to be carried out by the CCIR.

1.38 It was so agreed.

1.39 Draft Recommendation [COM4/...] as a whole, as amended, was approved.

2. Texts related to MSS and FPLMTS (Documents DT/104, DT/105, 223, 234, 259, 270, 272, 277)

2.1 The Chairman invited the persons concerned to introduce the documents related to MSS and FPLMTS, recalling that Document 259 had already been introduced.

2.2 The Chairman of Working Group 4B, introducing Document DT/104, said that an informal ad hoc Group established to consider the mobile-satellite service proposals had agreed on certain basic principles and expressed a number of views which were outlined in the document. An editorial correction should be made to paragraph (4) at the bottom of the first page, which should read "... the phased introduction of some new allocations ...". The Group's findings were given on page 2, where, in section 2, first paragraph, second sentence, the band "1 610.6 - 1 613.8 MHz" should read "1 613.8 - 1 626.5 MHz", while in the heading of section 4 the word "in" should be replaced by "at".

2.3 Introducing Document DT/105, which contained a draft Resolution relating to adjustments to the fixed service, he pointed out that it should be examined in conjunction with Document 259.

2.4 Introducing Document 270, he recalled that it had been taken up by Working Group 4B, which had been unable to finalize its consideration of the text. A correction should be made to the second box of the frequency table on page 2, in the band 137.025 - 137.175 MHz, where the addition of mobile-satellite (space-to-Earth) had been approved on a secondary basis: the square brackets round the box should therefore be deleted. The same applied to the second box on page 3, in the 137.825 - 138 MHz band, where the square brackets should also be deleted. Footnotes 599A, 647X, 608X and 608Y, which appeared in square brackets in Document 270, had now been considered by the Working Group of the Plenary and new texts for them would be found in Document 223.

2.5 The delegate of Australia informed the Committee that the sentence quoted in paragraph 5 of Document 223 should be inserted between the second and third sentences of Footnotes 599A and 647X. Moreover, the square brackets round the words "unless otherwise agreed by the affected administrations" in the second sentence of both those footnotes could now be removed.

2.6 The delegate of France, introducing Document 277 on behalf of the signatories, said that its intention was to expedite the work of the Conference by suggesting compromise solutions that might prove generally acceptable. The basic objectives had been to facilitate the introduction of new technologies to the benefit of both developing and developed countries and to protect existing systems and services. The proposals drew on the work of Working Group 4B and the informal ad hoc Group, as well as on ideas taken from various delegations and documents. Specific proposals related to the LEO MSS allocations below 1 GHz (section 3), additional allocations for MSS (section 4), in which some of the signatories had endorsed new proposals, and the mobile service, FPLMTS and APC/TFTS (sections 5, 6 and 7), where solutions were advanced as part of an overall compromise package. In conclusion, he stressed the importance of tackling issues in a comprehensive and coordinated way. The proposals in Document 277 were not presented as a "take-it-or-leave-it" offer, but as a basis for discussion, perhaps in a smaller group. All the signatories - and it seemed that other delegations wished to add their names - would be willing to take part in that process.

2.7 The delegate of the United Kingdom, speaking as a co-signatory of Document 277, said that it attempted to set out in some detail the contents of what might be an acceptable package. Much of the material it contained had already been tabled, but some of it was new. In particular, there were some mobile-satellite service allocations below or around 2 GHz within the range of spectrum that had been discussed for

use by FPLMTS. Those allocations were not restricted to systems associated with FPLMTS. Dates were suggested - the earliest at which the spectrum would be available for that system - leaving it to individual administrations to make their own decisions. As a result, the MSS proposals above 2.5 GHz were for a more restricted range of spectrum than had previously been proposed by his own country, for instance, and by some others. By reducing the original proposals it was hoped to avoid any clash with existing satellite networks, such as ARABSAT and INSAT, while leaving enough room near 2.5 GHz or 1.5 GHz to accommodate an allocation for BSS (Sound).

2.8 The delegate of the United States, introducing Document 234 on behalf of the ten other signatories, recalled that some administrations had made proposals to allocate spectrum below 1 GHz for new and advanced technologies. Certain countries had then indicated in the course of the discussions that they wanted protection for their fixed and mobile stations. Document 234 proposed the addition of a footnote to the 148 - 149.9 MHz band stating that MSS stations should not cause harmful interference to, or claim protection from, fixed or mobile stations in such countries. The footnote also related to Documents 270 and DT/104.

2.9 The delegate of Canada, introducing Document 272, said that the discussion had clearly shown the need for additional mobile-satellite spectrum and indeed, proposals had been made for extensions in the immediate vicinity of the currently allocated bands. Some modest accommodation would greatly enhance the utilization of those bands by enabling the further development of satellite systems.

3. Statement by the delegate of the Islamic Republic of Iran

3.1 The delegate of the Islamic Republic of Iran said that the official designation, the "Islamic Republic of Iran", should be used in all references to his country.

3.2 The Chairman said that note had been taken of that observation.

The meeting rose at 1235 hours.

The Secretary: The Chairman:

T. GAVRILOV I.R. HUTCHINGS

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 290-E
26 February 1992
Original: English

COMMITTEE 5

SUMMARY RECORD

OF THE

ELEVENTH MEETING OF COMMITTEE 5
(REGULATORY)

Wednesday, 26 February 1992, at 0935 hours and 1740 hours

Chairman: Mr. E. GEORGE (Germany)

Subjects discussed		Documents
1.	Resolution COM5/3 (continued)	212
2.	Resolution COM5/9 (Assistance to developing countries)	DT/111
3.	Resolution COM5/8 (Coordination and notification GEO/NONGEO) (continued)	257, 281
4.	Articles 27 and 28 (continued)	DT/116

1. Resolution COM5/3 (continued) (Document 212)

1.1 The Chairman, referring to the text of Resolution COM5/3, reminded the meeting that the Canadian delegation, supported by several others, had proposed certain amendments to the **recommends the next Plenipotentiary Conference, resolves** and **instructs the Secretary-General** paragraphs, and that a counter-proposal had been put forward for an amendment to the **recommends** part only.

1.2 The delegate of Canada said he still thought it in appropriate to require the Region 2 administrations to attend a world conference for the purpose in question. The matter could well be dealt with in a regional forum, since it related only to Regions 1 and 3, and the result endorsed by some future world conference. There were precedents for such an approach.

1.3 The delegate of the United Kingdom said experience clearly showed that the relationships between the Regions 1 and 3 parts and the Region 2 part of the 12 GHz broadcasting-satellite band and the BSS feeder-link plans were so intricate that a regional conference could not possibly suffice to separate them. The appropriate course, therefore, was that proposed by the delegation of the Russian Federation at the Committee's previous meeting, namely, to leave the decision to a Plenipotentiary Conference.

1.4 The delegate of France agreed with the previous speaker; it was essential to place the responsibility on a Plenipotentiary Conference.

1.5 The delegates of Japan, Germany, Italy, Finland, Algeria, Israel, China, India, Spain, France, Malta, the Islamic Republic of Iran, Australia, and the Netherlands supported the proposal by the delegation of the Russian Federation.

1.6 The delegate of the Bahamas stressed that many administrations found it hard to meet the cost of attending conferences; it was especially difficult to secure funding to attend a forum which did not directly affect the region concerned. If a world conference was to be envisaged, the Administrative Council would have to be requested to help in providing resources - a move likely to be queried in some quarters. Therefore, his delegation supported the Canadian proposal.

1.7 The delegates of Brazil, Mexico, Cuba and Ecuador said that they too supported the Canadian delegation's proposal.

1.8 The Chairman said that the discussion revealed a majority of roughly two to one in favour of the proposal by the delegation of the Russian Federation. He would therefore transmit the text of Resolution COM5/3, amended in the light of that proposal, to the Editorial Committee for submission to the Plenary. He would also list the delegations that had supported the Canadian delegation's proposal, and would draw attention to the concern, raised by the delegate of the Bahamas, about the expenses involved for developing countries which attend a conference of limited interest to their Region.

2. Resolution COM5/9 (Assistance to developing countries) (Document DT/111)

2.1 The Chairman of ad hoc Group 2 introduced Document DT/111. He drew attention to an amendment in the **resolves** part: paragraphs 1, 2 and 3 were to become 2, 3 and 1 respectively.

2.2 The Chairman thanked the Chairman and members of ad hoc Group 2 for their efforts, and invited the Committee to consider the text of Resolution COM5/9 paragraph by paragraph.

2.3 The title, preamble and **considering** a), b) and c) were approved.

2.4 The delegate of Canada, referring to **considering** d), said that it was not always necessary for an entire transfer process to be concluded before allocations could come into effect - a point which the text as it stood did not reflect.

2.5 Following brief observations by the Member of the IFRB, the Chairman of ad hoc Group 2 and the delegate of the Islamic Republic of Iran, the Chairman suggested that the difficulty could be circumvented by replacing the words "come into effect" in the English text by "be used effectively", thus matching the French and Spanish versions more closely.

2.6 **Considering** d), as amended, was approved.

2.7 **Considering** e), **recognizing** a) and b) and **resolves** 1 (former **resolves** 3) were approved, subject to a minor editorial correction in the English text.

2.8 Referring to **resolves** 2 (former **resolves** 1), the delegate of the United States proposed that the word "provide" in the second line should be replaced by "assist".

2.9 Following a brief discussion, it was agreed, on a proposal by the delegate of Canada, to replace the words "need to take account of assistance to developing countries and should provide" by "needs of developing countries and assist".

2.10 **Resolves** 2, as amended, was approved.

2.11 **Resolves** 3 (former **resolves** 2), **requests the IFRB and the CCIR, requests the Director of the BDT** and **invites the Administrative Council** were approved.

2.12 Resolution COM5/9 as a whole, as amended, was approved.

The meeting was suspended at 1030 hours and resumed at 1740 hours.

3. Resolution COM5/8 (Coordination and notification GEO/NONGEO) (continued) (Documents 257 and 281)

3.1 The Chairman of the ad hoc Group set up at the Committee's previous meeting introduced Document 281 which contained a proposed text for the **recognizing** part of Resolution COM5/8 (Document 257) intended to meet the concerns expressed during the discussion. Some members of the ad hoc Group had considered the text unnecessary but had accepted it as a means of accommodating those concerns.

3.2 The delegate of the Russian Federation said that the Conference was not competent to recognize sovereign rights and that he therefore found the proposed text unacceptable.

3.3 The delegate of the Netherlands could accept the beginning of the proposed text but could not agree to sub-paragraphs a) and b).

3.4 On the basis of a suggestion by the delegate of Mexico, the Chairman asked whether the proposed text would be acceptable if "**recognizing**" was replaced by "**noting**", and "sovereign" was deleted.

3.5 The delegate of the United Kingdom said that such a text was unnecessary and out of place in a technical document produced by a technical conference of the Union. As the Resolution was to be put before the Plenary, the Committee should not waste any more time on drafting.

3.6 The delegate of Cuba was in favour of the proposed draft with the suggested amendments.

3.7 The delegate of Australia, supported by the delegate of the United Arab Emirates and the Russian Federation, suggested that the text be submitted to the Plenary Meeting with the amended proposed text in square brackets.

3.8 It was so agreed.

4. Articles 27 and 28 (ad hoc Group 1) (continued) (Document DT/116)

4.1 The Chairman of ad hoc Group 1 said that the outcome of the Group's discussions would be presented to the Committee in a written report (Document DT/116). She noted that ad hoc Group 1 would have the task of considering Article 29, in addition to Articles 27 and 28.

4.2 The Chairman asked the Chairman of ad hoc Group 1 to keep track of the work of Committee 4 and report back to Committee 5 as necessary. He recognized that the Group's task was not an easy one.

The meeting rose at 1800 hours.

The Secretary: The Chairman:

J. LEWIS E. GEORGE

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 291-E
26 February 1992
Original: French

PLENARY MEETING

MINUTES

OF THE

SEVENTH PLENARY MEETING

Wednesday, 26 February 1992, at 1500 hours

Chairman: Mr. J. BARRIONUEVO PEÑA (Spain)

Subjects discussed		Documents
1.	Consideration of the report by the Chairman of ad hoc Group 1 of the Plenary and of the note by the IFRB on financial implications of the decisions of WARC-92	239, 269
2.	Sixth series of texts submitted by the Editorial Committee for first reading (B.6)	238
3.	Reports by Committee Chairmen	-
4.	Statement by the delegate of Kuwait	-

1. Consideration of the report by the Chairman of ad hoc Group 1 of the Plenary and of the note by the IFRB on financial implications of the decisions of WARC-92 (Documents 239 and 269)

1.1 The Chairman of Committee 5, speaking as Chairman of ad hoc Group 1 of the Plenary, introduced Document 239 and said that ad hoc Group 1, in accordance with its terms of reference, had studied solutions to permit the development of an arrangement for the allotment of frequencies for the mobile aeronautical (OR) service in the exclusive bands between 3 025 kHz and 18 030 kHz and associated provisions in Article 12 and Appendix 26. Having reviewed ad hoc Group 1's conclusions as set forth in the document, he said that the Group would submit to the Plenary a draft Resolution relating to the 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, draft modifications to Article 12 and Appendix 26, and two further draft Resolutions on the subject. He noted that the Group's decisions had been taken by consensus.

1.2 The Chairman of the IFRB said that the IFRB had prepared Document 269 on the financial implications of the decisions of WARC-92. The document provided a provisional assessment of the resources the Board would require in order to carry out the post-Conference work. With regard to Document 239, some delegations had raised objections of principle at previous meetings; the view had been expressed that the IFRB had not strictly followed the instructions set forth in Resolution No. 9 of the Nice Plenipotentiary Conference, in particular by utilizing the Master Register rather than the current Allotment Plan, and that, furthermore, some allotments had been removed from the Plan, including secondary allotments. He stressed that the Board had consulted all administrations on that procedure for arranging the frequency allotments. Some of the difficulties mentioned by certain administrations stemmed from the fact that a number of points had not yet been settled by correspondence. For the moment, no difficulty was foreseen in the preparation of a frequency allotment arrangement which would satisfy everyone. The Conference should appreciate that the sharing arrangements under Appendix 26 had existed for over 40 years and that their revision constituted a unique exercise. In his view, the new proposal set forth in Document 239 likewise failed to conform to the provisions of Resolution No. 9 of the Nice Plenipotentiary Conference, and the adoption of that document was likely to entail unnecessary additional costs in respect of a Plan which would be unsatisfactory, for the developing countries in particular.

1.3 The delegate of the Islamic Republic of Iran regretted having been unable to participate in the work of the ad hoc Group; he drew the attention of delegations, particularly those of the developing countries, to the fact that, first of all, the allotments which had been slightly altered by Committee 5 had been accepted by all Members, and that the additional resources mentioned in Document 269 to give effect to the Conference's decisions could be utilized for other purposes, such as the development of telecommunication infrastructures in the developing countries. He stressed that approval of Document 239 would not be in the interest of developing countries, and asked the Chairman of the IFRB to state his opinion on the proposals contained therein.

1.4 The delegate of Turkey made the statement reproduced in the Annex.

1.5 The Chairman of the IFRB, replying to the questions raised by the delegate of Turkey, said that, with regard to financial resources, there had been a provisional estimate of 300,000 Swiss francs. Unless the Administrative Council decided to allot funds for that work, there would clearly be a long delay. With regard to the assignments and the point in time at which they would be utilized, assignments could be made under Article 12. As for the status of the Allotment Plan, it seemed to him that approval by a subsequent Conference would be required, since the current WARC could not approve a new Allotment Plan.

1.6 The delegate of Swaziland said he had already pointed out at a previous meeting that his country had been omitted in the IFRB document. He was concerned by what the Chairman of the IFRB had just said, and hoped that his country would benefit from allotments. While recognizing that Document 239 provided a ray of hope for his Administration, he wished to know what the IFRB was proposing to do, since the Board seemed to be less than enthusiastic about Document 239 and, if that document were to be approved, he wondered what the time-scale for its implementation would be.

1.7 The Chairman of the IFRB said that the Board was doing everything it could to deal with the existing shortcomings, and that the problems ought to be possible to solve. With regard to the dates in Document 239, everything would depend on the resources made available to the IFRB. Assuming that the Administrative Council in the current year approved the additional expenditure, it would be difficult to meet the December 1992 date, on account of the time needed to recruit staff. The end or perhaps the middle of 1993 was a more plausible time frame for the new channelling arrangement.

1.8 The delegate of Morocco said he felt obliged to respond to the statement by the Chairman of the IFRB. A permanent organ of the Union had been given an instruction by the Plenipotentiary Conference, the Union's supreme body, and had decided not to act on it. In his view, the Board had to follow the Plenipotentiary Conference's instructions, and he could not accept the replies given to the various questions just raised. To begin with, the delegate of Swaziland had been told that a way out would be found by the IFRB and that Document 239 offered no solution. Swaziland, which appeared in the current Appendix 26 under another symbol, should be informed by the IFRB, following consultations with the administrations concerned, of its allotment under the new appendix. Should that country have no allotment under Appendix 26, operative paragraph 1.2 of draft Resolution PLEN/AH-1 (Annex 1 to Document 239) guaranteed it one. He likewise appreciated the concerns voiced by the delegate of Turkey with regard to other countries which had no allotment under the current Appendix 26; those countries, too, were covered by operative paragraph 1.2. It was stated in operative paragraph 1.3 that the operations described in paragraphs 1.1 and 1.2 had to be completed by 15 December 1992, the date mentioned in Resolution No. 9 of the Nice Plenipotentiary Conference; consequently, those operations had to be carried out before that date and without additional staff. It seemed to him, after obtaining the opinion of the IFRB secretariat, that those operations, while requiring consultations with some administrations, could be completed without additional personnel before the end of 1992. The conversion of assignments to allotments was not subject to any given date. As for there being a difference between an assignment recorded in the current Master Register and its conversion to an allotment in the Plan, in his view there was none. As he understood it, Document 269, which had just been added to the agenda of the current meeting, had been considered and noted by Committee 3. It was for the Administrative Council to take a decision on the matter. He reiterated that he could not accept the deletion from the Master Register, by a permanent organ of the Union, of frequency allocations without the agreement of the administration concerned.

1.9 The delegate of Senegal proposed that operative paragraph 2 of draft Resolution PLEN/AH-1 should be amended. In his view the time frame was too small; all delegates should be given an opportunity, on returning to their countries, to determine the allotment they needed. The words "at a later date" should therefore be added after the words "to the Conference".

1.10 The delegate of Argentina asked what would become of frequencies already notified to the Board when the new procedures entered into force, bearing in mind that those frequencies were already being used by some administrations.

1.11 In reply, the Chairman of the IFRB pointed out that, according to draft Resolution PLEN/AH-1, the Board was to transfer every allotment to the nearest possible channel. There would be a single channel of 3 kHz, no matter what the allocations of the previous Plan were. The Plan was an entirely new one, but one which ensured the transfer of frequencies to the nearest possible channel.

1.12 The delegate of Mali raised the question of the cost of the new operations. He asked why, despite the shortage of resources, the IFRB wished to take the risk that the Administrative Council might not grant it sufficient funds to carry out the work envisaged.

1.13 The delegate of Algeria said he was astonished at the tenor of the discussion, which was calling the IFRB's work in question and disputing its figures. While it was true that the Board had failed to conform to Resolution No. 9 (Nice, 1989), it was very important that Members should put their trust in a permanent organ of the Union.

1.14 The delegate of Nigeria said that his Administration had taken part in the work which had culminated in Document 239, which had been broadly approved in ad hoc Group 1 of the Plenary. That document, which constituted a revision of Appendix 26, covered the case of all countries, small or large, including those which had no allotment. He felt that, given proper application of the document, and bearing in mind that there was no deadline for the IFRB, the cost of the exercise would not be as high as the Plenary had been given to understand.

1.15 The delegate of Brunei Darussalam pointed out that the document envisaged that allotments would be granted to administrations which had none in the current Plan. Furthermore, operative paragraphs 1.2 a) and b) of Resolution PLEN/AH-1 referred to the communication of requirements to the IFRB before 3 February 1992. He asked for an explanation in that regard.

1.16 The Chairman of Committee 5, speaking as Chairman of ad hoc Group 1, said that administrations not covered by paragraph 1.2 could apply the modification procedure provided in Part V of the revised Appendix 26.

1.17 The Secretary-General said that the financial implications (Document 269) of the solutions proposed in Document 239 would be considered the next day by the Budget Control Committee. Despite the difficulties encountered during the current meeting, the Conference's decisions would, as always, be taken extremely seriously by the Administrative Council and the permanent organs, which would do their utmost to implement the solutions adopted. No other approach was possible.

1.18 The Chairman of Committee 5 suggested the addition, in paragraph 1.4 of the draft Resolution, after "Master Register", of the words "which is in conformity with the provisions of No. 1240 of the Radio Regulations".

1.19 The delegate of the Russian Federation asked whether, without a prior study of Document 269, there was any point in continuing to discuss Document 239, in view of the ties between the two texts.

1.20 The Chairman replied that it was necessary to proceed with the consideration of Document 239 and that, after the Secretary-General's statement, there could be no further doubts as to the course to be followed.

1.21 The delegate of Algeria considered that a document should be drawn up to compare the two solutions: the IFRB one, without financial implications, for incorporation in the Plan of the countries excluded from it; and the one presented in Document 239. With regard to operative paragraph 1.2 of the draft Resolution, he noted that the date of 3 February had already passed and wondered how the IFRB was going to make new allocations.

1.22 The Chairman of Committee 5 said that the case of countries or administrations having assignments in the Master Register and no allotment was covered by paragraph 1.4; moreover, the number of countries without an allotment was low, and gave rise to no serious problems.

1.23 The delegate of the Islamic Republic of Iran supported the view expressed by the Russian Federation. The procedure followed by the IFRB was not, in fact, that envisaged in Resolution No. 9. His country had raised that point in Document 117. Despite that difference, the IFRB had arrived at a solution acceptable to almost all countries, and had had the opportunity to look into the case of countries for which the new Plan created difficulties. Before considering Document 239, it might be as well to take a look at Committee 5's previous conclusions, since the conclusions of ad hoc Group 1 represented a consensus. It was a question of knowing which direction to move in.

1.24 The delegate of Yemen felt that it was up to the Plenary to consider Document 239 as the report of ad hoc Group 1. He proposed that it should be considered in isolation from Document 269, so that the Plenary could arrive at valid conclusions.

1.25 The delegate of Swaziland pointed out that he had not received a reply to certain questions. Firstly, with regard to paragraph 1.2 of draft Resolution PLEN/AH-1, he did not agree on the date of 3 February 1992; secondly, he had been informed that Swaziland was designated by another name - a matter on which he would like an explanation.

1.26 The delegate of the Lebanon said he regretted that the Plenary was not reaching practical conclusions. In the light of the Secretary-General's statement, there was no need to decide whether the Plenary's conclusions should be referred to Committee 4, 5 or even 6. Discussion should continue in the Plenary itself.

1.27 The delegate of Mexico, supported by the delegate of Argentina, requested the Secretary-General, the Chairman of the IFRB and certain delegations to meet in order to come up with a viable, rational solution to enable a definite outcome to be reached. If such a solution could be worked out, the matter could be reverted to at a subsequent Plenary Meeting.

1.28 The delegate of the Islamic Republic of Iran considered that Document 239 contained a wealth of detail which warranted longer deliberation. Since it did not seem possible to hold such a discussion in the Plenary itself, he proposed that the matter should be referred to Committee 5.

1.29 The delegate of Turkey, reverting to the question of the financial implications in Document 239, proposed that consideration of that document should be deferred until the Budget Control Committee's conclusions relating to Document 269 were known, since the two documents were linked.

1.30 The delegate of Morocco, speaking on a point of order, requested the Chairman to postpone the debate, until a subsequent Plenary Meeting, in accordance with No. 518 of the Convention. In support of his request, he proposed that, as requested by the delegate of Mexico, there should be discussions before the debate was resumed in Plenary. The Chairman could be relied upon to hold the necessary consultations and arrive at a solution.

1.31 It was so agreed.

2. Sixth series of texts submitted by the Editorial Committee for first reading (B.6) (Document 238)

2.1 The Chairman of Committee 6 introduced Document 238, pointing out that the underlining of words in the Spanish version should be disregarded. Furthermore, the Resolution to which several references were made [COM5/Document 192, Annex 1] was in fact Resolution COM5/7.

2.2 The Chairman observed that the delegations of Morocco and Senegal had reserved their position with regard to Resolution No. 703(Rev.WARC-92).

2.3 The delegate of Morocco, having consulted the delegate of Senegal, said that it should be up to future administrative conferences to deal with the amendments to paragraphs 3 and 6 of Resolution No. 703(Rev.WARC-92), for the following reasons: the amendments adopted by the Working Group of the Plenary affected countries' sovereignty; Morocco had ratified the provisions of the Radio Regulations and he could not accept that CCIR Recommendations should be applied in their place without having been adopted by his country.

2.4 The delegate of Spain pointed out that his country had proposed an amendment to Resolution No. 703(Rev.WARC-92), relating to the improved practical application of the text, which had not been adopted by the Working Group of the Plenary; however, that did not mean that he agreed with the reasons given by the delegate of Morocco.

2.5 The Chairman of the Working Group of the Plenary recalled that the text submitted had been adopted unanimously; only after its adoption had the delegation of Morocco entered a reservation.

2.6 The Chairman invited the meeting to consider Document 238 page by page.

Page B.6/1

2.7 Approved subject to the replacement of the words "these bands" by "this band" in the seventh line of ADD 521C.

Page B.6/2

2.8 Approved.

Page B.6/3

ADD 529B

2.9 Resolution [COM5/Document 192, Annex 1] became Resolution COM5/7.

Pages B.6/4 and B.6/5

2.10 Approved.

Page B.6/6

2.11 The delegate of the Russian Federation made the following statement: The delegation of the Russian Federation would like the following text to be included in the Final Acts of the Conference: "The symbol 'USSR' in all footnotes to the Frequency Allocation Table of the Radio Regulations (Article 8), whenever it appears in the Conference documents, stands for the territories of the States which used to be republics of the former Soviet Union, including the territories of the Russian Federation, Belarus and Ukraine, which are Members of the International Telecommunication Union."

2.12 The delegate of the United States wondered whether he would have the opportunity to consider the implications of the request by the Russian Federation before the following Plenary Meeting. He feared that the frequency allocations agreed upon would not bring about a significant improvement in the HF broadcasting planning system. Like other administrations, he was concerned about the time and money spent on developing a planning process, although he was aware of the problems which had made it impossible to progress further towards meeting the objectives set.

2.13 The delegate of Lithuania raised a formal objection to the proposal by the delegate of the Russian Federation, which might create ambiguity.

2.14 The Secretary-General replied that the request by the Russian Federation, which might have legal implications, required careful examination, after which it could be taken up again, either at a Plenary Meeting or in another appropriate place.

2.15 With those comments, page B.6/6 was approved.

Pages B.6/7 to B.6/9: Resolution No. 703(Rev.WARC-92)

2.16 The delegate of Morocco requested that, when consulting administrations under paragraphs 3, 5 and 6 b) of the Resolution, the Secretary-General's list of addresses rather than that of the IFRB should be used.

2.17 With those comments, pages B.6/7, B.6/8 and B.6/9 (Resolution No. 703(Rev.WARC-92)) were approved.

Page B.6/10: Resolution GT-PLEN/2

2.18 The Chairman of Committee 6 drew attention to the square brackets round the words "as specified in Article 8".

2.19 The delegate of Morocco said there should be some indication that the term "non-GSO" concerned only satellites in elliptical orbit, and not low-orbit satellite systems.

2.20 The delegate of Iran sought clarification with regard to the term "non-geostationary satellites".

2.21 The delegate of Australia asked the Chairman if that implied that non-GSO systems would be unable to operate. The fact that two delegations had made a statement did not mean that the entire meeting was in agreement.

2.22 The Chairman confirmed that the opinion expressed was that of only two delegations.

2.23 Resolution GT-PLEN/2 (page B.6/10) was approved.

Page B.6/11: Recommendation COM4/A

2.24 Approved.

3. Reports by Committee Chairmen

3.1 The Chairman of Committee 2 said that Committee 2 had completed its work; he referred delegates to Document DT/102 for more detailed information.

3.2 The Chairman of Committee 3 said that the work of his Committee was progressing satisfactorily.

3.3 The Chairman of Committee 4 said that all the texts from Working Group 4A had been considered and forwarded to the Plenary Meeting. Committee 4 had also considered texts from Working Group 4C, with the exception of those concerning the broadcasting-satellite service and high-definition television services. Working Group 4B still had a number of substantive issues relating to the mobile-satellite service and BSS (Sound) to resolve.

3.4 The Chairman of Committee 5 said that all his Committee's Working Groups had concluded their work. The Committee still had a few matters to settle concerning Articles 27 and 28 of the Radio Regulations.

4. Statement by the delegate of Kuwait

4.1 The delegate of Kuwait recalled that 26 February was the first anniversary of his country's liberation, the day on which it had re-established communications within its borders and with all other countries in the world. He thanked the Spanish authorities for their warm welcome, as well as the Secretary-General and the ITU staff for their work.

The meeting rose at 1730 hours.

The Secretary-General:
P. TARJANNE

The Chairman:
J. BARRIONUEVO PEÑA

Annex: 1

ANNEX

Statement by the delegate of Turkey

After waiting for a long time since 1959, with the Nice Plenipotentiary Conference we have had the opportunity to adopt Resolution No. 9 for modifying Appendix 26 of the Radio Regulations, to cover all excluded countries in the Plan and to provide the IFRB with a mechanism by modifying Article 12, to deal with all existing and future requirements of all administrations.

The IFRB has carried out an appreciated professional work in line with Resolution No. 9 and prepared a new channelling arrangement, required compatibility criteria, an Allotment Plan, procedures for modification and maintenance of the Plan, transfer of frequency assignments and also related modifications to Article 12.

Although the mandate of this Conference, in accordance with Resolution No. 995 of the Administrative Council and Resolution No. 9 of the Nice Plenipotentiary Conference, seems to me limited only to the confirmation of the transition date of the new arrangements prepared by the IFRB and consideration of the minimum modification to Article 12 of the Radio Regulations prepared by the IFRB, there has been a new initiative by a group of administrations to prepare a completely new document at the stage that Document 180 was submitted to the Plenary for the first reading.

I don't want to question the decision of this Conference at this very late stage, however, it is our observation that the new Document 239 now before us sets up no specific time limit for the completion of the work and it was tied with the date of the entry into force of the Final Acts of this Conference.

Therefore, Mr. Chairman, I have three questions for clarification:

- Firstly, what are the financial implications of this new initiative which will lead extra work to be carried out by the IFRB and could the required amount of resources be allocated by the Administrative Council? If that money could not be made available at the next meeting of the Council which will convene on June or July 1992, how could this work be accomplished?
- Secondly, I would like to hear a clear statement that when the IFRB could fulfil the task being now assigned by this Conference and an administration having no assignments in the present Appendix 26, like my country, could be able to start using its own assigned frequencies in accordance with the new provisions of the revised Appendix 26. I would like to see firm and considerable early date than having it related with the date of the entry into force of the Final Acts of this Conference which will not include approved Part III of Appendix 26.
- Thirdly, what will be the legal status of the Allotment Arrangements which is not included in Annex III of Document 239 and will be inserted into Appendix 26 as Part III, at a later stage after the IFRB completes its development process? Will this procedure be legal to have it without approval?

In conclusion, Mr. Chairman, if these three questions are not satisfactorily clarified, my delegation wishes to reserve its position to raise this point at a later stage of the Conference.

Finally, Mr. Chairman, I kindly request that my statement and replies to my questions be included in the minutes of this Plenary.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 292-E
26 February 1992
Original: English

COMMITTEE 2

SUMMARY RECORD

OF THE

SECOND AND LAST MEETING OF COMMITTEE 2 (CREDENTIALS)

Wednesday, 26 February 1992, at 0930 hours

Chairman: Mr. J.A. PADILLA LONGORIA (Mexico)

Subjects discussed:		Documents
1.	Approval of the summary record of the first meeting	107
2.	First and second reports of Working Group 2A	137, 226
3.	Draft report to the Plenary Meeting	DT/102

1. Approval of the summary record of the first meeting (Document 107)

1.1 The summary record of the first meeting was approved.

2. First and second reports of Working Group 2A (Documents 137, 226)

2.1 The delegate of the United States asked what efforts were being made to urge countries that had not yet submitted their credentials to do so.

2.2 The Chairman said that both he and the Secretary of the Committee had contacted a number of delegations, and that in his oral reports to the Plenary he had called on delegations to submit their credentials as soon as possible.

2.3 The first and second reports of Working Group 2A were approved.

3. Draft report to the Plenary Meeting (Document DT/102)

3.1 The Secretary announced that the following countries should be added to Annex 1 of Document DT/102: under section 1 (Credentials deposited by the delegations of countries having the right to vote and found to be in order) Canada, Mongolia, Poland; under section 2 (Credentials deposited by the delegations of countries without the right to vote and found to be in order) Guatemala; under section 4 (Delegations participating in the Conference which have not deposited credentials) Peru, with an asterisk indicating inclusion in the list of countries which have lost their right to vote.

3.2 He observed that the credentials deposited by delegations were available for inspection by members of the Committee.

3.3 The Committee approved the draft report for submission to the Plenary Meeting.

3.4 The Chairman thanked participants for their efforts and declared that the Committee had completed its work.

The meeting rose at 0940 hours.

The Secretary: The Chairman:

X. ESCOFET J.A. PADILLA LONGORIA

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 293-E
26 February 1992
Original: English

COMMITTEE 6

Source: Docs. 257, 271, 281

NINTH SERIES OF TEXTS FROM COMMITTEE 5 TO THE EDITORIAL COMMITTEE

Committee 5 has approved the annexed texts to be submitted to the Editorial Committee for consideration and subsequent transmission to the Plenary Session:

- Resolution COM5/8
- Consequential footnotes to be added to the titles of Articles 11, 12 and 13

After completion of the discussion in Committee 5, the advice of the ITU legal adviser was sought on provisions 5.1.1, 5.1.2, 5.1.3 and 5.1.4. As a result corrected wording has been introduced into these provisions. This appears in square brackets.

E. George
Chairman of Committee 5

Annex: 1

ANNEX

RESOLUTION COM5/[8]

Relating to 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]

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 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, will be able to adopt a permanent procedure,

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 present 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,

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1 This Resolution shall be applied only to the frequency bands [to be decided by Committee 4]. For the purpose of application of 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.

[noting

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 they 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;

4. to invite 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;

5. to invite the IFRB to apply these procedures and to provide the necessary assistance to administrations;

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

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

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

ANNEX TO RESOLUTION COM5/[8]

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

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 No. 703 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.

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 significantly change the character of the network may require recommencing the advance publication procedure.

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

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 therefore.

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 that system on which details have been published.

1.4A An administration sending information under paragraphs 1.1 and 1.2 shall provide, if requested by an administration receiving information published under paragraph 1.3, 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 requirements of that administration.

1.5C If, after following the procedure described in paragraphs 1.5A and 1.5B, there are unresolved difficulties, the administrations concerned shall together 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 had 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 in 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 in 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 in 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 in 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 in a geostationary-satellite network, it shall effect coordination of the assignment with any other administration whose assignment to a station in 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. **420-425** 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 the 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 receipt of the information 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**.[2] 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 was 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 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 those 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 is 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.

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[2] In order to assist administrations in the identification of 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**.

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 sought the coordination, as well as any administration which responded in accordance with 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 effort of the administrations concerned to reach agreement on 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 is to be deferred for a further three months.

Section III. Coordination of Frequency Assignments to Earth Stations in 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[3]. The request for coordination may specify all or some of the frequency assignments of the associated space station, but thereafter each assignment shall be dealt with individually.

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[3] The coordination area is defined as the service area in which it is intended to operate the typical earth stations or the coordinates of the fixed earth station, extended in either case in all directions by a coordination distance of 500 km. For a service area involving aircraft earth stations the coordination area is the service area extended by 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 for the information of the Board.

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 the earth station assignment into service, 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 the earth station assignment into service, 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 cases mentioned in paragraph **3.5.2**, the administration with which coordination is sought shall send to the administration requesting coordination a copy of 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 one 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 is to be deferred for a further three months.

Section IV. Coordination of Frequency Assignments to Terrestrial Stations for Transmission in Relation to Earth Stations in 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[4] of the 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 3.5.1.

Coordination Data

4.2 For the purpose of effecting coordination the administration requesting coordination shall send to any 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.

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[4] The coordination area is defined as the service area in which it is intended to operate the typical earth stations or the coordinates of the fixed earth station, extended in either case in all directions by a coordination distance of 500 km. For a service area involving aircraft earth stations the coordination area is the service area extended by 1,000 km.

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 one 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 is to 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 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.

ARTICLE 11

Orb-88

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, 4]

Section I. Procedures for the Advance Publication of Information on Planned Satellite Networks[4 5]

4 See Resolution COM5/[ ] relating to interim procedures for the notification and recording of frequency assignments of non-geostationary-satellite networks in certain space services and the other services to which the bands are allocated.

ARTICLE 12

Orb-85

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

5 See Resolution COM5/[ ] relating to 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.

ARTICLE 13

Orb-88

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]

5 See Resolution COM5/[ ] relating to interim procedures for the notification and recording of frequency assignments of non-geostationary-satellite networks in certain space services and the other services to which the bands are allocated.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 294-E
26 February 1992
Original: English

COMMITTEE 5

Source: Document DT/96

REVISION OF RESOLUTION COM5/[ ]

Introduction of Systems in the Broadcasting-Satellite Service (Sound), BSS (Sound) in the Band [ ], Including the Complementary Terrestrial Sound Broadcasting Uses

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 BSS (Sound) for the complementary terrestrial broadcasting and for the associated feeder links [that will become available for use from 1 January 2005];

b) that some administrations or groups of administrations may wish to take a lead in an early introduction of BSS (Sound) systems of an experimental nature without affecting the continued operation of existing services in other countries prior to [the date referred to in **considering** a)];

c) that it will be necessary to ensure that introduction of BSS (Sound) systems into this band proceeds in a flexible and equitable manner,

resolves

1. that, although the frequency band [ ] will not be available for general use by the BSS (Sound) service until [1 January 2005], some countries may make available all or parts of the band for BSS (Sound) systems including the complementary terrestrial uses before [1 January 2005];

2. that systems brought into use before [1 January 2005] shall operate in accordance with [Article 34] of the Radio Regulations, and the procedure contained in Resolution 33 shall be applied;

3. that for operational systems brought into use after [1 January 2005] the procedure in Resolution 33 shall be applied;

[4. that up to the date of implementation of operational BSS (Sound) systems after [1 January 2005] the existing services in the above-mentioned band shall remain with primary status, and after this event their allocation shall become secondary;]

5. to urge administrations to ensure, to the maximum extent possible, that operational systems of the BSS (Sound) service introduced into the band [ ] have technical characteristics which take into account the relevant studies of the CCIR and with the understanding that these characteristics shall not limit a future conference in establishing a flexible plan and associated procedures;

[6. that existing and planned BSS systems in the band 2 500 - 2 690 MHz may continue to operate after [1 January 2005]. Any BSS (Sound) systems introduced in accordance with the provisions of this Resolution in the band [ ] must be coordinated with the existing and planned BSS systems in the band 2 500 - 2 690 MHz.]

E. GEORGE
Chairman

PINK PAGES

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 295-E
27 February 1992

R.3

PLENARY MEETING

THIRD SERIES OF TEXTS SUBMITTED BY THE EDITORIAL COMMITTEE TO THE PLENARY MEETING

The following texts are submitted to the Plenary Meeting for second reading.

Source	Document	Title
COM6	238/B.6	Article 8
		Resolution No. 703 (Rev.WARC-92)
		Resolution GT-PLEN/2
		Recommendation COM4/A

P. ABOUDARHAM
Chairman of Committee 6

Annex: 11 pages

ARTICLE 8

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** 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** 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** 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 COM5/7. 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 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 COM5/7. 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	

NOC

ADD **529B** The bands 9 400 - 9 500 kHz, 11 600 - 11 650 kHz, 12 050 - 12 100 kHz, 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 COM5/7. 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 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 COM5/7. 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 **518** In Afghanistan, Argentina, Australia, Botswana, Burkina Faso, China, India, 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**

SUP **537**

SUP **543**

SUP **544**

MOD **572** The frequency 75 MHz is assigned to marker beacons. Administrations 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.

SUP **582**

MOD

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

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

considering

NOC 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;

NOC 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;

NOC 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;

MOD 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;

MOD 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;

ADD f) that the CCIR has adopted a procedure for approving Recommendations between Plenary Assemblies;

MOD 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,

NOC **is of the opinion**

MOD a) that future decisions of the CCIR are likely to make further changes in the recommended calculation methods and interference criteria;

NOC b) that administrations should receive advance information of the drafts of the relevant CCIR Recommendations;

NOC 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,

SUP **invites the CCIR**

a) and b)

ADD **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,

(MOD) **resolves**

ADD 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;

MOD 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;

MOD 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;

MOD 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;

MOD 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;

MOD 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 GT-PLEN/2

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)) downlinks and the complementary terrestrial service in the band [(as 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) in the frequency band mentioned above;

c) that systems in the BSS (Sound) 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 for avoiding mutual harmful interference between non-GSO systems, and between GSO and non-GSO systems of the broadcasting-satellite service(sound), and between BSS (Sound) systems and other services,

noting

the provisions of No. 2674 in 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,

   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,

instructs the Secretary-General

to bring this Resolution to the notice of the Administrative Council to ensure that the results of CCIR studies are taken into account when establishing the regulatory provisions that may be required for the BSS (Sound).

RECOMMENDATION COM4/A

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, prior to the final confirmation of the date for the cessation of DSB transmissions in the HF broadcasting service, there is a need for periodical reviews, by competent world administrative radio conferences, of the 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.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 296-E
27 February 1992
Original: English

PLENARY MEETING

REPORT OF THE BUDGET CONTROL COMMITTEE TO THE PLENARY MEETING

1. The Budget Control Committee held three meetings during the Conference and examined the questions arising from its terms of reference.

Under Nos. 476 to 479 of the International Telecommunication Convention (Nairobi, 1982), the Committee's terms of reference are:

a) to determine the organization and the facilities available to delegates;

b) to examine and approve the accounts for expenditure incurred throughout the duration of the Conference;

c) to estimate the costs that may be entailed by the execution of the decisions taken by the Conference.

2. Agreement with the inviting Administration

In accordance with Resolution No. 83 (amended) of the Administrative Council of the ITU on the organization, financing and liquidation of the accounts of conferences and meetings of the ITU, the Spanish Government and the Secretary-General of the ITU concluded an agreement concerning the organization and financing of WARC-92.

The Budget Control Committee took note of the agreement concluded between the Spanish Government and the Secretary-General of the Union.

3. Appreciation of the organization and facilities available to delegates

The Budget Control Committee considered that the organization and facilities made available to delegates were entirely satisfactory and wishes to express its thanks for all the efforts made to ensure the smooth running of the Conference.

4. Conference budget

The Budget Control Committee examined the Conference budget, as approved by the Administrative Council at its 46th session, 1991, amounting to 2,581,000 Swiss francs.

This budget includes 100,000 Swiss francs for IFRB post-conference work.

The Committee noted that the Conference budget had been adjusted to take into account changes in the Common System of the United Nations and the specialized agencies with regard to salaries and allowances and fluctuations in the rate of exchange between the US dollar and the Swiss franc, as required by Administrative Council Resolution No. 647. These adjustments raised the budget for the Conference to 2,697,000 Swiss francs, i.e. an increase of 116,000 Swiss francs (see Annex 1).

The Committee noted that the budget did not include expenditure incurred for the Conference in respect of supernumerary staff for the common services of the General Secretariat, which is included in a special section of the ordinary budget of the Union. This expenditure was evaluated at 1,285,000 Swiss francs.

5. Situation of Conference expenditure

Under No. 478 of the Convention, the Budget Control Committee has to submit a report to the Plenary Meeting showing, as accurately as possible, the estimated total expenditure of the Conference.

Accordingly, Annex 2 contains a statement showing the budget for the Conference and for post-conference work, as approved by the Administrative Council and adjusted under Administrative Council Resolution No. 647, together with a breakdown of credits among the budget subheads and items, as well as the actual expenditure incurred as at 25 February 1992. There is also an indication of the expenditure committed up to that date and an estimate of expenditure up to the end of the financial year 1992.

The above statement shows that the total amount to be charged to the ordinary budget for WARC-92 is estimated at 2,697,000 Swiss francs, i.e. the same as the amount allocated by the Administrative Council as adjusted at 1 February 1992. It can therefore be assumed that 1992 expenditure will remain within the approved budgets, provided that the 1992 overall workload of the Conference is maintained within the current estimates.

6. Expenditure limit for WARC-92

The Committee considered the situation regarding the expenditure limit for WARC-92 decided by the Plenipotentiary Conference (Nice, 1989). The current estimates of Conference costs are 1,100,000 Swiss francs, value 1 April 1989, below the ceiling that was set (see Annex 3). This amount will need to be adjusted to take account of actual 1991 and 1992 expenditure.

7. Estimate of work for the execution of WARC-92 decisions

At its 46th session, the Administrative Council provisionally approved a credit of 100,000 Swiss francs for post-conference work by the IFRB, pending details of decisions by WARC-92 which could entail additional expenditure.

The Budget Control Committee considered the estimates of the resources needed for post-conference work.

As far as the CCIR is concerned, most of the Resolutions and decisions proposed which call for urgent studies can be implemented within its normal work programme. They can be covered in the normal way out of the resources allocated to the CCIR under the ordinary budget.

As far as the work of the IFRB is concerned, the expected expenditure amounts to 500,000 Swiss francs (see Document 269 Rev.1 in Annex 4). Allowing for the provisional credit of 100,000 Swiss francs included in the ordinary budget for 1992, the additional expenditure envisaged by the IFRB is thus estimated at 400,000 Swiss francs.

The Budget Control Committee took note of the IFRB's provisional estimates. It did not make any judgment on the cost estimate. It expressed its concern on the level of the IFRB financial requirements and its hope that other less costly alternatives be pursued by the IFRB Board.

The Budget Control Committee noted that the IFRB will have to make a more detailed evaluation of its requirements as given in Annex 4. More precise estimates will be submitted to the Administrative Council at its 47th session in June-July 1992.

Recognized private operating agencies and international organizations taking part in the Conference

Under Article 16 of the Financial Regulations, the report of the Budget Control Committee must include a list of the recognized private operating agencies and international organizations which contribute to the expenses of the Conference. To this shall be added a list of the international organizations which have been exempted from payment in accordance with Resolution No. 925 of the Administrative Council.

The list is found in Annex 5 to this document.

It should be noted that, on the basis of the provisions of No. 383 of the Convention (Nice, 1989), the contributory unit for recognized private operating agencies and international organizations not exempt under Administrative Council Resolution 925 amounts to 11,500 Swiss francs. These contributions are to be considered as income in the Union's budget.

* * * *

The Plenary Meeting is requested to examine and approve this Report, which, together with the comments of the Plenary Meeting, will then be transmitted to the Secretary-General for submission to the Administrative Council at its next annual meeting.

S. AL BASHEER

Chairman of the Budget
Control Committee

ANNEX 1

Budget of the WARC-92 Conference adjusted at 1 February 1992

WARC-92		1992 budget basis 1.1.91*	1992 budget at 1.2.92**
		Swiss francs	
Subhead I	**Staff expenses**		
	Salaries and related expenses	1,532,000	1,648,000
	Travel (recruitment)	167,000	167,000
	Insurance	17,000	17,000
	Staff provided for the Conference	---	----
		1,716,000	1,832,000
Subhead II	**Premises and equipment**		
	Premises, furniture, machines	150,000	150,000
	Document production	305,000	305,000
	Supplies and office expenses	50,000	50,000
	PTT	112,000	112,000
	Technical installations	20,000	20,000
	Sundry and unforeseen	20,000	20,000
		657,000	657,000
Subhead III	**Other expenses**		
	Conference Final Acts	108,000	108,000
	Travel expenses for the preparation of the Conference	---	---
		108,000	108,000
Subhead IV	**Post-conference work of the IFRB**	100,000	100,000
Subhead V	**Travel costs away from Geneva**		
	Per diem	---	---
	Travel expenses	---	---
	Transport and dispatch costs	---	---
		---	---
Total		2,581,000	2,697,000

* Basis: exchange rate at 1 January 1991: 1 US $ = 1.27 Swiss francs

** Basis: exchange rate at 1 February 1992: 1 US $ = 1.43 Swiss francs

ANNEX 2

Position of the WARC-92 accounts
(at 25 February 1992)

Estimate of expenditure for WARC-92, Torremolinos 25.2.1992

Recapitulation	Budget value 1.1.91	Adjusted budget 1.2.1992	Actual expenditure 25.2.92	Committed and estimated expenditure	Total expenditure charged to reg.budget		Total expenditure charged to Host Admin.
				Swiss francs			
Salaries and related expenses							
- Meeting staff	1,532,000	1,648,000	298,000	1,383,000	1,681,000		-298,000
- Travel expenses (recruitment)	167,000	167,000	167,000		167,000		-167,000
- Insurance	17,000	17,000	4,000	13,000	17,000		-4,000
Sub-total I	1,716,000	1,832,000	469,000	1,396,000	1,865,000		-469,000
Cost of travel outside Geneva							
- Subsistance allowance							2,316,000
- Travel expenses							353,000
- Transport and dispatch costs							75,000
- Travel for the preparation of the Conf.							35,000
Sub-total II							2,779,000
Premises and equipment							
- Premises, furniture, machines	150,000	150,000	150,000		150,000		-150,000
- Document production	305,000	305,000	47,748	232,252	280,000		
- Supplies and office expenses	50,000	50,000	43,470	16,530	60,000		
- PTT	112,000	112,000	3,358	103,642	107,000		
- Technical installations	20,000	20,000	1,600	18,400	20,000		
- Sundry and unforeseen	20,000	20,000		25,000	25,000		
Sub-total III	657,000	657,000	246,176	395,824	642,000		-150,000
Finals Acts of the Conference	108,000	108,000		90,000	90,000		
Post Conference work of the IFRB	100,000	100,000		100,000	100,000		
TOTAL	2,581,000	2,697,000	715,176	1,981,824	2,697,000		2,160,000
Less : Staff made available to the WARC-92							-253,000
TOTAL	**2,581,000**	**2,697,000**	**715,176**	**1,981,824**	**2,697,000**		**1,907,000**

ANNEX 3

Limit on expenditure set for WARC-92

World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum, 1992 - Section 11.2

			- Swiss francs -
1)	Limit on expenditure set for WARC 1992 under Decision No. 1, 4.1 a)		5,100,000
less:			
2)	Budget provision for 1991 - Limit value		443,000
3)	Limit available for 1992-94		4,657,000
4)	Estimated expenditure in the draft budget for 1992	3,866,000*	
5)	Differences referred to in 5.1 and 5.2 of Decision No. 1 of the Plenipotentiary Conference (Nice, 1989) to take into account increases in salary scales, pension contributions and allowances, including post adjustments established by the United Nations Common System for application to its staff employed in Geneva, changes in the exchange rate between the Swiss franc and the United States dollar insofar as this affects the costs of staff on United Nations scales	-179,000	
6)	Differences referred to in 5.3 of Decision No. 1 of the Plenipotentiary Conference (Nice, 1989) to take into account changes in the purchasing power of the Swiss franc in relation to non-staff items of expenditure	-130,000	
7)	Expenditure on WARC 1992 for 1992 - Limit value		3,557,000
8)	Balance (3 - 7)		1,100,000

* i.e. 2,581,000 Sw.frs. under Section 11.2
1,285,000 Sw.frs. under Section 17

ANNEX 4

Note from the Chairman, IFRB

FINANCIAL IMPLICATIONS OF THE DECISIONS OF WARC-92

1. On the basis of the work being carried out in Committees 4 and 5, the Board foresees post-Conference activities which it would be required to carry out and which would require additional resources.

2. At the present stage of the Conference, it is obviously not possible for the Board to make precise estimates of the financial implications of all the decisions that the Conference may take. In spite of the fact that the resources available to the Board will continue to decrease during the period 1992-1994, the Board will make every effort to use its available manpower in the most efficient manner, thus limiting the need for additional requirements. However, the Board has identified the items under consideration by WARC-92 that will require additional resources to be available to the Board to enable it to carry out the resulting post-Conference work. They are:

2.1 actions to be taken for the preparation of Part III of Appendix 26(Rev.) (Document 239);

2.2 actions to be taken for the development of the accelerated application of the RR 1218 procedure (Resolution COM5/7, Document 276);

2.3 actions to be taken in the application of the procedures for various space radiocommunication services.

3. The estimated requirements are as follows:

3.1 for actions relating to the preparation of Part III of Appendix 26(Rev.), the following resources are required:

- 12 person-months (8 person-months of engineer and 4 person-months of system analyst) at P4 level;
- 8 person-months at G5/G6 level;

3.2 for the development of the accelerated application of the RR 1218 procedure, it would be necessary to foresee 12 person-months of P4 system analyst to fully automate the present semi-automatic procedure;

3.3 for the actions arising from the decisions relating to space radiocommunication services, at present the Board considers that they can be implemented without any additional resources; this will need to be reviewed after the decisions of the Conference are known with more precision;

3.4 thus, the overall resource requirements, as far as they can be estimated at present, are:

- 24 person-months at the P4 level (engineer and system analyst), and 8 person-months at the G5/G6 level.

At the current levels of salary scales and inclusive of the accessory expenses of office accommodation, office equipment and hardware/software, this would amount to 500,000.- Swiss francs spread over the calendar years of 1992-1994.

4. The Board wishes to emphasize that these estimates need to be refined after very careful study of the full implications of all Conference decisions which the Board will carry out before the 47th session of the Administrative Council to be held in June/July 1992.

5. The Conference is kindly requested to consider these estimates, note their provisional nature and agree that the Board develop more precise estimates for submission to the 47th session of the Administrative Council.

W.H. BELLCHAMBERS
Chairman

ANNEX 5

List of recognized private operating agencies and international organizations contributing to the expenses of the Conference

		Number of contributory units
I.	**Recognized private operating agencies**	
	None	
II.	**International organizations**	
II.1	**United Nations**	*)
II.2	**Specialized agencies**	
	International Civil Aviation Organization (ICAO)	*)
	International Maritime Organization (IMO)	*)
	World Meteorological Organization (WMO)	*)
II.3	**Regional telecommunications organizations**	
	Asia-Pacific Telecommunity (APT)	*)
	European Conference of Postal and Telecommunications Administrations (CEPT)	*)
	Caribbean Telecommunications Union (CTU)	*)
	Pan-African Telecommunication Union (PATU)	*)
	Arab Satellite Communications Organization (ARABSAT)	1/2
	European Telecommunications Satellite Organization (EUTELSAT)	1/2
	International Maritime Satellite Organization (INMARSAT)	1/2
	International Telecommunications Satellite Organization (INTELSAT)	1
	European Meteorological Satellite Organization (EUMETSAT)	1/2
II.4	**Other international organizations**	
	Asia-Pacific Broadcasting Union (ABU)	*)
	International Broadcasting Association (IBA)	*)
	Arab States Broadcasting Union (ASBU)	*)
	European Space Agency (ESA)	1/2
	European Communities (EC)	1/2
	International Committee of the Red Cross (ICRC)	*)
	International Maritime Radio Committee (IMRC)	*)
	International Satellite System for Search and Rescue (COSPAS-SARSAT)	*)
	Gulf Cooperation Council for Arab Countries (GCC)	*)
	International Amateur Radio Union (IARU)	*)
	International Air Transport Association (IATA)	*)
	International Chamber of Shipping (ICS)	1/2

International Organization of Space Communications (INTERSPUTNIK)	1/2
International Transport Workers Federation (ITF)	1/2
Inter-Union Commission on Frequency Allocations for Radio Astronomy and Space Science (IUCAF)	*)
International Society for Aeronautical Telecommunications (ISAT)	1/2
European Broadcasting Union (EBU)	*)
Union of National Radio and Television Organizations of Africa (URTNA)	*)

*) Exempt from any contribution in accordance with Administrative Council Resolution No. 925.

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 297-E
26 February 1992
Original: English

COMMITTEE 4

SUMMARY RECORD
OF THE
THIRTEENTH MEETING OF COMMITTEE 4
(FREQUENCY ALLOCATION)

Tuesday, 26 February 1992, at 1740 hours
Chairman: Mr. I.R. HUTCHINGS (New Zealand)

Subjects discussed	Documents
Overview of the current state of the work of Committee 4	

1. Overview of the current state of the work of Committee 4

1.1 The Chairman listed six issues based on the documents before the Committee and which related to mobile-satellite services (MSS) or the general mobile allocations around 1 - 3 GHz, which required further consideration:

i) low-Earth orbit ("small" LEO) applications of MSS generally in bands below 1 GHz;

ii) the "big" low-Earth orbit satellites (LEO) in bands above 1 GHz, usually 1.5 or 2.0 GHz;

iii) conventional mobile-satellite bands which needed to be augmented;

iv) future public land-mobile telecommunication systems, including the satellite and terrestrial components;

v) aeronautical public correspondence with aircraft, with identification of the bands for those purposes;

vi) issues relating to bands between 1 525 and 1 530 MHz, including questions relating to existing bands already allocated to MSS at around 1.5 - 1.6 GHz.

1.2 The question of BSS (Sound) was at present under consideration in ad hoc Group 4 which would report to the Committee later. He invited comments on those issues.

1.3 The delegate of the United Kingdom wished to clarify that whereas for frequency bands below 1 GHz the Committee was addressing the question of LEO satellites, there had been many references to "big" LEO systems above 1 GHz. He took that to mean a reference to new mobile-satellite applications specifically in the RDSS bands, but his Administration's intention had been to make such allocations to the MSS in general terms and not to restrict them either to geostationary or to non-geostationary systems.

1.4 The delegate of the United States considered that conventional MSS should cover not only geostationary satellites but also the broader issue of LEO satellites for new and expanded uses.

1.5 The delegate of the Russian Federation said that he could have supported the views of the delegates of the United Kingdom and the United States had they been put forward at the beginning of the Committee's work. At the present late stage, he considered that the adoption of a new concept was inappropriate, and the issue before the Committee depended on the adoption of exact frequency bands and the appropriate procedure to be followed.

1.6 The delegate of Norway considered that allocations above 1 GHz should have no reference to category of orbit.

It was agreed, on a provisional basis, that allocations below 1 GHz would be orbit-specific for LEO systems and not for use with geostationary systems.

The meeting rose at 1755 hours.

The Secretary: The Chairman:

T. GAVRILOV I.R. HUTCHINGS

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 **WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM**

Document 298-E
26 February 1992
Original: English/French

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

COMMITTEE 4

SUMMARY RECORD OF THE FOURTEENTH MEETING OF COMMITTEE 4 (FREQUENCY ALLOCATION)

Wednesday, 26 February 1992, at 2000 hours

Chairman: Mr. I.R. HUTCHINGS (New Zealand)

Subjects discussed		Documents
1.	Texts related to MSS and FPLMTS (continued)	203(Add.1), 223 + Corr.1, 227(Rev.1) 234, 259, 270, 272, 277, 279, 280, DT/104

1. Texts related to MSS and FPLMTS (continued) (Documents 203(Add.1), 223 + Corr.1, 227(Rev.1), 234, 259, 270, 272, 277, 279, 280, DT/104)

1.1 The Chairman invited the Committee to continue consideration of the documents relating to MSS and FPLMTS.

1.2 The delegate of Tanzania said that the systematic displacement of fixed services in the bands below 3 GHz which had taken place since the beginning of the Conference had a very negative impact on developing countries. Certain services had been upgraded from secondary to primary status, in some cases without adequate protective measures, on the grounds that the use of new technologies should be encouraged. In his view, such technologies should be accommodated in higher bands. Although his Administration supported the idea of band-sharing, it could not endorse any further displacement of the fixed services currently in the Table of Frequency Allocations; it could, however, support the accommodation of the new services through appropriate sharing criteria and procedures ensuring protection to the existing services. Efforts to find compromise solutions should be supported at every level, and his Administration could go along with the proposal in Document 277 provided that Tanzania was included in Footnote 730.

1.3 The delegate of Lebanon, whose Administration was a signatory of Document 277, endorsed the views expressed by the French and United Kingdom delegates at the Committee's twelfth meeting and said that an ad hoc Group in which all regions were represented should be set up to work on the changes required to Article 8, as set out in that document.

1.4 The delegate of Finland said that Document 277 represented a genuine attempt to put together a compromise package on the bands below 3 GHz. In section 4B, moving the first sub-band slightly upwards to 2 511 - 2 546 MHz and the second downwards to 2 630 - 2 665 MHz would minimize the impact on the fixed services; if the allocations were implemented in step, starting from the upper end, the impact on the existing space services would also be minimal. Similarly, in section 4C, the lower sub-band could be modified to 1 992.5 - 2 007.5 MHz. As for section 6 (FPLMTS), the Conference should designate two suitable sub-bands, separated by at least 115 MHz, in order to keep both duplexing options open.

1.5 The delegate of the Russian Federation said that Document 277 presented some useful ideas but very little in the way of actual compromise. After an exchange of views in the Committee, it might be useful to set up an ad hoc Group as suggested by the delegate of Lebanon.

1.6 The delegate of Norway expressed support for Document 277 as a good basis for further discussion.

1.7 The delegate of Congo requested the addition of his country's name to those mentioned in paragraph 2 of Annex 1 in Document 259. He too supported the concept of Document 277 and the eventual setting up of a sub-group.

1.8 The delegate of Brazil, while agreeing that the document put forward some useful ideas and that the Finnish modifications deserved consideration, thought it was far from representing a compromise solution; for instance, it offered no solution for extending the existing allocation to the MSS (1.5 - 1.6 GHz), and no proposal which ignored that aspect could be regarded as a compromise.

1.9 The delegate of Nigeria endorsed the protective measures applicable to the MSS set out in Footnote 608Z (Document 234). His Administration had also requested an allocation for the generic MSS in the band 1 900 - 2 200 MHz and would be willing to accept any suitable compromise that could be worked out.

1.10 The delegate of Australia welcomed the constructive approach adopted by the authors of Document 277. However, it would be unfortunate if the constraints imposed upon LEOs were so severe that the new services were hampered. Regarding the proposal for additional MSS allocations, his Administration had proposed an additional MSS allocation at 1 515 - 1 525 MHz in Document 31 and could therefore support the Canadian proposal in Document 272 for expansion of the MSS in the 1.5 - 1.6 MHz range. Finally, his delegation supported the suggestion to set up an ad hoc Group, in which it would be happy to take part.

1.11 The delegate of Canada said that Document 277, in its present form could not form the basis of a consensus; in particular, it contained no proposal for the allocation of mobile-satellite spectrum close to the currently allocated bands. However, he noted with appreciation the suggested allocation to the MSS around 2 GHz. In the view of his Administration, sharing between fixed services and FPLMTS in rural and remote areas would be possible; accordingly, the allocation to the MSS should be moved downwards, in order to permit greater use of the fixed service. The other matters that his delegation wished to raise could more easily be dealt with by an ad hoc or Drafting Group, in which Canada would be prepared to participate.

1.12 The delegate of Saudi Arabia welcomed Document 277, but only as a starting point for discussion. After noting that it focused on extension of the MSS, he emphasized that other services should not be ignored and referred in that connection to the need to protect the broadcasting service in the range 2 500 - 2 690 MHz used for collective reception by ARABSAT and INSAT.

1.13 The delegate of Senegal, referring to Addendum 1 to Document 203 submitted by Benin, Gambia and Senegal, said that his Administration favoured the introduction of LEO systems for the telephone and data transmission services, since they would permit an efficient service to rural areas. As for APC systems, Senegal proposed as a compromise, in the absence of consensus, a choice between the bands 849 - 851 MHz and 894 - 896 MHz for Region 2 and the bands 1 670 - 1 675 MHz and 1 800 - 1 805 MHz for Regions 1 and 3. His delegation was ready to participate in the proposed ad hoc Group.

1.14 The delegate of Japan supported the basic philosophy underlying Document 277, and drew attention to the Japanese proposal for an MSS allocation in a new band (2.5 - 2.6 GHz) using new technology. He joined previous speakers in calling for the establishment of a Group to consider all those issues in further detail.

1.15 The delegate of the United Arab Emirates said it was important for the interests of all parties, not only those which planned LEO systems, to be taken into consideration. The proposal in section 4C of Document 277 to use part of the MSS band for FPLMTS was premature, and all arrangements for the combined utilization of terrestrial space services should be worked out under the guidance of the CCIR. The BSS should not be overlooked in the search for a compromise.

1.16 The delegate of the United States, while welcoming the ideas in Document 277, noted that it was couched in very general terms and would have to be transposed into the format of the Radio Regulations. Only when the Article and Table, text and footnotes were seen together would it be possible to grasp the thrust of the proposals. His delegation would be happy to work with the Chairman or in an ad hoc Group to consolidate them.

1.17 The delegate of Gabon said that Document 277 showed the way towards a compromise in respect of allocations to the various mobile-satellite services. His delegation, which welcomed the suggestion that a Working Group should be set up to examine all the proposals submitted, attached great importance to the protection, at least up to a certain date of existing land services occupying the bands in question.

1.18 The delegate of Pakistan supported the proposal in section 4B of Document 277 because it considered that some exclusive bands for the fixed and mobile services should continue to be provided in the lower part of the spectrum. As for section 5, his delegation had already expressed its concern over the fact that the band 1 910 - 1 990 MHz would not be available in many countries after the year 2000.

1.19 The delegate of Argentina said that his Administration's position was that the exclusive allocations in the 1 610 - 1 626.5 MHz band should not be changed. The band was used by a world satellite navigation system complemented by GPS, both of which were valuable to civil aviation, a sector where security requirements were paramount.

1.20 The delegate of Zimbabwe said that his Administration had entered a reservation with regard to the band above 1 GHz (Document 259), which was used extensively in his country for the development of fixed telecommunication services. It would perhaps be advisable for the Committee to await the outcome of discussions in the ad hoc Group that was considering BSS (Sound) requirements in the 1.5 - 2.5 GHz band.

1.21 The delegate of Singapore, speaking as a signatory of Document 277, said that he understood the concerns expressed and was willing to discuss any suggestions or improvements; he supported the establishment of a small Group to examine the various issues, which were indeed complex.

1.22 The delegate of Ethiopia said that it was because his Administration wished to continue to operate fixed services in the 2 GHz band that Ethiopia was listed in Annex 1 to Document 259, although its name should be moved from paragraph 4 to paragraph 2 of that text. Document 277 did not deal with all the pending items, and it was not a good idea for subjects to be treated in isolation from one another. He too supported the proposal to set up an ad hoc Group.

1.23 The delegate of Syria considered that Document 277 made ample provision for aeronautical mobile services but did not afford sufficient protection for existing services. The various documents before the Committee should therefore be examined in turn, possibly in the order in which they had been introduced, and the various services discussed one after the other. No global solution which did not encompass all the services concerned could be regarded as a compromise.

1.24 The delegate of the Netherlands said he was confident that Document 277 could form the basis for a solution.

1.25 The delegate of India said that Document 277 appeared to focus on all the major issues, particularly in the 1 - 3 GHz band, except for BSS (Sound). The proposals for LEO MSS below 1 GHz also required further consideration. He could agree with what was stated in the document with regard to FPLMTS and APC systems and was pleased to see that INSAT's existing operations would be protected.

1.26 The observer for the International Civil Aviation Organization (ICAO), speaking at the invitation of the Chairman, recalled the statement made by the Secretary-General of ICAO at the second Plenary Meeting. At present, two systems were available for the global navigational satellite system (GNSS): GPS provided by the United States and GLONASS provided by the Russian Federation. The long-term use of both systems had been offered to civil aviation with no cost to users over and above the purchase price of a receiver. He urged delegates not to underestimate the importance of providing adequate protection to GLONASS operation in the 1 610 - 1 626.5 MHz band, since failure to do so might well render the system unusable as a safety service. There seemed to be little in Document 277 that would offer the necessary safeguards.

1.27 The delegate of Tanzania, with the support of the delegate of Nigeria, commented in his introduction to Document 227(Rev.1) that his country welcomed the advent of new technologies to serve remote areas. LEO systems could be used to bring the telephone within reach of all mankind by the beginning of the next century in developing countries, as recommended by the Independent Commission for Worldwide Telecommunications Development. He was therefore in favour of allocating frequencies to those systems for telephone and data transmissions.

1.28 The delegate of Mexico recognized that Document 277 showed a spirit of compromise and he thought that other proposals could be made regarding future satellite telecommunication services. If an ad hoc Group was set up for the purpose, he would like to take part.

1.29 The delegate of Benin introduced Document 203(Add.1) and endorsed the proposals in Document 277, which he considered as a satisfactory working basis for an ad hoc Group to find a consensus.

1.30 The Chairman proposed identifying items which had already been agreed and only subsequently considering the possibility of setting up an ad hoc Group. He suggested considering the various bands listed in Document 270.

Band 137 - 137.025 MHz

1.31 The Chairman said that allocations would be made to the mobile-satellite service on a primary basis, with the addition of a Footnote 599A to protect existing services.

1.32 The delegate of Cuba pointed out that Footnote 599A already appeared in Document 223 prepared by the Working Group of the Plenary. He would like that document to be considered in the analysis of Document 270.

1.33 The Chairman said that footnotes would be considered later, once all the different the types of allocation had been identified.

1.34 The delegate of the Russian Federation proposed that the mobile-satellite service should receive allocations on a secondary basis in the band 137 - 138 MHz.

1.35 The Chairman, after asking delegates if they were in favour of allocations on a primary basis to the BSS, subject to the insertion of a footnote providing protection for existing services, noted that a majority of delegations was in favour of that type of allocation.

1.36 Replying to the delegate of Germany, who expressed the hope that an overall compromise would emerge as a result of the consultation, the Chairman said that he was against decisions being taken by survey; he was only trying to sound out the various opinions.

1.37 The delegate of France shared the concern expressed by the delegate of Germany and said that considering questions one at a time had not led to any solution; he preferred an overall approach and would like to make a statement concerning an overall compromise.

Band 137.025 - 137.175 MHz

1.38 The Chairman noted that the addition of the mobile-satellite service in that band with allocations on a secondary basis met with no objection.

Band 137.175 - 137.825 MHz

1.39 The Chairman noted that the addition of the mobile-satellite service with allocations on a primary basis, subject to the addition of a footnote protecting existing services, met with no objection.

Band 137.825 - 138 MHz

1.40 The delegate of Cuba enquired whether the footnote protecting existing services would be the one given in Document 270 or whether the Committee would need to draft another text in due course to protect services with primary and secondary allocations in the Table.

1.41 The Chairman pointed out that Footnote 599A in Document 270 had been revised by the Chairman of the Working Group to the Plenary and was the text which appeared in Document 223. He invited delegates to decide whether the protection offered was adequate.

1.42 The Chairman of Working Group 4B added that Footnotes 599A and 647X of Document 223 needed to be completed as indicated by the Chairman of the Working Group to the Plenary in section 5 of page 1 of Document 223.

1.43 The delegate of France said that Document 270, in Footnote 599A, mentioned a power flux-density value of -120 dB(W/m^2/4) kHz, and further on to a limit of -223 dB(W/m^2/4) kHz. He would like further clarification.

1.44 The delegate of Australia said that the figure of -125 dB in the footnotes appearing in Document 223 was in fact a threshold value for proceeding to coordination. Administrations wishing to launch a LEO system without undertaking coordination could apply that value. If the value was exceeded, coordination would follow the procedures laid down in the Radio Regulations.

1.45 The delegate of Germany wished to avoid going into detail and proposed that the wording of footnotes should be left to a small Drafting Group. All that mattered was knowing whether a footnote was required or not.

1.46 The delegate of Cuba said that, according to the explanations given, he understood that administrations could launch a system either without seeking coordination by applying a power flux-density limit of -125 dB or use a higher value for the latter, and apply coordination procedures. If so, he would like to know what type of coordination would apply between a service with primary allocations and one with secondary allocations.

1.47 The Chairman reiterated that details of footnotes would be considered later.

Band 400.15 - 401 MHz

1.48 The delegate of the Russian Federation proposed that allocations should be made to the mobile service on a secondary basis and that the square brackets should be deleted. His proposal received no support.

1.49 The Chairman noted that the addition of the mobile service in that band met with no objection.

Band 148 - 150.05 MHz

1.50 The delegate of the Russian Federation, supported by the delegate of Canada, said that as far as the sub-band 148 - 149.9 MHz was concerned, he would like secondary allocations. For the sub-band 149.9 - 150.05 MHz, it had been agreed with Canada that it would not be a good idea to have nothing but mobile-satellite systems (Earth-to-space); it would be better to add land satellite systems, with primary allocations, revising the footnotes accordingly. He was surprised that the proposal in Document 270 did not take account of that agreement.

1.51 The delegate of Germany, supported by the delegate of the Netherlands, said that there was room for the mobile-satellite service in the sub-band 148 - 149.9 MHz but that the sub-band 149.9 - 150.05 MHz should be limited to the land mobile-satellite service.

1.52 The Chairman noted a consensus that the allocations in the sub-band 148 - 149.9 MHz to the mobile service should be on a primary basis and that those in the sub-band 149.9 - 150.05 MHz should be to the land mobile-satellite service and should be primary.

1.53 The delegate of the United Kingdom pointed out that there was a time limit for the allocation of the band to the land mobile-satellite service. That point should be spelt out in a footnote.

1.54 The delegate of Argentina asked when the footnotes relating to the band 148 - 150.05 MHz would be considered, as it did not seem a good idea to detach them from their context, by dealing with the Table separately.

1.55 The Chairman reminded the Committee that the footnotes would be considered later, the aim at the moment being to see if a consensus could be reached on the general allocations. If delegates wanted to set up an ad hoc Group, its terms of reference would have to be clearly defined.

1.56 The delegate of Switzerland agreed, but said it was not absolutely necessary to set up an ad hoc Group to draft the footnotes.

1.57 The delegate of France supported the previous speaker and stressed the need to find some way of dealing with the problem of the different values and different versions of footnotes appearing in different documents.

1.58 The Chairman said he thought he would shortly be able to prepare a consolidated document including the Table and the footnotes.

Band 300 MHz

1.59 The delegate of the Russian Federation proposed that the text relating to bands 312 - 315 MHz and 387 - 390 MHz should be left as it appeared in Document 270 and that the square brackets should be deleted.

1.60 The delegate of Japan, supported by the delegate of Pakistan, maintained that it was not necessary to discuss the Table of Frequency Allocations, since the introduction of the mobile-satellite service in the band in question was permitted by Footnote 641.

1.61 The delegate of the Netherlands, supported by the delegate of Norway, asked the delegation of the Russian Federation to reconsider its proposal, given that its country had a large number of fixed and mobile applications in the band. He was not in favour of abolishing the procedure in Article 14 of the existing Regulations.

1.62 The Chairman noted that the proposal by the delegation of the Russian Federation concerning bands 312 - 315 MHz and 387 - 390 MHz had aroused misgivings.

Bands 610 - 890 MHz and above 1 GHz

1.63 The Chairman noted that there were not many delegations in favour of the proposal to introduce the mobile-satellite service in the band 610 - 890 MHz. That service needed a greater portion of the spectrum for its future applications. The question was what bandwidth could be allocated to the service above 1 GHz.

1.64 The delegate of Brazil asked for a more specific indication of the bandwidth required. He noted that it would depend on the compromise proposed.

1.65 The Chairman said that according to Document 272 what was needed was about 100 MHz.

1.66 The delegate of France said that his delegation had twice tried to find a bandwidth of 50 MHz above 2.5 GHz. The authors of Document 277 had done their best to take all other proposals into account, in order to arrive at a compromise, and had twice proposed bandwidths of 60 to 70 MHz. He thought it would be very difficult to give a specific figure without knowing the frequency bands concerned.

1.67 The delegate of Canada, referring to the CCIR report to the Conference, said that the value of 89 MHz in each direction could be very useful for the work of the Committee.

1.68 The delegate of the United States said that while the bandwidth required depended on the band in question and on the type of orbit used, his delegation arrived at a figure of around 200 MHz. The possibility of sharing the bandwidths in question with existing services should not be overlooked.

1.69 The delegate of France explained for the benefit of the delegate of the Russian Federation the considerations which had prevailed in arriving at the bandwidth required. It should be remembered that the introduction of the services in those bands could be spread over a period of time.

The meeting rose at 2305 hours.

The Secretary:	The Chairman:
T. GAVRILOV	I.R. HUTCHINGS

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MALAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 299-E
27 February 1992
Original: English

PLENARY MEETING

MINUTES

OF THE

EIGHTH PLENARY MEETING

Thursday, 27 February 1992, at 2005 hours

Chairman: Mr. J. BARRIONUEVO PEÑA (Spain)

Subjects discussed		Documents
1.	Statements by delegations	-
2.	Approval of the minutes of the fourth and fifth Plenary Meetings	195, 244
3.	Seventh series of texts submitted by the Editorial Committee for first reading (B.7)	276
4.	Eighth series of texts submitted by the Editorial Committee for first reading (B.8)	283
5.	Second series of texts submitted by the Editorial Committee for second reading (R.2)	284

1. Statements by delegations

1.1 The delegate of Saudi Arabia announced that the third ARABSAT satellite had just been launched and was taking up its assigned orbital position. The event had been a complete success and he offered his thanks to all concerned. He also congratulated Japan, which had launched a satellite jointly with the ARABSAT one.

1.2 The delegate of Japan expressed his satisfaction at the successful launching and thanked all those involved.

1.3 The Chairman said that the applause of the meeting was evidence of its pleasure at the news and offered his warmest congratulations to the countries concerned.

2. Approval of the minutes of the fourth and fifth Plenary Meetings (Documents 195 and 244)

2.1 The Chairman of Committee 5 said that he would submit to the Secretariat a written correction to paragraph 2.28 of the minutes of the fourth Plenary Meeting.

2.2 The Chairman of the IFRB said that he would submit to the Secretariat a text for insertion in place of paragraph 2.8 of the minutes of the fourth Plenary Meeting.

2.3 Subject to those amendments, the minutes of the fourth Plenary Meeting (Document 195) were approved.

2.4 The minutes of the fifth Plenary Meeting (Document 244) were approved without comment.

3. Seventh series of texts submitted by the Editorial Committee for first reading (B.7) (Document 276)

3.1 The Chairman of Committee 6 said that the texts in Document 276 emanated from two sources: first, the Preamble to the Final Acts from the Secretary-General and, second, four texts from Committee 5.

Preamble

3.2 The Secretary-General said that the amendments proposed at the fifth Plenary Meeting had been incorporated, with the exception of that to replace "Member of the Union" by "Administration". On checking it had been found that although "Administration" had been used in a number of previous Final Acts, legally "Member of the Union" was more correct in such a context. He therefore suggested that the text should remain as it stood.

3.3 The delegate of Japan said that he had proposed the change on the basis of the definition of "Administration" in Annex 2 to the Nairobi Convention; however, he could accept the Secretary-General's explanation.

3.4 The delegate of Algeria, while not opposing the wording in Document 276, considered that the situation might be clearer at the time when the text was submitted for second reading.

3.5 The Preamble was approved.

Article 1 (Section VIII)

3.6 Approved without comment.

Resolution COM5/5

3.7 The Chairman of Committee 5 said that the square brackets in the title and body of the Resolution should remain, pending decisions by Committee 4. In the Annex to the Resolution, Section III, the power flux-density figures had been approved and the square brackets around "-115" and "-105" could therefore be deleted.

3.8 Subject to that amendment, the Resolution and its Annex were approved.

3.9 In reply to the delegate of Saudi Arabia, who said that he would have preferred the frequency bands to remain unspecified until a relevant decision had been taken, the Chairman of Committee 5, supported by the Chairman of Committee 4, emphasized that the figures were provisional in any case.

3.10 In reply to the delegate of Syria, who sought clarification regarding both the frequency bands and the figures "-115" and "-105" in Section III of the Annex, the Chairman suggested that the Chairman of the Working Group of the Plenary might be requested to reply later.

3.11 It was so agreed.

Resolution COM 5/6

3.12 The Chairman of Committee 5 said that the parts of the text in square brackets were awaiting decisions by Committee 4.

3.13 The Resolution was approved on that understanding.

Resolution COM5/7

3.14 The Chairman of Committee 5 read out a series of amendments to be made to the draft Resolution in order to reflect decisions taken subsequent to its publication in Document 276.

3.15 The delegate of Japan said that in **considering** d) the words "from the IFRB" had been omitted and should be reinstated after "special assistance".

3.16 The delegate of Morocco said that he had no objection to reinstatement of the deleted text; he further proposed the addition of the words "as well as in application of Resolution COM5/[ ]" at the end of the same paragraph.

3.17 The Chairman of Committee 5 undertook to supply the number of the relevant Resolution.

3.18 Resolution COM5/7 was approved subject to those amendments.

3.19 The seventh series of texts submitted by the Editorial Committee (B.7) (Document 276), as a whole, as amended, was approved on first reading.

4. Eighth series of texts submitted by the Editorial Committee for first reading (B.8) (Document 283)

MOD Table 13.75 - 14 GHz

4.1 Approved subject to deletion of the square brackets and of the reference to 855C.

ADD 855A

4.2 The Chairman of the IFRB pointed out that the second sentence could not be applied by the IFRB; it was a matter for administrations.

4.3 ADD 855A was approved on that understanding.

ADD 855B

4.4 The Chairman of Committee 4 said that during consultations following a meeting of Committee 4, a second version of Footnote 855B was proposed of which the text appears in square brackets in the document. If it were approved, the first version and the square brackets around the second could be deleted. The word "satellite" in the second line of both versions of the text should be deleted.

4.5 The delegates of Nigeria and Brazil supported the second version of the footnote.

4.6 The Chairman of the IFRB, replying to a request for clarification by the delegate of the United States, said that in the second version of the footnote, it was important to distinguish between the first and second paragraphs. The first concerned the relationship between the fixed-satellite service and geostationary space stations in the space research service whereas the second concerned that between the fixed-satellite service and non-geostationary stations.

4.7 The second version of ADD 855B was approved. As a consequence, it was agreed to remove the square brackets and to delete the first version of 855A altogether.

ADD 855C

4.8 Deleted, at the proposal of the delegate of the United States.

MOD 404

4.9 The delegate of Belarus said that due to recent political changes and the fact that the former Ministry of Communications of the USSR was no longer in existence, a Coordinating Council had been set up consisting of the administrations of the former Republics, with Lithuania, Latvia and Estonia participating as observers. As a result of that Council's deliberations on the question of participation in international organizations such as the ITU and UPU, the Administration of the Russian Federation had been entrusted with the task of representing the interests of certain other Telecommunication Administrations. Belarus and Ukraine, however, would be representing their own interests, while Latvia, Lithuania, and Estonia would adopt a position at their discretion.

4.10 The delegate of the Russian Federation requested that MOD 404 be placed in square brackets for the time being, in view of the statement he had made at the previous Plenary Meeting. Consultations were being held with a view to having that statement entered in the Final Acts of the Conference. Footnote 404 - and others similar - could be reverted to when the problem had been solved.

4.11 It was so agreed.

Resolution COM4/1

Considering a) - d), recognizing a) and b)

4.12 Approved.

"Resolves to invite the CCIR"

4.13 Approved subject to replacement of the words "the footnotes" in paragraph 1 by "No. 855A of the Radio Regulations".

"also resolves"

4.14 Approved.

"further resolves"

4.15 In reply to a question by the delegate of Saudi Arabia, the Chairman of the IFRB said that in general the Board did not involve itself in bilateral coordination procedures; however, there had been a number of cases in which it had participated in discussions in an advisory capacity and provided general assistance with coordination problems at the request of the administrations concerned.

4.16 The "**further resolves**" paragraph was approved.

"instructs the Secretary-General"

4.17 Approved subject to the same amendment as that made to paragraph 1 under "**resolves to invite the CCIR**".

4.18 Resolution COM4/1 as a whole, as amended, was approved.

4.19 The eighth series of texts submitted by the Editorial Committee (B.8) (Document 283), as a whole, as amended, was approved on first reading.

5. Second series of texts submitted by the Editorial Committee for second reading (R.2) (Document 284)

5.1 The Chairman of Committee 6 said that the note by Committee 4 on the cover page was still relevant because the Plenary had not yet taken a decision of principle on the footnotes in question.

Article 1

NOC 3, 4, 7, MOD 24, NOC 26, NOC 36, MOD 48, NOC 110, 111, 112, 117, NOC 163

5.2 Approved.

Article 8

MOD Table 31.3 - 33.4 GHz, SUP 890, SUP 891, MOD 893

5.3 Approved.

MOD Table 33.4 - 40.5 GHz, SUP 895, MOD 896, SUP 899

5.4 In reply to a question by the delegate of Algeria concerning the provisional allocation to the space research service in the 37 - 37.5 GHz band, the Chairman of Committee 5 said that the square brackets around the name of that service and the associated note at the bottom of the page could now be deleted.

5.5 The Table, as amended, was approved.

5.6 SUP 895 and SUP 899 were approved.

5.7 It was decided to retain the square brackets around MOD 896 pending a decision on how to deal with the reference to the USSR.

MOD Tables 66 - 86 GHz and 151 - 185 GHz

5.8 Approved.

MOD 446, 447, 449, 457, SUP 464A, 481, 551, MOD 555, SUP 569, MOD 571, 581, 587 (Mob-87)

5.9 The Chairman of Committee 4 observed that the square brackets which had been placed around all those provisions related to the question of principle that had been raised regarding the relevance of the texts to the Conference agenda; they had no bearing on the replacement of the name of the former USSR.

5.10 The delegate of Senegal said that the question of whether the Conference was competent to consider footnotes on matters not strictly speaking on its agenda was one of substance and required legal advice.

5.11 The delegate of Spain said that his own and other delegations held the view that the Conference was empowered to consider such texts under item 2.6 of its agenda.

5.12 The Secretary-General endorsed that interpretation.

5.13 The Chairman said that if he heard no objection he would take it that the meeting was prepared to delete the collective square brackets around all the provisions on page R.2/6. Square brackets would, however, be retained around the footnotes with reference to the USSR, until one of the next Plenaries.

5.14 It was so agreed.

MOD 777, 779, 780, SUP 782, MOD 797B, 798, 800, 803, 804, 819, 826, 830, 834, 857, 866, 885, 889

5.15 A number of delegations having asked for the name of their country to be either added to or removed from certain of those footnotes, the delegate of Morocco, speaking on an point of order, said that it was inappropriate to modify texts submitted for second reading. The correct procedure would be for delegations wishing to add country names to submit their requests to the Editorial Committee, which could then compile a single document for submission to the Plenary for first reading.

5.16 It was so decided.

5.17 The Chairman of Committee 6 asked for any changes to be submitted to him in writing by the evening of Friday, 28 February.

Article 29

MOD 2613

5.18 Approved.

Article 55

NOC Mob-87, NOC 3860 to 3979 Mob-87

5.19 Approved.

Article 56

NOC Mob-87, NOC 3987, 3988, MOD 3989, 3990, SUP 3991, MOD 3992, 3993, NOC 3994 to 4011

5.20 Approved.

Resolution COM5/4

5.21 Approved.

5.22 Subject to the outcome of decisions in Committee 4, the second series of texts submitted by the Editorial Committee (R.2) (Document 284), as a whole, as amended, was approved on second reading.

The meeting rose at 2200 hours.

The Secretary-General:
P. TARJANNE

The Chairman:
J. BARRIONUEVO PEÑA

INTERNATIONAL TELECOMMUNICATION UNION

WARC-92 WARC FOR DEALING WITH FREQUENCY ALLOCATIONS IN CERTAIN PARTS OF THE SPECTRUM

MÁLAGA-TORREMOLINOS, FEBRUARY/MARCH 1992

Document 300-E
28 February 1992

LIST OF DOCUMENTS

(Documents 251 to 300)

No.	Origin	Title	Destination
251	S	Proposals for the work of the Conference	C4
252	C4	Fifth series of texts from Committee 4 to the Editorial Committee	C6
253	Ad hoc Group 1 to C4	Report of the Chairman of ad hoc 1 to Committee 4 - Allocation of frequency bands to BSS (HDTV) and the associated feeder links	C4
254	WG PL	Sharing criteria in Articles 27 and 28 (First reply)	C5
255	WG PL	Generalized coordination distance for coordination between fixed stations and typical earth stations operating in non-geostationary satellite networks	C5
256	MEX	Proposals for the work of the Conference	C5
257	WG 5B	Seventh and last report of Working Group 5B to Committee 5	C5
258	WG 4B	Consideration of Agenda Item 2.2.3a (BSS (Sound))	C4
259	WG 4B	Consideration of Agenda Item 2.2.4c (FPLMTS - Terrestrial Component)	C4
260	C4	Summary Record of the ninth meeting of Committee 4	C4
261	C4	Summary Record of the tenth meeting of Committee 4	C4
262	C4	Summary Record of the eleventh meeting of Committee 4	C4
263	C5	Summary Record of the eighth meeting of Committee 5	C5
264	C5	Summary Record of the ninth meeting of Committee 5	C5
265	C5	Summary Record of the tenth meeting of Committee 5	C5
266	PL	Minutes of the sixth Plenary Meeting	PL
267	C5	Seventh series of texts from Committee 5 to the Editorial Committee	C6
268	WG 4B	Note from the Chairman of Working Group 4B	C4
269(Rev.1)	SG	Note of the IFRB: Financial implications of the decisions of WARC-92	C3,C4,C5
270	WG 4B	Consideration of Agenda Item 2.2.4 (MSS)	C4

No.	Origin	Title	Destination
271	C5	Note from the Chairman of Committee 5	C5
272	CAN	Proposals for the work of the Conference	C4
273	SG	Situation of the accounts of the Conference as at 25 February 1992	C3
274	WG PL	Trans-horizon radio-relay systems in the 2 025 - 2 110 MHz and 2 200 - 2 290 MHz bands	C4, C5
275	Ad hoc Group 1 to C4	Note from the Chairman of ad hoc 1 to Committee 4	C4
276	C6	B.7 - Seventh series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
277 + Corr.1	ALG, CME, CAF, DNK, F, LBN, LTU, LVA, NGR, POL, G, SEN, SNG, SWZ, TCD	Proposals for the work of the Conference	C4
278	MRC	Proposals for the work of the Conference	PL
279	BLR, URS, UKR	Proposals for the work of the Conference	C4
280	WG 4B	Consideration of Agenda Item 2.2.4 (MSS)	C4
281	C5	Proposed text for Resolution COM5/[ ] (Document 257)	C5
282	C2	Report by Committee 2 to the Plenary Meeting (Credentials)	PL
283	C6	B.8 - Eighth series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
284	C6	R.2 - Second series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
285	CLM, CUB, EQA, E, PNR	Draft Resolution relating to the Establishment of Standards for the Operation of Low-Orbit Systems	C5
286	SG	Final days of the Conference	-
287	C5	Eighth series of texts from Committee 5 to the Editorial Committee	C6
288	C4	Sixth series of texts from Committee 4 to the Editorial Committee	C6
289	C4	Summary Record of the twelfth meeting of Committee 4	C4
290	C5	Summary Record of the eleventh meeting of Committee 5	C5

No.	Origin	Title	Destination
291	PL	Minutes of the seventh Plenary Meeting	PL
292	C2	Summary Record of the second and last meeting of Committee 2	C2
293	C5	Ninth series of texts from Committee 5 to the Editorial Committee	C6
294	C5	Revision of Resolution COM5/[ ] - Introduction of Systems in the Broadcasting-Satellite Service (Sound), BSS (Sound) in the Band [ ], including the Complementary Terrestrial Sound Broadcasting Users	C5
295	C6	R.3 - Third series of texts submitted by the Editorial Committee to the Plenary Meeting	PL
296	C3	Report of the Budget Control Committee to the Plenary Meeting	PL
297	C4	Summary Record of the thirteenth meeting of Committee 4	C4
298	C4	Summary Record of the fourteenth meeting of Committee 4	C4
299	PL	Minutes of the eighth Plenary Meeting	PL
300	SG	List of documents (251 - 300)	-