Documents of the Regional Administrative MF Broadcasting Conference (Region 2) (1st session) (RARC-1)

(Buenos Aires, 1980)

To reduce download time, the ITU Library and Archives Service has divided the conference documents into sections.

- This PDF includes Document DT No. 1 - 20.
- The complete set of conference documents includes Document No. 1 - 139, DL No. 1 - 5, DT No. 1 - 20.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document No. DT/1-E
10 March 1980
Original : English

PLENARY MEETING

Note by the Secretary-General

COMMITTEE STRUCTURE

The Administrative Council at its 34th Session, Geneva, 1979, adopted Resolution No. 835 which contains the agenda of the Regional Broadcasting Conference, Buenos Aires, 1980. This Resolution is reproduced in the Annex to Document No. 1 of this Conference.

The suggestions made below were arrived at in the light of the committee structure at previous conferences and the provisions of the above-mentioned Administrative Council Resolution.

Committee 1 - Steering Committee

Terms of Reference :

To coordinate the work of the Committees, fix the timetable of meetings, etc.

Committee 2 - Credentials Committee

Terms of Reference :

To verify the credentials of delegations and to report on its conclusions to the Plenary Meeting within the time specified by the latter (No. 369 of the International Telecommunication Convention, Malaga-Torremolinos, 1973).

Committee 3 - Budget Control Committee

Terms of Reference :

To determine the organization and the facilities available to the delegates, and to examine and approve the accounts for expenditure incurred throughout the duration of the Conference (No. 442 of the International Telecommunication Convention, Malaga-Torremolinos, 1973).

Committee 4 - Technical Criteria Committee

Terms of Reference :

To establish the technical criteria for the basis of the preparation, by the second session of the Conference, of the Frequency Assignment Plan for the MF Broadcasting Band (535 - 1 605 kHz) in Region 2, taking into account the following non-exhaustive list of items :

- definitions;
- propagation data;
- modulation standards and channel spacing;
- protection ratios, including noise levels;
- required values for the minimum usable field strength, for the usable field strength and for the nominal usable field strength;
- transmitting antenna characteristics and transmitter powers.

Committee 5 - Planning Criteria Committee

Terms of Reference :

a) To establish the planning criteria and methods for the basis for the preparation, by the second session of the Conference, of a Frequency Assignment Plan for the MF Broadcasting Band (535 - 1 605 kHz) in Region 2;

b) To specify the form in which requirements for inclusion into the Frequency Assignment Plan should be submitted to the Union and to fix a date by which they should be submitted;

c) To adopt any recommendation which the first session may consider useful for the second session of the Conference.

Committee 6 - Editorial Committee

Terms of Reference :

To perfect the form of the approved texts of the first session without altering the sense (No. 527 of the International Telecommunication Convention, Malaga-Torremolinos, 1973).

M. MILI

Secretary-General

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFERENCE REGIONALE DE RADIODIFFUSION

(PREMIÈRE SESSION) BUENOS AIRES, 1980

Document N° DT/2-F/E/S
10 mars 1980
Original : français
anglais
espagnol

SEANCE PLENIERE
PLENARY MEETING
SESION PLENARIA

Note du Secrétaire général / Note by the Secretary-General / Nota del Secretario General

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

Plénière / Plenary / Plenaria	: 1
C2 - Pouvoirs / Credentials / Credenciales	: 2
C3 - Budget / Presupuesto	: 3, 4, 14
C4 - Critères techniques / Technical Criteria / Criterios técnicos	: 5 (Rev.) + Add. 1, 6 + Corr. 1, 8, 9, 10, 11 + Add. 1, 12, 13, 15, 16, 17
C5 - Critères de planification / Planning Criteria / Criterios de planificación	: 5 (Rev.) + Add. 1, 7, 8, 9, 10, 11 + Add. 1, 12, 15

M. MILI
Secrétaire général

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document No. DT/3 -E
10 March 1980
Original : English

HEADS OF DELEGATIONS

DRAFT

AGENDA

OF THE

FIRST PLENARY MEETING

Monday, 10 March 1980, at 1500 hrs

		Document No.
1.	Opening of the Conference	-
2.	Election of the Chairman of the Conference	-
3.	Election of the Vice-Chairmen of the Conference	-
4.	Address by the Secretary-General	-
5.	Committee structure	DT/1
6.	Election of Chairmen and Vice-Chairmen of Committees	-
7.	Composition of the Conference Secretariat	-
8.	Allocation of documents to the Committees	DT/2
9.	Invitations to the Conference	18
10.	Notifications to international organizations	19
11.	Date by which the Credentials Committee shall formulate its conclusions	-
12.	Schedule of the work of the Conference	-
13.	Other business	-

M. MILI

Secretary-General

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document No. DT/4(Rev.1)-E
13 March 1980
Original : English
French
Spanish

COMMITTEE 5

ORGANIZATION OF THE WORK OF COMMITTEE 5

1. Terms of reference

a) To establish the planning criteria and methods for the basis for the preparation, by the second session of the Conference, of a Frequency Assignment Plan for the MF Broadcasting Band (535 - 1 605 kHz) in Region 2;

b) To specify the form in which requirements for inclusion into the Frequency Assignment Plan should be submitted to the Union and to fix a date by which they should be submitted;

c) To adopt any recommendation which the first session may consider useful for the second session of the Conference.

2. Analysis of the terms of reference

Pursuant to the decision adopted at the joint meeting of Commitees 4 and 5, Document No.5 (Rev.1) is to be used as a reference document. A study of the terms of reference of Committee 5 reveals the following points; each point is accompanied by a reference to the relevant paragraph of Document No. 5 and, wherever possible, a reference to the other proposals from administrations:

1. General principles to be taken as a basis for planning: Does the Committee want its report to contain a statement of the general principles to be adopted as a basis for planning?

2. Planning methods (Chapter III of Document No. 5(Rev.1), Documents Nos. CAN/21 and ARG/26).

2.1 Class of station:

The joint meeting of Committees 4 and 5 adopted the principle of using three classes of stations, which should be defined (Chapter I, paragraphs I.2 to I.4 Document No. 5(Rev.1), Documents Nos. 8, 9, 11, 12).

2.2 Protection criteria (use of the curve 50% or 10%);(paragraph 10, Chapter II, Document No. 5(Rev.1); Corr.1 to Document No. ARG/6; URG/10; 11; CUB/37).

2.3 Primary service zone and secondary service zone (Chapter I, paragraphs I.17 and I.18, Document No. 5(Rev.1), Documents Nos. 8, 9, 11, 12).

2.4 Objectionable interference (Chapter I, paragraph 1.19, Document No. 5(Rev.1); CAN/9; USA/12).

2.5 Protected contour (Chapter I, paragraph I.10, Document No. 5(Rev.1), Documents Nos. 8, 9, 11, 12.

2.6 Maximum station power (paragraph 7 of Document No. 5(Rev.1); Documents Nos. SLV/8, CAN/9, URG/10, USA/12, ARG/25, URG/35).

2.7 Protection outside national boundary (Documents Nos. URG/7 and CAN/9).

2.3 Maximum permissible field strength:

2.4 Protected contour (Chapter I, paragraph I.10, Document No. 5(Rev.1), Documents Nos. 8, 9, 11, 12.

2.5 Service zone to be protected beyond the national territory (Document No. 7).

3. Deadline for submitting requirementes

3.1 Eventual confirmation of the list of requirements sent to the IFRB.

3.2 Any modifications to the list.

3.3 Model forms for communicating requirements or modifications to the list.

4. Instructions to the IFRB for the processing of the list.

5. Provisional procedures to be followed for modifications to the list.

6. Any recommendations to the Second Session.

A. ITUASSU

Chairman of Committee 5

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

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French
Spanish

COMMITTEE 5

ORGANIZATION OF THE WORK OF COMMITTEE 5

1. Terms of reference

a) To establish the planning criteria and methods for the basis for the preparation, by the second session of the Conference, of a Frequency Assignment Plan for the MF Broadcasting Band (535 - 1 605 kHz) in Region 2;

b) To specify the form in which requirements for inclusion into the Frequency Assignment Plan should be submitted to the Union and to fix a date by which they should be submitted;

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1. General principles to be taken as a basis for planning: Does the Committee want its report to contain a statement of the general principles to be adopted as a basis for planning?

2. Planning methods (Chapter III of Document No. 5(Rev.1), Document No. 21)

2.1 Class of station:

The joint meeting of Committees 4 and 5 adopted the principle of using three classes of stations, which should be defined (Chapter I, paragraphs I.2 to I.4 Document No. 5(Rev.1), Documents Nos. 8, 9, 11, 12).

2.2 Primary service zone and secondary service zone (Chapter I, paragraphs I.17 and I.18, Document No. 5(Rev.1), Documents Nos. 8, 9, 11, 12).

2.3 Maximum permissible field strength:

2.4 Protected contour (Chapter I, paragraph I.10, Document No. 5(Rev.1), Documents Nos. 8, 9, 11, 12.

2.5 Service zone to be protected beyond the national territory (Document No. 7).

3. Deadline for submitting requirementes

3.1 Eventual confirmation of the list of requirements sent to the IFRB.

3.2 Any modifications to the list.

3.3 Model forms for communicating requirements or modifications to the list.

4. Instructions to the IFRB for the processing of the list.

5. Provisional procedures to be followed for modifications to the list.

6. Any recommendations to the Second Session.

A. ITUASSU

Chairman of Committee 5

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document No. DT/5-E
12 March 1980
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COMMITTEE 4

ESTABLISHMENT OF WORKING GROUPS

As a result of decisions made in Committee 4 on 11 March 1980, the following Working Groups are established with the Chairmen and terms of reference as indicated:

WORKING GROUP 4/1: Chairman: MR. VALENCIA (Mexico)

Terms of Reference:

Chapter II of Doc. 5(Rev.1)
Items 1, 2, 3, 5.2, being:
- Class of emission
- Bandwidth of emission
- Channel separation
- Adjacent channel protection ratios

WORKING GROUP 4/2: Chairman: MR. TABOADA (Argentina)

Terms of Reference:

Chapter II, Item 8 of Doc. 5(Rev.1) being:
- Nominal usable field strength

WORKING GROUP 4/3: Chairman: DR. CROMBIE (United States)

Terms of Reference:

Chapter II, Section 9, Section 10, Annex C and Annex B-III fo Doc. 5(Rev.1) being:
- Ground wave and sky wave propagation
- Calculations of antenna characteristics

Members of Committee 4 are informed that Working Group 4/1 has been given first priority and that Working Group 4/2 will not commence operation until either Working Group 4/1 or Working Group 4/3 has finished; this is to enable maximum participation in the work.

C. ROMERO
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Addendum No. 1 to
Document No. DT/6-E
12 March 1980
Original: English

AIDE MEMOIRE

To the topics attributed to Working Group 4/3 add the following:

Chapter I, 1.20, 1.21, 1.22 and 1.23.

C. ROMERO
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document No. DT/6-E
12 March 1980
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COMMITTEE 4

AIDE MEMOIRE

As a result of decisions taken in Committee 4 on 11 March, and referring to Document No. 5(Rev.1), topics were allocated as follows :

Drafting Group: Chapter I

1.1, 1.5, 1.9, 1.11, 1.12, 1.13, 1.14, 1.15, 1.16, 1.24.

Working Group 4/1: Chapter II

1, 2, 3, 5.2, and the definition of 1.1 of Chapter I.

Working Group 4/2: Chapter II

Section 8

Working Group 4/3: Chapter II

Section 9, Section 10, Annex B-III, Annex C.

The following topics are held over pending information from Committee 5

Chapter I, 1.2, 1.3, 1.4, 1.10, 1.17, 1.18, 1.19

Chapter II, Section 6, Section 7

C. ROMERO
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Addendum No. 1 to
Document No. DT/7-E
14 March 1980
Original : English

WORKING GROUP 4/3

DRAFT

FIRST REPORT OF WORKING GROUP 4/3 TO COMMITTEE 4

ANNEX F

PATH PARAMETERS

If a_T and b_T respectively are the latitude and longitude of the transmitting terminal, and a_R and b_R those of the receiving terminal, then the path parameters may be calculated as follows : North and East are considered positive; South and West negative.

- Great-Circle path distance

$d = 111.18 \times d^\circ$ [km], where

$d^\circ = \arccos [\sin a_T \sin a_R + \cos a_T \cos a_R \cos (b_R - b_T)]$,

- Geographic Azimuth of the path from either terminal.

For the transmitting terminal, for example,

$$\alpha_T = \arccos \left(\frac{\sin a_R - \cos d^\circ \sin a_T}{\sin d^\circ \cos a_T} \right)$$

determined such that $0^\circ \leq \alpha < 180^\circ$. The geographic bearing to the receiving terminal is α_T if $b_R > b_T$, or is $(360^\circ - \alpha_T)$ if $b_t > b_r$. The same equation, with latitudes reversed, is used for the receiving terminal.

- Direction of propagation at either terminal relative to magnetic East-West.

$$\beta = \left| 90^\circ + \delta - \alpha \right| ,$$

where δ is the magnetic declination at the terminal, as determined from Figure 8 of Annex B - I, considered positive for east declination.

- Path midpoint latitude

$a = \arcsin [\sin a_T \cos (d^\circ/2) - \cos a_T \sin (d^\circ/2) \cos \alpha_T]$

- Path midpoint longitude

$$b = b_T + \arccos \left[\frac{\arccos (d^\circ/2) - \sin a_T \sin a}{\cos a_T \cos a} \right]$$

Note that the transmitting location was used in these equations for a and b, but alternatively the receiving location may be used.

- Geomagnetic latitude of path midpoint

$\phi = \arcsin [\sin a \sin 78.5^\circ + \cos a \cos 78.5^\circ \cos (69^\circ + b)]$

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

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WORKING GROUP 4/3

DRAFT

FIRST REPORT OF WORKING GROUP 4/3 TO COMMITTEE 4

Working Group 4/3 met on Wednesday 12 March 1980 and Thursday 13 March 1980 and agreed to the following texts. References to pages and figures are to Document No. 5 (Rev.1) unless otherwise specified.

CHAPTER I

1. Definitions

MOD 1.9 Characteristic field strength (E_c): The field strength at a reference distance of 1 km in a horizontal direction, of the ground wave signal propagated along perfectly conducting ground, for 1 kW fed to the antenna.

Note: a) the gain (G) of the transmitting antenna relative to an ideal short vertical antenna

$$G = 20 \log_{10} \frac{E_c \ \text{mV/m}}{300 \ \text{mV/m}} \quad \text{dB}$$

b) effective monopole radiated power (e.m.r.p.) given by

$10 \log_{10} P_t$ kW + G dB (1kW)

when P_t is the transmitter power.

NOC 1.20 Daytime operation. Operation between the times of local sunrise and local sunset.

NOC 1.21 Night-time operation. Operation between the times of local sunset and local sunrise.

MOD 1.22 Skywave, 10% of the time: Skywave, the median field strength during the reference hour which is not exceeded for more then 10% of the nights of the year. The reference hour is the hour centered on a time 2 hours after sunset at the mid-point of the great-circle path.

MOD 1.23 Skywave, 50% of the time. Skywave, the median field strength during the reference hour which is not exceeded for more than 50% of the nights of the year. The reference hour is the hour centered on a time 2 hours after sunset at the mid-point of the great-circle path.

CHAPTER II

10. Calculation of sky-wave field strength

Annex B: Method

Document No. 5 (Rev.1)

ADD Page 18 s_m: the greatest distance between a terminal and the sea, km, at which any sea gain applies.

MOD page 18 $\emptyset$: geomagnetic latitude of mid-point of the great-circle path.

MOD page 18 a : geographic latitude of mid-point of the great-circle path. *

MOD page 18 b : geographic longitude of mid-point of the great-circle path. *

SUP page 18 $\emptyset_T$

SUP page 18 $\emptyset_R$

MOD page 18 d : great-circle path distance, km *

NOC page 19 General Procedure points (1), (2), (3), (4).

MOD point (5) Add after "Figure 4 or Table 3" the following:

"Note: Values of F_C in Figure 4 and Table 3 are normalized to 100 mV/m at 1 km, corresponding to an effective monopole radiated power (e.m.r.p.) of -9.5 dB relative to 1 kW."

MOD page 19 point (6)

In formula (4) replace factor 1.75 by factor 1.4. Otherwise no change in text on pages 19 and 20, with the exception of the last sentence should be deleted.

ADD: "To facilitate calculations, Fig. ... (Fig. 37 of Doc. 11) shows the greatest distance, S_m, of a location from the sea for which sea gain should be calculated. If both terminals are near the sea, G_S is the sum of the values for the individual terminals.

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* See Annex /__ __/

Note: This method for sea gain is proposed with the understanding that the IFRB will be able to implement a digital map of the coast line of countries in Region 2 in time for the necessary calculations to be performed. In order to achieve an accuracy of 2 dB in the determination of sea gain the definition of the digital map must be such that distances to the coast may be determined to an accuracy of 5 km.

If the IFRB are unable to undertake the necessary calculations in time for the preparation for the second session of the Conference, then sea gain should not be included in the calculations undertaken for existing stations considered in the Conference planning. The definition of an "existing station" is to be determined. Additional stations which are to be subsequently added into the plan should utilise the full calculation procedure for sea gain.

MOD page 20 point (7): Existing text until the end, except the brackets which should read:

"(see Figures 6, 7, 8 and Annex ...)"

NOC page 20 point (8)

MOD page 20 point (9)

The skywave field strength exceeded for 10% of the time is given by:

$$F(10) = F(50) + \Delta \text{ is dB relative to } 1\mu V/m \qquad (7)$$

$$\text{where } \Delta = \begin{cases} 6 \text{ (dB)} & |\phi| < 40^\circ \\ 0{,}2\,|\phi| - 2 \text{ (dB)} & 40 < |\phi| < 60^\circ \\ 10 \text{ (dB)} & |\phi| \geq 60^\circ \end{cases} \qquad (8)$$

and where ϕ is the geomagnetic latitude at the mid-point of the path. Figure 9 may be used instead of equation 8. A method for determining ϕ is given in Annex (new proposal). Alternatively Figure 10 may be used.

(10) The nocturnal variation of skywave field strength

Hourly median skywave field strengths vary during the night and at sunrise and sunset. (Fig. 44) (Doc. 11) shows the average variation referred to the value at 2 hours after sunset at the path midpoint. This variation applies to field strengths occurring for both 50% and 10% of the nights.

(11) Sunrise and sunset times

To facilitate the determination of the local time of sunrise and sunset, Fig. 45 , Doc.11, gives the times for various geographic latitudes of the path midpoint (see Annex ...) and for each month of the year. The time is the local meridian time at the midpoint and should be converted to take account of the appropriate standard time (zone).

MOD Page 21 Replace Fig. 1 by Fig. 50 (page 94) of Document No. 11 but only with curve A = 0.25λ. The ideal curve will be added with dashes together with an explanation.

NOC Pages 22 to 28

MOD Page 29 Figure 4 should be plotted on a double size sheet with a uniform distance scale. A caption should be added.

NOC Pages 30 to 31

MOD Page 32 Add caption

"Sea gain (G_o) for a single terminal on the coast

(G_o = 10 dB for d > 6500 km) "

MOD Page 33 Replace present figure 6 by figure 39 (page 59) of Document No. 11. Amend on new figure 6 the angle θ to β in three places, in the diagram, in the abscissa scale and in the title.

NOC Page 34 to 35

MOD Page 36 Add caption

NOC Page 37

MOD Page 38 : Replace present text by the following :

METHOD OF CALCULATION OF ROOT SUM SQUARE (RSS) NIGHT-TIME LIMITATION OF A CLASS B OR CLASS C STATION

The interference from two or more reflected wave signals to a desired signal on the same channel is taken to be the root sum square (RSS) value of such interfering field intensities. Calculation is accomplished by considering the signals in order of decreasing magnitude. Take the higher signal first and determine whether the next higher signal is 50% or greater. If it is less than 50%, it will not be considered to enter into the RSS calculation. If it is 50% or greater, extract the square root of the sum of the squares of signals one and two. Take the results of this RSS calculation and consider the third signal. Continue this method for successive decreasing signals until a signal level is reached which is less than 50% of the RSS composed of all previously considered signals that have been included in the RSS. The RSS value will not be considered to be increased when a new interfering signal is added which is less than 50% of the RSS value of interference from existing stations and which is, at the same time, less than the smallest signal included in the RSS value of interference from existing stations. However, when the existing RSS value is less than the value of the nominal usable field strength, the new interfering signal may be included in the RSS calculation, only if the night-time limitation is not increased above the nominal usable field strength for the class of station concerned.

The above calculations of the interfering signal will be based on site-to-site separation.

A sample calculation follows :

Let us assume the following field strengths in uV/m :

140, 125, 130, 65, 52

If we put them in decreasing order, we have :

140, 130, 125, 65, 52

Let us calculate the RSS value applying the 50% exclusion rule :

$RSS_1 = \sqrt{140^2 + 130^2} = \sqrt{19600 + 16900} = 191$ uV/m

If we take one half of the above RSS value, we have :

$\frac{RSS_1}{2} = 95.5$ uV/m

This value is less than the third field strength

95.5 uV/m < 125 uV/m

Let us now calculate a new RSS value including the third field strength.

$RSS_2 = \sqrt{140^2 + 130^2 + 125^2} = 228.3$ uV/m

If we apply the 50% exclusion rule again we obtain :

$\frac{RSS_2}{2} = 114.5$ uV/m

and if we compare this value with the fourth field strength, we will see that

114.5 uV/m > 65 uV/m

In fact, in this example, we see that only three values are considered as interfering field strengths. The remaining field strengths are not considered as objectionable interference.

D.D. CROMBIE
Chairman of Working Group 4/3

Annex : (to follow)

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

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13 March 1980
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COMMITTEE 5

CREATION OF WORKING GROUPS

It is suggested to Committee 5 to create the following Working Groups :

Working Group 5A

Terms of reference

1. To examine paragraphs 3 to 5 of Document No. DT/4 and to suggest the appropriate texts to the Committee.

Chairman .....

Working Group 5B : Drafting Group

Terms of reference

To perfect the form of the approved texts of Committee 5, without altering the sense, in order to submit them to the Plenary.

A. ITUASSU
Chairman of Committee 5

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document No. DT/9-E
17 March 1980
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Spanish

LIST OF DOCUMENTS

(1 - 50)

No.	Origin	Title	Destination
1	SG	Agenda of the Conference	PL
2	SG	Credentials of delegations	PL
3	SG	Budget of the Conference	C.3
4	SG	Contributions from non-exempt recognized private operating agencies and international organizations	C.3
5(Rev.1)	B	Proposed technical basis	C.4,5
6 + Corr.1, Add.1,2	ARG	Comments on the technical bases for the Regional Administrative Conference to be held in Buenos Aires from 10 March 1980	C.4
7	URG	Proposals	C.5
8	SLV	Proposal for the work of the first session of the Conference	C.4,5
9	CAN	Proposals	C.4,5
10	URG	Comments on the document submitted by Brazil (Document No. 5)	C.4,5
11 + Add.1 -Corr.1	SG	CCIR Report to the first session of the Conference	C.4,5
12 + Corr.1, Add.1,2	USA	Proposals	C.4,5
13 + Add.1-4	USA	Proposals relating to channel spacing	C.4
14	SG	Agreement with the inviting Government	C.3
15	G	Antenna gain and effective monopole radiated power	C.4,5
16	G	Radiowave propagation prediction method	C.4
17	G	Carrier spacing and emission bandwidth	C.4
18	SG	Invitations to the Conference	PL

No.	Origin	Title	Destination
19	SG	Notifications to international organizations	PL
20	SG	Loss of the right to vote	PL
21	CAN	Planning methods - An approach to determining basic station parameters	C.5
22	B	Nominal usable field strength	C.4
23	B	Conductivity maps for Region 2 - Presentation	C.4
24	ARG	Proposals	C.4
25	ARG	Transmitter powers for each class of station	C.4
26	ARG	Planning methods - Assignment capacity around a class A station	C.5
27	-	Conference Chairmen and Vice-Chairmen	-
28	Chairman	Committee structure	PL
29	Chairman	Allocation of documents	PL
30	-	Secretariat of the Regional Administrative MF Broadcasting Conference	PL
31	CAN	Information paper - A review of channel separation	C.4
32	URS	Frequency separation in the MF band	C.4
33	URS	Method for coordination distance determination in border areas using different curves	C.4
34	CAN	Information paper - The number of usable channels that would be created by a change to 9 kHz channel separation	C.4
35	URG	Transmitter power of each class of station	C.4
36	CUB	Protection ratios	C.4
37	CUB	Points concerning the skywave service for MF broadcasting	C.4
38	CUB	Proposals	C.4,5

No.	Origin	Title	Destination
39	CAN	Information paper - Inter-regional interference	C.4
40	C.4	Summary record of the first meeting of Committee 4 (Technical criteria)	C.4
41	GT4/1	First report of Working Group 4/1 - Definitions	C.4
42	GT4/1	Second report of Working Group 4/1	C.4
43	USA	Calculation of nightime MF field strength at distances greater than 5000 km	C.4
44	CAN/USA	Radiation characteristics of transmitting antennae	C.4
45	ARG	Use of the Kirke and Millington methods for mixed paths	C.5
46	C.5	List of requirements	C.5
47	GT4/1	Third report of Working Group 4/1	C.4
48	GT4/1	Fourth report of Working Group 4/1	C.4
49	GT4/1	Report of Working Group 4/1 - Channel separation	C.4
50	PL	Minutes of the first Plenary Meeting	PL

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

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14 March 1980
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WORKING GROUP 4/3

DRAFT

SECOND REPORT OF WORKING GROUP 4/3 TO COMMITTEE 4

Working Group 4/3 met on Thursday 13 March 1980 and on Friday 14 14 March 1980 and discussed ground-wave and skywave propagation. It agreed on the following:

1. Ground-wave curves

The new FCC curves (see Addendum No. 2 to Document No. 12) are recommended for adoption by the Conference.

2. Propagation over mixed paths

The Kirke method (see Document No. 12) is recommended by the majority of the Administrations of Region 2. The US Administration will furnish to the IFRB a computer program for this method.

3. Ground conductivity maps

a) After studying the conductivity maps prepared by the Brazilian Administration and finding that certain values which might be provided by the administrations concerned were missing, the Working Group agreed that time would be allowed for those administrations to supply the Brazilian Administration with the missing information, which would be included in the maps to be sent to the IFRB. Those administrations which fail to supply measured or estimated conductivity values within the time allowed will appear without a conductivity value in the map.

b) The Administration of Brazil expects to do any updating of the present maps within .... months and will send updated maps to the ITU, if possible in June 1980. Those maps will be used in the planning exercise which the IFRB has to perform before May 1981. Another updating of the maps could be arranged after that date, but before the Second Session of the Conference. Later updating of the maps will be done by CITEL in intervals of ... months and communicated to ITU for publication and distribution, as well as for updating the data bank.

c) The idea of a Panel of Experts to assist the IFRB in the programming effort for the planning exercise is endorsed. In addition, Committee 3 should be requested to reserve money in the Conference budget for possible use of a computer outside the ITU.

4. Interregional interference

It is recommended to use the Cairo N - S curve for evaluation of , interregional interference.

D. D. CROMBIE
Chairman Working Group 4/3

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document No. DT/11-E
17 March 1980
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WORKING GROUP 4/2

Nominal usable field strength

The first meeting of Working Group 4/2 discussed the question of nominal usable field strength and noise zones.

The attached (Annex 1) outline of the Report to Committee 4, which may be regarded as a document reflecting the stage so far reached and therefore as being subject to amendment, is intended to facilitate subsequent discussions of this point at the second session.

The Group consideres that the table of correction factors for nominal usable field strength as a function of frequency submitted by the Brazilian Administration should be studied at the second session. This Table, together with its reasons, is attached as Annex 2.

Jorge TABOADA
Chairman

Annexes: 2

A N N E X 1

8. NOMINAL USABLE FIELD STRENGTH

The minimum values recommended for this parameter for planning purposes will depend on the class of station and noise zones.

Noise zone 1 comprises the points to the East of the Meridian 45° W, to the North of the parallel 20° N and to the South of the parallel 20° S.

Noise zone 2 comprises the points to the West of the Meridian 45° W between the parallels 20° N and 20° S.

NOISE ZONE 1	NOISE ZONE 2
8.1 Class A stations	
- daytime: (a) co-channel ⌈100 µV/m⌋ ground-wave (b) adjacent channel ⌈500 µV/m⌋ ground-wave	- daytime: ⌈250 µV/m⌋ ground-wave
- night-time: ⌈500⌋ µV/m ground-wave or ⌈500⌋ µV/m sky-wave for ⌈50%⌋ of the time, whichever is at the greatest distance	- night-time: ⌈1250⌋ µV/m ground-wave or ⌈1250⌋ µV/m sky-wave for ⌈50%⌋ of the time, whichever is at the greatest distance
8.2 Class B stations	
- daytime: ⌈500⌋ µV/m ground-wave	- daytime: ⌈1250⌋ µV/m ground-wave
- night-time: ⌈2500⌋ µV/m ground-wave	- night-time: ⌈6500⌋ µV/m ground-wave
8.3 Class C stations	
- daytime: ⌈500⌋ µV/m ground-wave	- daytime: ⌈1250⌋ µV/m ground-wave
- night-time: ⌈4000⌋ µV/m ground-wave	- night-time: ⌈10000⌋ µV/m ground-wave

Note 1. Values differing from those given above may be adopted subject to the agreement of any Administration concerned.

Note 2. National borders close to $\pm 20^{\circ}$ latitude may be used to define the high noise area if desired by the Administration concerned.

Note 3. Regions subject to high radio noise, such as in the tropical zone and other areas affected by adverse meteorological and radio conditions, may adopt other values of usable field strength calculated in accordance with CCIR recommendations. The tropical zone is defined in Radio Regulations Nos. 135 and 136.

A N N E X 2

8.2 For frequencies other than 1 MHz, the minimum values of nominal usable field strength established in point 8.1 should be multiplied by the correction factors listed below:

Frequency (kHz)	Correction factor
530 - 560	1,82
570 - 590	1,70
600 - 620	1,64
630 - 650	1,55
660 - 680	1,44
690 - 710	1,41
720 - 760	1,32
770 - 810	1,23
820 - 860	1,16
870 - 910	1,10
920 - 960	1,05
970 - 1030	1,00
1040 - 1100	0,94
1110 - 1170	0,89
1180 - 1240	0,85
1250 - 1330	0,81
1340 - 1420	0,77
1430 - 1510	0,74
1520 - 1600	0,71

REASONS: The introduction of the correction factors (ADD 8.2) is intended to correct the nominal usable field strength values which vary with frequency in the presence of noise.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Addendum No. 1 to
Document No. DT/12-E
18 March 1980
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WORKING GROUP 4/1

ANNEX

BASIC PRINCIPLES TO BE APPLIED FOR THE COMPARATIVE STUDY OF CHANNEL SEPARATION

1. The study shall take account of the following:

   a) For 10 kHz channel separation, broadcasting stations generally will only have to change frequency to resolve incompatibilities;

   b) For 9 kHz channel spacing, since most broadcasting stations will be required to change frequency, the change should be made according to a rearrangement of the channels so as to optimize the use of the spectrum, while bearing in mind the relevant technical, operational and economic factors.

2. The stations to be included in this study will be those contained in the basic inventory as modified in accordance with paragraph... of the report of this Conference.

3. The study on 10 kHz channel separation shall determine the usable field strength. Where there are incompatibilities which are in the form of a serious degradation of the usable field strength, when possible recommendations shall be made to obviate the problem.

4. The study on 9 kHz channel separation shall determine the usable field strength using the following approach:

   a) initially search for the channel rearrangement which will minimize the frequency change for stations with directional antenna arrays and also will give appropriate relief to frequency congested areas;

   b) use of the method described in Annex ... to the report of this Conference.

5. Every effort shall be made to minimize the frequency change to be made by any particular station, but it may be necessary for some administrations to change their station carrier frequency by more than 20 kHz in order to derive the maximum number of new assignments. In such cases, consultations shall be undertaken with the administration concerned in accordance with resolves 2 of this Resolution.

6. The criteria on which administrations could base their decision on channel spacing should be:

a) the extent to which the service areas of the station can be extended;

b) the number of new frequency assignments that will be available in all areas of Region 2 where new requirements are identified;

c) to the extent possible, take account of other relevant factors like economic and operational impact.

7. With reference to the 10 kHz study, the IFRB shall communicate to the administrations concerned the results of calculations concerning stations whose service area is reduced in a significant manner. A report shall be prepared for the second session in a format which will be adopted in consultation with the Panel of Experts including the criteria listed in paragraph 6 above. This report shall be sent to administrations at the latest two months before the Second Session.

L. VALENCIA
Chairman of Working Group 4/1

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document DT/12-E
17 March 1980
Original: English

WORKING GROUP 4/1

DRAFT RESOLUTION

CHANNEL SEPARATION

The Regional Administrative Broadcasting Conference (Region 2), 1980,

considering

a) that the use of a uniform channel spacing throughout the Region is of the utmost importance for the efficient use of the medium frequency band and for planning that band;

b) that the channel spacing to be used for the planning should be acceptable to all the countries of the Region;

c) that while a majority of countries favoured 9 kHz channel spacing, a substantial minority favoured the retention of 10 kHz channel spacing and, thus, a consensus could not be reached at this session of the Conference;

d) that this session of the Conference has adopted technical standards for both 9 kHz and 10 kHz channel spacing;

e) that the adoption of a specific channel spacing has technical, operational, social and economic implications;

f) that a comparative study of the two channel spacing is required;

resolves

1) that with a view to reaching a consensus on the channel spacing during the second session of the Conference the IFRB shall undertake the study referred to in paragraphs ... and ... of the Report of the first session of the Conference for the two channel spacing and prepare a comparative report for decision by the second session of the Conference (See considering f)).

2) that, if needed, the IFRB, in conducting the study, may consider change of carriers of more than 4 kHz subject to the agreement of the administrations concerned,

3) that a panel of experts consisting of [ ] will assist the IFRB with the analysis of the results in accordance with the Annex to the present Resolution,

invites

the Administrative Council to provide sufficient resources for the IFRB and the panel of experts to complete the study in a timely manner.

L. VALENCIA
Chairman of Working Group 4/1

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document No. DT/13-E
21 March 1980
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COMMITTEE 3

DRAFT

FINAL REPORT OF THE BUDGET CONTROL COMMITTEE TO THE PLENARY MEETING

The Budget Control Committee has held two meetings. Under Chapter XI, Article 77, No. 442 of the International Telecommunication Convention, Malaga-Torremolinos, 1973, the Committee is required to :

a) determine the organization and the facilities available to the delegates, and

b) examine and approve the accounts for expenditure incurred throughout the duration of the Conference.

1. Determination of the organization and the facilities available to the delegates

In the absence of any comment or criticism from any of the delegations, the Committee found that the organization and the facilities made available to the delegates were perfectly satisfactory.

2. Budget of the Conference

The Budget Control Committee took note of the Budget of the Conference (600,000 Swiss francs, Document No. 3) as approved by the Administrative Council at its thirty-fourth session in 1979.

The Committee also noted that the budget of the Conference had been adjusted to meet the changes introduced in the common system of the United Nations and of the specialized institutions affecting salaries and allowances of short-term staff under Administrative Council Resolution No. 647.

3. Conference expenditure

The Convention stipulates that the Budget Control Committee shall present a report to the Plenary Meeting showing, as accurately as possible, the estimated total expenditure of the Conference.

Annex 1 constitutes a statement of the budget of the Conference with the required itemization according to the relevant chapters and headings, showing any credit transfers and the state of expenditure as at 20 March 1980. The statement includes an indication of the expenditure committed until the aforementioned date and the estimated expenditure up to the closing date of the Conference.

This statement shows that the overall expenditure would amount to 702,000 Swiss francs; it is therefore presumed that the budget approved by the Administrative Council will be exceeded by 102,000 Swiss francs.

In this regard, in conformity with the Convention it was necessary to provide for interpretation in four languages (in lieu of three foreseen in the Budget) and to take account of changes in the daily subsistence. Some of these additional expenses were offset by expenditures of some other items being less than foreseen. Thus the "dépassement" was reduced.

4. Contributions of recognized private operating agencies and non-exempted international organizations

Under Article 16 of the Financial Regulations of the Union, the report of the Budget Control Committee to the Plenary Meeting has to list the recognized private operating agencies and international organizations contributing to the expenses of broadcasting Conferences. This list must include the international organizations exempted from contributing under No. 548 of the Convention.

This list is attached as Annex 3 hereto.

5. Allocation of expenditure of the Conference

Since this Conference is a Regional Conference under No. 42, Article 7, of the International Telecommunication Convention, Malaga-Torremolinos, 1973, of the countries of Region 2 as defined in Article 5 of the Radio Regulations, the relevant expenses must be borne by all the Members of the Region concerned according to their class of contribution and, on the same basis, by the members of Regions 1 and 3 participating in the Conference. Annex 2 to this report lists the members that must bear the cost of the Conference.

The statement in Annex 1 hereto, shows a total estimated expenditure of 702,000 Swiss francs. On the basis of the number of contributory units of members required to bear the expenses of the Conference (see Annex 2), the amount of the contributory unit can be set at 3,810 Swiss francs. According to Article 28 of the Financial Regulations of the Union, the accounts for the Regional Conferences accrue interest after a period of 60 days from the date on which the accounts have been sent out. Since the bills will probably be dispatched to the participants on 30 June 1980, settlement should be made not later than 31 August. As from 1 September 1980, interest will accrue at 3 % for 180 days, and thereafter at 6 %.

\+ + +

Under No. 445 of the Convention, this report, together with the observations of the Plenary Meeting, shall be transmitted to the Secretary-General for submission to the Administrative Council at its next annual session.

\+ + +

The Plenary Meeting is requested to approve this report.

M. PIZZARRO A.
Chairman of Committee 3

Annexes : 3

A N N E X 1

(see Annex 1 to Document No. 86)

ANNEX 2

List of Members of the Union in Region 2 and contributory units

	A. Region 2 members	Contributory units
1.	Argentine Republic	3
2.	Bahamas (Commonwealth of the)	½
3.	Barbados	½
4.	Bolivia (Republic of)	½
5.	Brazil (Federative Republic of)	5
6.	Canada	18
7.	Chile	1
8.	Colombia (Republic of)	3
9.	Costa Rica	½
10.	Cuba	1
11.	Denmark	5
12.	Dominican Republic	½
13.	El Salvador (Republic of)	½
14.	Ecuador	1
15.	United States of America	30
16.	France	30
17.	Guatemala (Republic of)	1
18.	Guyana	½
19.	Haiti (Republic of)	½
20.	Honduras (Republic of)	½
21.	Jamaica	½
22.	Mexico	3
23.	Nicaragua	1
24.	Panama (Republic of)	½
25.	Paraguay (Republic of)	½
26	Netherlands (Kingdom of the)	10
27.	Peru	½
28.	United Kingdom of Great Britain and Northern Ireland	30
29.	Surinam (Republic of)	½
30.	Trinidad and Tobago	1
31.	Uruguay (Oriental Republic of)	½
32.	Venezuela (Republic of)	3
		153 ½
	B. Regions 1 and 3 members participating in the Conference	
33.	Saudi Arabia (Kingdom of)	1
34.	Union of Soviet Socialist Republics	30
		184 ½

A N N E X 3

LIST OF INTERNATIONAL ORGANIZATIONS AND RECOGNIZED PRIVATE OPERATING AGENCIES PARTICIPATING IN THE FIRST SESSION OF THE REGIONAL MF BROADCASTING CONFERENCE

		Class of Contribution
(1)	International organizations	
(A)	United Nations and Specialized Agencies	
	NONE	
(B)	Other international organizations	
	- Inter-American Association of Broadcasting (AIR)	exempted
	- European Broadcasting Union (EBU)	exempted
(2)	Recognized private operating agencies	
	NONE	

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

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19 March 1980
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COMMITTEE 5

DRAFT TEXTS

The Chairman hereby submits for consideration by Committee 5 a number of draft texts (see Annex 1) to be inserted in the relevant parts of Chapters 1 and 2 of the Report of the First Session of the Conference (see Document No. 58).

The draft texts deal with matters listed in points 1 and 2 of Document No. DT/4(Rev.1) left pending in Committee 5.

A. ITUASSU
Chairman of Committee 5

Annex: 1

A N N E X

CHAPTER I

DEFINITIONS AND SYMBOLS

1. Definitions

1.2 Class A station: A station intended to provide coverage over extensive primary and secondary service areas and which is protected against interference accordingly.

1.3 Class B station: A station intended to provide coverage over one or more population centres, and the rural areas contiguous to them, located in its primary service area and which is protected against interference accordingly.

1.4 Class C station: A station intended to provide coverage over a city or town and the contiguous suburban areas, located in its primary service area and which is protected against interference accordingly.

1.10 Protected contour: Continuous line that determines the areas of primary or secondary service that is protected from objectionable interference.

1.17 Primary service area: Service area delimited by the contour within which the calculated level of the ground-wave field strength is equal to or greater than the nominal usable field strength.

1.18 Secondary service area: Service area delimited by the contour within which the calculated level of the field strength due to the sky-wave 50% of the time is equal to or greater than the nominal usable field strength.

1.19 Objectionable interference: Interference caused by a signal exceeding the maximum permissible field strength at and within the protected contour according to the terms of an agreement.

CHAPTER II

PLANNING

2.1 Planning principles

The second session of the Regional Administrative MF Broadcasting Conference shall establish an MF Frequency Assignment Plan for Region 2 in the band 535-1605 kHz.

The Plan shall be based on the principle of equal rights for all countries large or small. It should also make provision for the requirements of administrations as defined in Chapter 7 of this Report and lead to satisfactory reception conditions for all countries, allowing for the different situations which arise in the countries of Region 2.

Planning shall be based on three classes of stations, namely classes A, B and C. The primary and secondary service areas of Class A stations shall be protected. The primary service area only of Class B and Class C stations shall be protected. The plans shall be based on the power of stations as notified to the IFRB for the establishment of the basic inventory. Modifications to the basic inventory as well as modifications to the plan to be prepared by the Second Session shall be subject to power limitations. The power of Class B and Class C stations shall (normally) be lower than that of Class A stations

The plan shall be established using a uniform channel spacing. The IFRB shall undertake a comparative study of 9 and 10 kHz channel spacing and prepare a report on this question to the Second Session, which shall adopt the appropriate channel spacing to be used in planning.

In planning, the Second Session shall take account of the interference from stations in Regions 1 and 3 as recorded in the Master Register. The interfering field strength of such stations is calculated in accordance with criteria defined in the present report. Appropriate protection shall also be afforded to stations in Regions 1 and 3 recorded in the Master Register on the understanding that the relationship between the stations in Regions 1 and 3 on the one hand, and Region 2 on the other hand, shall be governed by the provisions of Article 12 of the Radio Regulations.

2.2 Planning methods

The plan must be established in the spirit of the planning principles, but account should be taken of the following facts:

a) the available frequency spectrum is limited, as are the capital and human resources;

b) the problem of providing a fair and rational allocation of channels and adequate powers is particularly difficult in those regions of the world where there is a large number of countries or population groups in relatively close proximity.

A rational planning method is needed to maximize the number of programmes and the quality of coverage that is given to the radio broadcasting listener.

2.2.1 Basic considerations

When planning, it is necessary to observe the following basic considerations :

a) the use of identical carrier frequencies, with uniform channel spacing, throughout Region 2;

b) the retention and, possibly, improvement of the coverage of the existing broadcasting stations to the maximum extent possible, having regard to the countries' commitments;

c) the reduction to a minimum, of changes in existing frequencies;

d) the endeavour to meet to the maximum extent possible, the requirements of all administrations for the broadcasting services;

e) the technical parameters adopted by this session of the Conference;

f) the taking into account of the specific needs of certain countries, in view of the insufficient availability of alternative means in other frequency bands (for example VHF-FM), noting that the MF bands are particularly suitable as an economic medium for mass communication over large areas;

2 3 Planning Criteria

In calculating the sky-wave interfering signal field strength, the curve exceeded for more than / 50% / / 10% / of the time shall be used.

3.2.1 Primary service area and secondary service area

Station power

2.3.2 Class A

2.3.2.1 The Plan shall be established on the basis of the requirements communicated to the IRFB as described in Chapter VII of this Report. The stations appearing in the basic list might be entered in the Plan with the power given in the list.

If the Second Session of the Conference should adopt a procedure allowing modification of the Plan after its entry into force, the following conditions shall apply:

- the power of any Class A station exceeding / 50 kW / should not be increased;
- the power of any Class A station not exceeding / 50 kW / may be increased but should not exceed / 50 kW /;
- any new class A station should have a power of / 50 kW / or less.

2.3.2.2 Class B

The maximum station power shall be 50 kW.

2.3.2.3 Class C

The maximum station power shall be 1 kW during daytime, except in areas of low conductivity or high atmospheric noise where the limit will be 5 kW during the day provided the protection criteria given in this Report are met.

The maximum station power shall be 1 kW during night-time

2.3.3 Daytime and night-time hours of operation

2.3.4 Protection ratios and protected contour

2.3.5 Protection of an emission outside national borders

2.3.6 Planning of synchronized networks

For the purposes of planning and for determining the probabilities of harmful interference, a network of synchronized transmitters may generally be represented by an equivalent single transmitter the characteristics of which are calculated according to the method described below*).

2.3.6.1 Calculation of interference in the case of a synchronized network

*) More details can be found in C.C.I.R. Reports Nos. 459 and 616.

2.3.6.2 Interference caused by a synchronized network

In the simple but frequent case in which the transmitters of the synchronized network use omnidirectional antennae and in which the transmitters are sufficiently close together, the interference can be calculated by replacing the transmitters by an equivalent single transmitter. This transmitter will be located at the "centre of gravity" of the network. This centre is determined as that of various masses, the mass in this case being the square of the c.m.f. of each of the transmitters (or the e.m.r.p. of each transmitter). The radiation of this equivalent transmitter will be the sum of the radiations of each transmitter of the network (i.e. the sum of the squares of the c.m.f.'s or the arithmetical sum of the e.m.r.p.'s).

If the transmitters of the network are equipped with directional antennae, the same rules apply for the calculation of the interference in a given direction (that of the transmitter to be protected). In this case, the centre of gravity and the radiated power of the equivalent transmitter will depend on the direction considered. The calculation of the centre of gravity must be effected with the masses proportional to the radiated power of the transmitters in the direction considered. In the same way, the radiated power of the equivalent single transmitter will be determined by adding up the radiated powers of each transmitter in the direction considered.

Let D be the distance between any transmitter of the network and any transmitter not belonging to the group and suffering interference, and D' the distance of the centre of gravity of the network from this transmitter. It is assumed that the previous method is acceptable only if :

$| D - D' | \leq 0.15D$ in the case of co-channel interference

$| D - D' | \leq 0.25D$ in the case of adjacent channel interference

If the conditions described above for the distances are not fulfilled, the general method will be applied, which consists of calculating the interference caused by each transmitter in the synchronized network and adding up the squares of the interference fields. This method is clearly valid in all cases, and can be applied systematically if the validity of the equivalent transmitter method is challenged.

The radio-frequency protection ratio to be applied for interference caused by a synchronized network suffered by the service of any other transmitter is the same as for a single transmitter.

2.2.8.1.2 Interference suffered by a transmission of a synchronized network

The interference suffered by a transmission belonging to a synchronized network may be due to :

- the other transmitters of the synchronized network (internal interference);
- other transmitters (external interference).

In the case of external interference, the radio-frequency protection ratio is considered to be the same as in the case of a single transmitter.

In the case of internal interference, the radio-frequency protection ratio is regarded as a problem specific to each country. However, in order to compare different frequency plans, it is necessary to calculate the coverage of the transmitters of a synchronized network. This coverage is determined in the same way as in the general case, namely by calculating for each transmitter the usable field strength by the formula :

$$E_u = \sqrt{\Sigma(a_e E_{be})^2 + \Sigma(a_i E_{bi})^2 + E_{min}^2}$$

where E_{be} and E_{bi} are the external and internal interference fields,

a_e and a_i are the corresponding protection ratios, and

E_{min} is the minimum usable field strength which is defined in Recommendation 499 of the C.C.I.R., and which at the same time takes into account natural and man-made noise.

This formula corresponds to that given in C.C.I.R. Recommendation 499.

In this calculation, the internal protection ratio a_i for planning purposes is taken as 8 dB.

2.2.8.2 Recommendation AA deals with the use of synchronized networks.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

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COMMITTEE 2

Draft

REPORT OF COMMITTEE 2 TO THE PLENARY MEETING

Credentials

1. Terms of reference of the Committee

The terms of reference of the Committee are given in Document No. 28.

2. Meetings

Committee 2 held two meetings (on 13 and 21 March respectively).

The Working Group established by the Committee for the purpose of verify the credentials presented to the Conference pursuant to the provisions of the Convention met on 18 and 21 March 1980.

The meetings were attended by the Chairman and Vice-Chairman of the Committee, and by delegates of Argentina and the United States of America.

3. Conclusions

The Committee's findings are contained in the Annex and are submitted to the Plenary Meeting for approval.

4. Final remarks

The Committee recommends that the Plenary Meetings should authorize the Chairman and Vice-Chairman of Committee 2 to verify the credentials received after the date of this Report and to present its findings to the Plenary Meeting.

Carlos J. MARTINEZ
Chairman of the Committee

Annex: 1

A N N E X

1. Credentials presented

1.1 Credentials found to be in order

1.1.1 Credentials presented by countries which have ratified (or acceded to) the Convention and to which the provisions of Number 97 of the Convention do not apply.

Conclusion: The delegations of the above countries have the right to vote.

1.1.2 Countries which have not ratified (or acceded to) the Convention or to which the provisions of Number 97 of the Convention apply.

Conclusion: The delegations of the above countries do not have the right to vote.

2. Provisional credentials presented

The provisional credentials presented by the delegations of the countries listed below were found to be in order.

Credentials presented by countries which have ratified (or acceded to) the Convention to which the provisions of Number 97 of the Convention do not apply:

Conclusion: The delegations of the above countries have the right to vote.

3. Delegations which have not presented credentials

Conclusion: The delegations of the above countries do not have the right to vote.

4. Credentials presented by countries of Regions 1 and 3

- Union of Soviet Socialist Republics (as observer)

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

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COMMITTEE 5

NEW DRAFT TEXTS FOR CHAPTERS 7 AND 8

Taking into account Document No. CAN/60 and the decisions that Committee 5 has already taken on Document No. DT/14, the Chairman suggests the following additional texts:

"Having adopted the appropriate channel spacing the Second Session of the Conference shall establish a plan based on the basic inventory as modified in accordance with paragraph 7.2. In a second stage the Second Session of the Conference shall include in the plan this requirement notified to the IFRB in accordance with paragraph 7.2. In a second stage the Second Session of the Conference shall include in the plan this requirement notified to the IFRB in accordance with paragraph 7.3 concerning stations to be authorized in the period between 1 January 1983 and [ ]."

The Second Session shall also be requested to include in the procedure provisions intended to delete from the plan those assignments which are included in the plan and which are not brought into use more than [ ] years after their recording in the plan.

If Committee 5 accept this approach, Chapter 7 should be modified as follows:

7. Basic inventory of administration requirements

At the Second Session of the Conference planning shall be based on the following material:

1. basic inventory
2. modification to the basic inventory
3. plan use to be authorized in the period between [1.1.83] and [ ]
4. any other modification or addition which the Second Session of the Conference may decide to take into consideration.

7.3 Administrations shall notify the IFRB using the form in Annex B, their requirements concerning stations intended to be authorized in the period between [1.1.83] and [ ] except the indication of the carriers which will be determined by the Second Session of the Conference on the basis of the adopted channel spacing. Such communication shall reach the Board by no later than [31.5.81].

It is also proposed that Chapter 8 be modified as follows:

1. Add the following sentence:

"The IFRB shall prepare for consideration by the Conference the list of requirements received by it in application of paragraph 7.3".

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

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COMMITTEE 5

6.4 PROTECTION OUTSIDE NATIONAL BOUNDARIES

6.4.1 No station has the right to be protected beyond the boundary of the country in which the station is established, except when otherwise specified in a bilateral or multilateral agreement.

6.4.2 No broadcasting station shall be assigned with a separation of 10 kHz or 9 kHz or less from a station in another country if the [2500 µV/m] contours overlap.

No broadcasting station shall be assigned with a separation of 20 kHz or 18 kHz from a station in another country if the [10,000 µV/m] contours overlap.

No broadcasting station shall be assigned with a separation of 30 kHz or 27 kHz from a station in another country if the 25,000 µV/m contours overlap.

6.4.3 In addition to the conditions described in 6.4.2, when the protected contour extends beyond the boundary of the country in which the station is located, the calculated field strength along the boundary shall be protected on the basis of the ratios specified in Sections 5.1 and 5.2.

6.4.4 For protection purposes, the boundary of a country shall be deemed to encompass only its land area including islands.

A. ITUASSU
Chairman of Committee 5

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document No. DT/18-E
24 March 1980
Original: English

PLENARY MEETING

NOTE BY THE CHAIRMAN OF THE CONFERENCE

In accordance with the decision taken at the first plenary meeting, please find in Annex 1 a first draft of a resolution relating to the transmission of the report to the second session and, in Annex 2, a draft of the cover page of the report, which are submitted to the Plenary for consideration.

R.J.P. SEVERINI
Chairman

Annexes : 2

A N N E X 1

DRAFT

RESOLUTION

REPORT OF THE FIRST SESSION

The Regional Administrative MF Broadcasting Conference (Region 2), First Session, Buenos Aires, 1980

considering

that, pursuant to Administrative Council Resolution No. 835, the First Session is responsible for establishing the necessary basis for the preparation, by the Second Session of the Conference, of a frequency assignment plan for the MF broadcasting band in Region 2 (535 - 1605 kHz);

resolves

1. to approve the Report of the First Session of the Conference;

2. that the Second Session apply the criteria established in said Report as the basis for the Agreement and the associated Frequency Assignment plan for the MF broadcasting band in Region 2 (535 - 1605 kHz), subject to the consideration of the comparative report on the choice of channel spacing (See Resolution);

instructs

1. the Chairman of the Conference to transmit under his signature the Report of the First Session to the Second Session of the Conference;

2. the Secretary-General to transmit the Report of the First Session to all administrations of Region 2 as well as to the administrations of the other Regions and to the international organizations which have participated in the First Session of the Conference.

A N N E X 2

Regional Adminsitrative MF

Broadcasting Conference (Region 2)

First Session, Buenos Aires, 1980

REPORT TO THE

SECOND SESSION OF THE CONFERENCE

(See Resolution...., page....)

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document No. DT/19-E
25 March 1980
Original : English

PLENARY MEETING

NOTE BY THE CHAIRMAN OF THE CONFERENCE

Bearing in mind the discussions and decisions in the various Committees, please find in the annex a draft recommendation relating to the date, agenda and duration of the Second Session of the Conference, which is submitted to the Plenary for consideration.

R.J.P. SEVERINI
Chairman

Annex : 1

ANNEX

DRAFT RECOMMENDATION

The Regional Administrative MF Broadcasting Conference (Region 2) First Session, Buenos Aires, 1980,

considering

a) that the Administrative Council in consultation with the Members of Region 2 has established the Agenda of the Second Session of the Conference "to draw up an agreement and an associated frequency plan of assignments in the MF broadcasting band in Region 2 (535 - 1 605 kHz);

b) that the Second Session of the Conference shall be convened in November 1981 for a duration of approximately four weeks;

c) that the First Session has decided that a panel of experts will assist the IFRB to undertake an inter-sessional study for a comparative report on the two channel spacings of 9 kHz and 10 kHz and to analyze the results (see Resolution A);

d) that the Second Session will need to review the comparative report as well as certain technical criteria to be furnished to the Second Session through considerations in the CCIR;

e) that the Administrative Council has not yet considered the precise date and duration of the Second Session;

recommends to the Administrative Council

1. to modify the Agenda of the Second Session in an appropriate manner, in order to take account of the foregoing inter-sessional studies, and

2. to provide for a four weeks' duration for the Second Session of the Conference.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(FIRST SESSION) BUENOS AIRES, 1980

Document No. DT/20-E
26 March 1980
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PLENARY MEETING

NOTE BY THE CHAIRMAN OF THE CONFERENCE

With reference to the decision taken by the First Session of the Conference regarding the appointment of the members of the Panel of Experts, attached is a draft resolution which is submitted to the Plenary for consideration.

R.J.P. SEVERINI
Chairman

Annex: 1

ANNEX

DRAFT RESOLUTION

The Regional Administrative MF Broadcasting Conference (Region 2), First Session, Buenos Aires, 1980,

considering

a) that the Conference has adopted Resolution A providing inter alia for the establishment of a Panel of Experts to assist the IFRB in the preparation of a comparative report on 9 and 10 kHz channel spacing and to assist in the analysis of results;

b) that the Panel of Experts has been also invited to assist in connection with certain other aspects of the work in preparation for the Second Session of the Conference as provided for in Chapter 8 of the Report;

c) that the above tasks of the Panel of Experts will also cover assistance to the IFRB with respect to the adaptation of computer programs (referred to in Chapter 8 of the Report) to the technical criteria adopted by the First Session of the Conference, as well as to the computer facilities of the ITU;

invites

those administrations which have developed any of the computer programs relevant to the studies required and listed, as examples, in paragraph 8.2 of Chapter 8 of the Report to make such programs available;

invites also

the following countries to provide experts to meet the differing requirements mentioned in a), b), and c) above: Argentina, Brazil, Canada, Cuba, United States of America, Mexico and Peru;

requests the Administrative Council

to provide the necessary resources to enable the Panel of Experts (equivalent to one expert per country and phase) to carry out their tasks in the inter-sessional preparations for the Second Session of the Conference.