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

(Rio de Janeiro, 1981)

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- This PDF includes Document DT No. 1 - 30.
- The complete set of conference documents includes Document No. 1 - 212, DL No. 1 - 28, DT No. 1 - 30.

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INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/1-E
6 November 1981
Original : English

PLENARY MEETING

Note by the Secretary-General

COMMITTEE STRUCTURE

The Administrative Council at its 35th Session, Geneva, 1980, adopted Resolution No. 848 which contains the agenda of the second session of the Regional Administrative Broadcasting Conference, Rio de Janeiro, 1981. 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; they were brought to the notice of Administrations participating in the Second Session of the Conference by way of ITU letter No. 3293 dated 28 May 1981.

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 (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, examine and approve the accounts for expenditure incurred throughout the Second Session of the Conference (No. 442 of the International Telecommunication Convention, Malaga-Torremolinos, 1973).

Committee 4 - Planning Committee

Terms of Reference :
- To consider the studies relating to planning exercises undertaken in the period between the two sessions of the Conference and adopt the channel spacing;
- To establish, on the basis of agreed technical criteria, Frequency Assignment Plans (to be associated with the Regional Agreement) for broadcasting stations in Region 2 in the band 535 - 1 605 kHz.

ARCHIVES U.I.T. GENÈVE

For reasons of economy, this document is printed in a limited number. Participants are therefore kindly asked to bring their copies to the conference since only a few additional copies can be made available.

Committee 5 - Agreement Committee

Terms of Reference - To establish a Regional Agreement concerning the use by the Broadcasting Service of frequencies in the frequency band 535 - 1 605 kHz in Region 2 giving due consideration to the provisions of No. 47 of the International Telecommunication Convention and the relevant provisions of the Radio Regulations;

and

to determine which of the data relating to a frequency assignment is to be included in the plans.

Committee 6 - Editorial Committee

Terms of Reference : To perfect the form of the texts to be included in the Final Acts of the Conference, without altering the sense (No. 527 of the International Telecommunication Convention, Malaga-Torremolinos, 1973).

Specific Working Party (Technical) of Plenary*)

Terms of Reference : To consider the report of the CCIR on additional technical criteria relating to inter-regional interference as resulting grom studies undertaken in the period between the two sessions of the Conference.

M. MILI

Secretary-General

*) Note : The first Session of the Conference adopted the technical criteria to be observed for the establishment of Frequency Assignment Plans, but invited the CCIR Study Group concerned to make available for the Second Session technical information relating to Inter-Regional Sky-Wave Propagation Prediction. As this relates only to inter-regional interference, and in the interests of economy (staff and financial resources), it is suggested that the Conference may prefer to establish a Specific Working Party reporting directly to Plenary instead of a Technical Committee.

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS

CONFÉRENCE RÉGIONALE DE RADIODIFFUSION

(SECONDE SESSION) RIO DE JANEIRO, 1981

V

Document No. DT/2-F/E/S
6 novembre 1981
Original : français, anglais, espagnol

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

P R O J E T - D R A F T - P R O Y E C T O

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

Plénière / Plenary / Plenaria	:	1, 5, 12, 13
C.2 - Pouvoirs / Credentials / Credenciales	:	2
C.3 - Budget / Presupuesto	:	10, 11
C.4 - Planification / Planning / Planificación	:	5, 6, 7, 8, 9, 14, 17, 18, 19
C.5 - Accord / Agreement / Acuerdo	:	5, 6, 9, 14
C.6 - Rédaction / Editorial / Redacción	:	
Groupe de travail spécial de la Plénière / Specific Working Party of Plenary / Grupo de trabajo específico de la Plenaria	:	3, 4, 5, 6, 7, 8, 9, 14, 15

M. MILI
Secrétaire général

ARCHIVES U.I.T. GENÈVE

Pour des raisons d'économie, ce document n'a été tiré qu'en nombre restreint. Les participants sont donc priés de bien vouloir apporter à la conférence leurs documents avec eux, car il n'y aura que fort peu d'exemplaires supplémentaires disponibles.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/3-E
6 November 1981
Original : English

HEADS OF DELEGATIONS

DRAFT
AGENDA
OF THE
FIRST PLENARY MEETING

		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	12
10.	Notifications to international organizations	13
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

ARCHIVES U.I.T. GENÈVE

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INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/4-E
19 November 1981
Original : French, English, Spanish

LIST OF DOCUMENTS

(Nos. 1 to 55)

PL = Plenary meeting
C = Committee

No.	Origin	Title	Destination
1	SG	Agenda of the Conference	PL
2	SG	Credentials of Delegations	C.2
3	SG	Definitions	TECH. GROUP
4	SG	Recommandations B and C of the First Session	TECH. GROUP
5	SG	Report of the First Session of the Conference	PL, C.4, C.5
6	BRB	Proposals for the work of the Conference	C.4, C.5 TECH. GROUP
7	URS	Proposals for the work of the Conference	C.4 TECH. GROUP
8	IFRB	Report to the Second Session of the Conference, drawn up by the IFRB with the help of a group of experts from Region 2 Administrations	C.4 TECH. GROUP
9	CAN	Proposals for the work of the Conference	C.4, C.5, TECH. GROUP
9 (Add.1)	CAN	Revision to the Report to the Second Session of the Regional Administrative MF Broadcasting Conference (Region 2)	TECH. GROUP
9 (Add.2)	CAN	Coordination Procedure for Interregional Interference	C.5
10	SG	Budget of the Conference	C.3
11(Rev.1)	SG	Contributions from non-exempt recognized private operating agencies and international organizations	C.3
12(Rev.1)	SG	Invitations to the Conference	PL
13	SG	Notifications to International Organizations	PL
14 + Corr.1, 2	ARG	Proposals for the work of the Conference	C.4, C.5, TECH. GROUP
15	CCIR	Texts by the CCIR of interest to the Conference	TECH. GROUP
16	SG	Loss of the right to vote	PL
17	IFRB	Preparatory work performed by the IFRB	C.4
18 + App.	IFRB	Basic Data prepared by the IFRB	C.4
19 + App.	SG	List of requirements concerning stations to be authorized between 1 January 1983 and 31 December 1987	C.4
20	USA	Proposal	PL
21	USA	Proposal	C.4

ARCHIVES U.I.T. GENÈVE

No.	Origin	Title	Destination
22	USA	Proposal	C.5
23	USA	Information paper - Comparison of the CCIR and Region 2 Methods for Estimation of Nighttime Signal Strengths of Distant MF Transmitters	PL
24	USA	Proposal	PL
25	B	Proposal for the work of the Conference - Classification of stations	TECH.GROUP
26 + Add.1	B	Proposal for the work of the Conference - Excess polarization coupling loss	PL + TECH.GROUP
27 + Add.1	B	Proposals for the work of the Conference - Standard form to be used for modifications to the Plan	PL + TECH.GROUP
28 + Corr.1	B	Proposals for the work of the Conference - Draft Regional Agreement	C.5
29	B	Information document for the work of the Conference	TECH.GROUP
30	ARG	Proposals for the work of the Conference - Technical data proposed for use in preparing the Plan and applying the Agreement	PL
31	ARG	Method of calculating site tolerances	PL
32	ARG	Information document - Operating and cost analysis	PL
33	CLM	Draft Regional Agreement on medium frequency broadcasting for Region 2	C.5
34	CUB	Proposals for the Regional Broadcasting Conference	PL
35(Rev.1)	SG	Conference Secretariat	-
36(Rev.1)	SG	Conference Chairmen and Vice-Chairmen	-
37	SG	Committee structure	PL
38	SG	Allocation of documents	PL
39	VEN	Minimum necessary signal levels in the presence of atmospheric noise	TECH.GROUP
40 + Corr.1	B	Technical Data to be used by the Second Session for preparing the technical document to be annexed to the Plan	TECH. GROUP
41	IFRB	Statement by Mr. A. Berrada, Member of the IFRB	C.4
42	CHL	Evaluation of the problem of applying additional protection criteria	C.4
43	C.4	First Report of Committee 4 (Planning) to the Plenary Meeting	PL
44 + Add.1	ARG	Regional Agreement	C.5
45	PL	Minutes of the Inaugural Meeting	PL
46	PL	Minutes of the First Plenary Meeting	PL

No.	Origin	Title	Destination
47	CLM	Noise Zones	C.4
48	EQA	Noise Zones	C.4
49	C.4	Proposed procedure for development of the Plan	C.4
50	MEX	Draft Regional Agreement	C.5
51	B	Working Proposition for CARR - Maximum interference permitted for the application of the principle of guaranteed access to the Plan	TECH. GROUP
52	PL	Minutes of the Second Plenary Meeting	PL
53	TECH. GROUP	Note from the Chairman of the Technical Group to the Chairmen of Committees 4 and 5	C.4, C.5
54	TECH. GROUP	First Report by the Specific (Technical) Working Group of the Plenary Meeting	PL
55	C.4	Countries not represented in the Conference	C.4

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Corrigendum No. 1 to
Document No. DT/5(Rev.2)-E
19 November 1981

Note by the Chairman of Committee 4

Add page 8, missing from the English version of Document No. DT/5(Rev.2) :

Document No. DT/5(Rev.2)-E
Page 8

A P P E N D I X 2

PROCEDURES AND DOCUMENTS

1. On a weekly basis, Administrations will be given an updated extract of their stations in the Basic Inventory. A copy of the updated Basic Inventory will be available to Administrations for consultation at the Technical Secretariat. During the week, the Secretariat can supply on request information on the characteristics of a station resulting from the following modifications since the last publication of the Basic Inventory :

- corrections submitted directly to the IFRB which do not increase the level of interference to stations of other Administrations;
- modifications resulting from negotiated solutions accepted by the Planning Groups.

2. Every Monday, each Delegation will receive the list of its stations showing the usable field strength (Eu) and the sources of interference. Together with the above list, each Delegation will receive a form B for each station filled by computer. In cases where the Administration does not accept the usable field strength, it shall clearly indicate it on the form; otherwise, it shall be deemed to have accepted it. Where no station of another Administration is affected, the Administration responsible for the station shall sign the form B, have it endorsed by the Chairman of the Working Group and hand it tc the Secretary of the Working Group. Where stations of other Administrations are affected, the Administration responsible for the station shall sign the form B and endeavour to obtain the signatures of the affected Administrations. When all the affected Administrations have signed the form, then the Chairman of the Working Group shall endorse it and hand it to the Secretary of the Working Group. When the form B of a station indicates that the Administration does not accept the usable field strength mentioned in the form, this shall be recorded in the interim Plan for further review of the case.

ARCHIVES U.I.T. GENÈVE

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/5(Rev.2)-E
18 November 1981
Original : French

COMMITTEE 4

Note by the Chairman of Committee 4

The purpose of this document is to present the following:

Appendix 1 - Data processing facilities of the Technical Secretariat to be used by the Planning Groups

Appendix 2 - Documents to be supplied to delegations and Planning Groups and description of the procedure to be followed in application of Document No. 49

G. COURTEMANCHE
Chairman of Committee 4

Appendices: 2

ARCHIVES U.I.T. GENÈVE

A P P E N D I X 1

Data processing facilities of the Technical Secretariat to be used by the Planning Groups:

1. Four (4) Siemens terminals are connected to two (2) Siemens computers at ITU, Geneva. The Siemens 7541 (4 MB, 750 kops) computer will be used for data capture and for carrying out the following test programmes:

   1.1 SKYONE : Calculation of usable field strength (E_u) at a given point (the site of a transmitting station or its protected contour). This programme also provides details of the calculations made (sky-wave only).

   1.2 SKYMANY : Calculation of the effect induced by a new station or of a modification to an existing station on all the stations already on a given frequency (sky-wave only).

   1.3 Ground-wave one : Calculation of ground-wave incompatibilities caused by a given station to other preselected stations. Three (3) adjacent channels at a studied frequency will also be included in the calculations.

   1.4 For these three programmes, the results will be printed and distributed to the Chairmen of the Planning Groups (see examples in Annex 1). The Siemens 7760 (4 MB, 1070 kops) computer will be used essentially for the complete calculation of incompatibilities, as employed for developing the incompatibility matrix.

2. Four (4) Scopus terminals are connected to Embratel's IBM 370 computer at Rio. The incompatibility matrix will be calculated on this computer and printed with the aid of the terminals.

3. Use of the equipment mentioned in 1 and 2 above is reserved to the Technical Secretariat and requests for calculations will be submitted using Form C.

4. Two (2) Tektronix 4054 (64 kB) mini-computers with magnetic cassettes and two (2) Zentec machines (64 kB) with floppy discs will be used for conducting the following programmes:

4.1 Distance and azimuth calculations.

4.2 Calculation and plotting of directional antenna patterns.

4.3 Design of simple systems having directional antennas with two or three masts.

Two graph tracers are also available to the Planning Groups. The service and/or interference contours of stations studied can also be plotted on request.

The use of these mini-computers by delegations will be coordinated by the Technical Secretariat.

5. The installation diagram is given in Annex 2.

ANNEXE 1 - ANNEX 1 - ANEXO 1

SKYONE

```
************************************************************************
************************************************************************
(IN)    /MIFAMI      DU PFC_SKYONE
(IN)    /FILE DAT_ANTENNA_HIFMHE,LINK=DSE119,SHAREUPD=YES
(IN)    /FILE =IUIGUZZL_DAT_RECIS_OCT81,LINK=DSLII2,SHAREUPD=YES
(IN)    /FILE =IUIPANI_DATA_MASE_SI_NA_FIRSI,LINK=OSAMP2D,SHAREUPD=YES,        RECFORM=,RECSIZE=,KEYLEN=,BLKM
        PL=
(IN)    /FILE =IUIEMOF_CAT_USA_ILS,LINK=PIESLC,SHAREUPD=YES,RECFORM=,RECSIZE=,  KEYLEN=,KEYPOS=,BLKSIZE=,BC
(IN)    /FILE =IUIIHOF_DAT_USA_AUG,LINK=NGIAUG,SHAREUPD=YES,RECFORM=,RECSIZE=,  KEYLEN=,KEYPOS=,BLKSIZE=,BLKM
(IN)    /ECHOG UFIOL=NO
(IN)    /EXEC PRO_SKYONE
(OUT)   % P500 LOADING
(OUT)   (MSG) % % ES60 PRO_SKYONE
(OUT)   BS2000 F O R 1 : FORTRAN PROGRAM "SKYONE"
(OUT)   STARTED ON 210CI81 AT 20:24:22
(OUT)
(OUT)   ***********************************************************************
(OUT)
(OUT)                   WELCOME TO SKYONE
(OUT)
(OUT)   ***********************************************************************
(OUT)
(OUT)   SKYONE COMPUTES THE RSS AT A SPECIFIED ANTENNA SITE
(OUT)   SKYONE HANDLES ONLY WEST LONGITUDE
(OUT)   ***********************************************************************
(OUT)   ENTER FREQ, SERIAL #, ENOM AT SITE (MV/M)
(IN)    540,0,2.5
(OUT)   ENTER N FOR NORTH LATITUDE
(OUT)         S FOR SOUTH LATITUDE
(IN)    N
(OUT)   ENTER SITE COORDS:LAT(D,M,S),LON(D,M,S)
(IN)    45,0,0,75,0,0
(OUT)    540 KHZ; SERIAL #       0; ENOM IS  2.5 MV/M;    N LAT 45  0  0  W LONG  75  0  0
(OUT)   LISTING OF THE NIGHTTIME OPERATIONS ON  540 KHZ (Y/N)
(IN)    N
(OUT)    49  U540200000U
(OUT)
(OUT)     RSS AT SERIAL #        0; N LAT 44.999  W LONG  74.999; COUNTRY IS
(OUT)
(OUT)   SERIAL #            126000   120040   120030   124890
(OUT)   COUNTRY                CAN      CAN      CAN      CAN
(OUT)   DIST (KM)            479.1    816.9    724.4    893.5
(OUT)   AZIMUTH (DEG)        220.0    251.1     61.3    276.4
(OUT)   RAD (MV/M)           RES.9    829.7    492.0    527.1
(OUT)   THETA (DEG)           20.7     11.4     13.2     10.1
(OUT)   F SUB C (UV/M)       50.99    33.69    38.21    30.20
(OUT)   COUP LOSS (DB)        0.00     0.00     0.00     0.00
(OUT)   LIMIT (MV/M)          9.07     5.59     3.76     3.18
(OUT)
(OUT)   RUNNING RSS           9.07    10.65
(OUT)
(OUT)   RSS FOR SERIAL #        0 IS  10.65 MV/M; ENOM IS  2.50 MV/M
(OUT)   THE RSS EXCEEDS ENOM BY  12.59 DB
(OUT)   ENTER 1 TO GO AGAIN ,
(IN)    0
(OUT)   STOP AT STMT 71 IN SKYONE
(OUT)   BS2000 F O R 1 : FORTRAN PROGRAM "SKYONE  " ENDED PROPERLY AT 20:25:16
(OUT)   CPU - TIME USED :        6.4501 SECONDS
(OUT)   ELAPSED TIME    :       52.7800 SECONDS
(OUT)   /ENDP
```

GROUND WAVE ONE

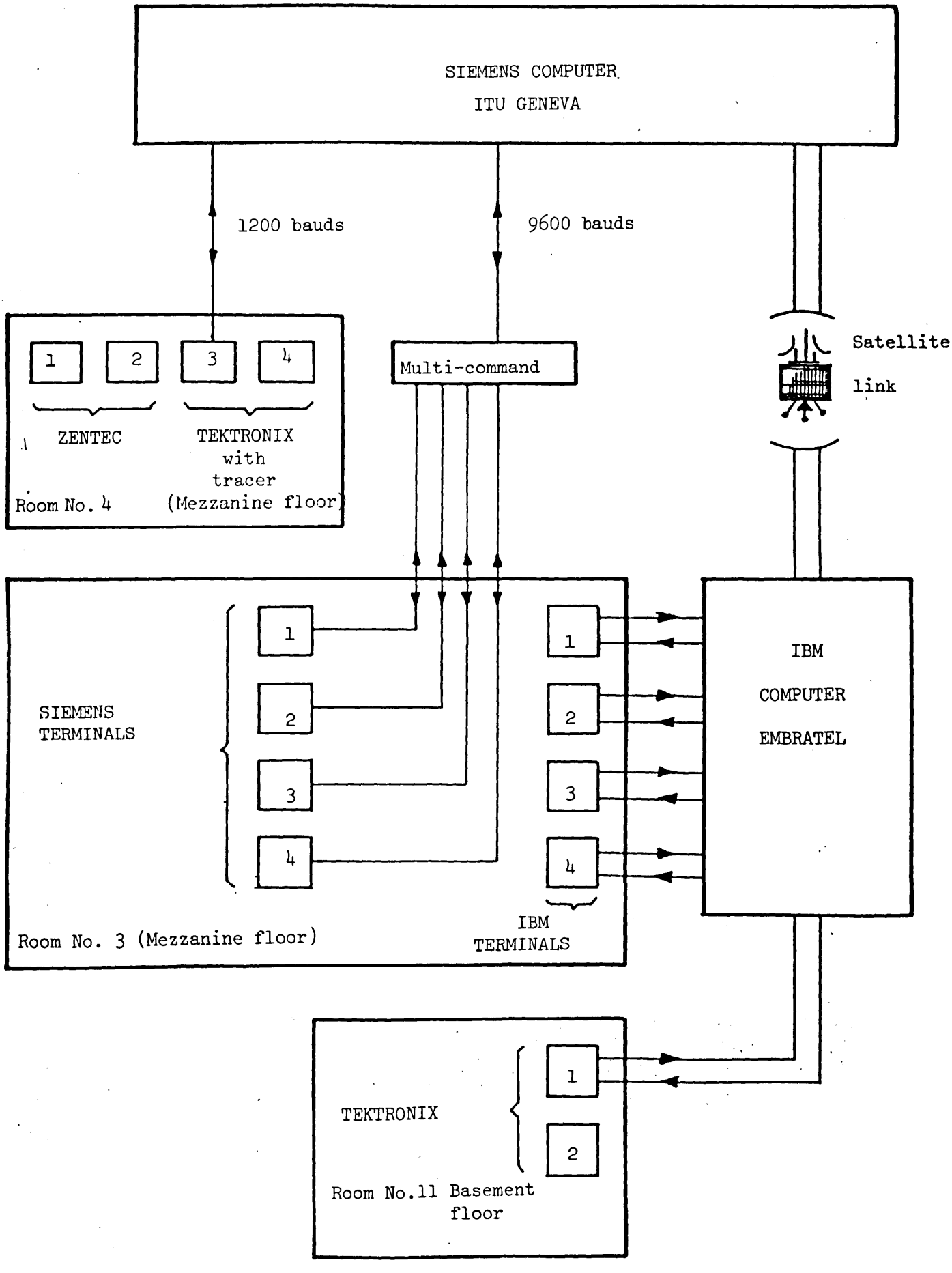
```
(IN)    /ICHNG OFLOW=NO
(IN)    /OPTION MSG=INL
(IN)    /REMARK      /DO PRC.GDUONE
(IN)    /REMARK      NEW VERSION OF GDUONE
(IN)    /FILE =ID1GOZZE.ANTENNA.BEFORE,LINK=DSET19  ,SHRUPD=YES
(IN)    /FILE =ID1GOZZE.DAT.R2.GCPAP.OCT81,LINK=DSET22 ,SHRUPD=YES
(IN)    /FILE =ID1GOZZE.DAT.WRK.DUSIX,LINK=DSET40 ,SHRUPD=YES
(IN)    /FILE =ID1DAM1.DATA.BASE.81.DA.FIRST,LINK=DSAMP20,                    RECFORM=,RECSIZE=,KEYLEN=,KEYPOS=,BLKSIZE=
        PE=,SHRUPD=YES
(IN)    /FILE =ID1DAM1.DATA.BASE.CONT.DA,LINK=FSMCONT,                        RECFORM=,RECSIZE=,KEYLEN=,KEYPOS=,BLKSIZE=,
        PE=,SHRUPD=YES
(IN)    /FILE DAT.USA.AUG,LINK=PGIAUG,SHRUPD=YES,RECFORM=,RECSIZE=,           KEYLEN=,KEYPOS=,BLKSIZE=,FCBTYPE=
(IN)    /EXEC PRO.GDUONE
(OUT)   % PSDO LOADING
(OUT)   (MSG) %  %  E560 PRO.GDUONE
(OUT)   BS2000  F O R T : FORTRAN PROGRAM "GDUONE"
(OUT)   STARTED ON IRDCIR1 AT 19:02:01
(OUT)
(OUT)   ********************************************************************************
(OUT)
(OUT)                   WELCOME TO GDUONE
(OUT)
(OUT)   ********************************************************************************
(OUT)
(OUT)   GDUONE PERFORMS A GROUNDWAVE STUDY FOR A SINGLE STATION
(OUT)
(OUT)   COMPUTE PROPERTIES INCOMPARABILITIES? (Y/N)
(IN)    Y
(OUT)    TEST AN INTERN. STATION FROM BASIC INVENTORY? (Y/N)
(IN)    Y
(OUT)   ENTER FREQ,SERIAL NUMB (E.G:540,12345)
(IN)    540,00001
(OUT)   ENTER D TO DO DAYTIME GROUNDWAVE STUDY
(OUT)         N TO DO NIGHTTIME GROUNDWAVE STUDY
(IN)    D
(OUT)   *** GDUONE: 540D0001
(OUT)   GROUNDWAVE PROPAGATION CURVE # 1  FREQ  540
(OUT)
(OUT)    ,P  SER    CNTY  CL     E       TOW    LAT    LON
(OUT)     1      10  ARG   B   1648.20      1 -34.61 -65.23
(OUT)
(OUT)       FIELD     PHASE   SPACE   ORIENT
(OUT)      1.0000      0.00    0.00    0.00
(OUT)   PATTERN TYPE IS T; SUPPLIED AS IS  -10.00
(OUT)    WANT AUTOMATIC PRE-SELECTION ? (Y/N)
(IN)    Y
(OUT)                  PRE-SELECTED PROTECTED CONTOURS
(OUT)          PRE CONT  SER     LAT    LON   COUNTRY     AZ      DIST(KM)
(OUT)          DS4D0?1D00D2D  -42.77 -65.03  ARG        358.9     1111.8
(OUT)          DS4D011D04?D0  -39.78 -73.24  CHL __     334.8     1509.5
(OUT)          DS4D011D08D60  -51.70 -57.83  FLK __      49.0      403.8
(OUT)          DS6D071D00100  -53.30 -68.47  ARG        283.1       45.3
(OUT)          DS6D11D001D0   -53.30 -68.47  ARG        320.0      189.6
(OUT)   GCPPII: LATIF,LONIF,IDP      5     5
(OUT)     981   982   985  1021  1022  1025  1061  1062  1065
(OUT)   GCPPII: SITE CONDUCTIVITY, AZIMUTH 5000.00  283.10
(OUT)   GCPPII: AZ,RCHANGES    1  4
(OUT)   GCPPII: COND, DISTANCE    5000.00        9.04
(OUT)   GCPPII: COND, DISTANCE       2.00       15.08
(OUT)   GCPPII: COND, DISTANCE    5000.00     1098.84
(OUT)   GCPPII: COND, DISTANCE       2.00     5000.00
(OUT)   GCPPII: AZ,RCHANGES    2  4
(OUT)   GCPPII: COND, DISTANCE    5000.00        6.13
(OUT)   GCPPII: COND, DISTANCE       2.00       20.15
(OUT)   GCPPII: COND, DISTANCE    5000.00      520.41
(OUT)   GCPPII: COND, DISTANCE       2.00     5000.00
(OUT)   GCPPII: AZ,RCHANGES    3  1
(OUT)   GCPPII: COND, DISTANCE    5000.00     5000.00
(OUT)   GCPPII: AZ,RCHANGES    4  4
(OUT)   GCPPII: COND, DISTANCE    5000.00        2.76
(OUT)   GCPPII: COND, DISTANCE       2.00      222.47
(OUT)   GCPPII: COND, DISTANCE       3.00      102.62
(OUT)   GCPPII: COND, DISTANCE    5000.00     5000.00
(OUT)   GCPPII: AZ,RCHANGES    5  3
(OUT)   GCPPII: COND, DISTANCE    5000.00        3.30
(OUT)   GCPPII: COND, DISTANCE       2.00       23.44
(OUT)   GCPPII: COND, DISTANCE    5000.00     5000.00
(OUT)
(OUT)      AZ       PAD       VALUE      SIGI      RATIO       SIGD
(OUT)               (V/M)      (DB)      (DB)       (DB)       (DB)
(OUT)   358.9      1018.6      12.1 =     40.0 +    24.0 -     54.0
(OUT)   334.8      1018.6     -47.5 =    -19.5 +    26.0 -     54.0
(OUT)    49.0      1018.6      35.0 =     67.0 +    26.0 -     58.0
(OUT)   283.1      1018.6      -6.2 =     77.2 +   -29.5 -     54.0
(OUT)   320.0      1018.6      -5.2 =     74.8 +     0.0 -     80.0
(OUT)
```

SKY MANY

```
(IN)    /REMARK        /DO PRC.SKYMANY
(IN)    /FILE DAT.ANTENNA.REPORT,LINK=DSET19,SHRUPD=YES
(IN)    /FILE =INTGOZZE.DAT.REG13.OCT81,LINK=DSET12,SHRUPD=YES
(IN)    /FILE =INTBANI.DATA.MASE.ST.DA.FIRST,LINK=DSAPP20,SHRUPD=YES,          RECFORM=,RECSIZE=,KEYLEN=,KEYPOS=,BLKSI
        ZE=
(IN)    /FILE =INTTHOP.DAT.USA.TLS  ,LINK=RILEFC,SHRUPD=YES,RECFORM=,RECSIZE=,KEYLEN=,KEYPOS=,MAXSIZE=,SCRATCH=
(IN)    /FILE =INTTHOM.DAT.USA.AUG,LINK=RLTAUG,SHRUPD=YES,RECFORM=,RECSIZE=,  KEYLEN=,KEYPOS=,MAXSIZE=,SCRATCH=
(IN)    /EXEC PRO.SKYMANY
(OUT)   $  PSUN LOADING
(OUT)   (MSG) $  $  E54M PRO.SKYMANY
(OUT)   MS2000  F O R T R A N  PROGRAM "SKYMANY"
(OUT)   STARTED ON 210CT81 AT 20:12:18
(OUT)

(OUT)   ********************************************************************************

(OUT)

(OUT)                   WELCOME TO SKYMANY

(OUT)

(OUT)   ********************************************************************************

(OUT)

(OUT)   SKYMANY MOVES A STATION FROM ONE FREQUENCY TO ANOTHER
(OUT)   OR INTRODUCES A NEW STATION ON A FREQUENCY
(OUT)       AND COMPUTES THE RSS IMPACT ON THE NEW FREQUENCY
(OUT)

(OUT)   ********************************************************************************

(OUT)    WANT TO MOVE EXISTING PARAM. IN DATA BASE ? (Y/N)
(IN)    N
(OUT)    ENTER COUNTRY ,
(IN)    CAN
(OUT)    ENTER FREQUENCY ,
(IN)    540
(OUT)    ENTER POWER (KW) ,
(IN)    50
(OUT)    ENTER SITE COORDINATES, LAT(D,M,S), LON(D,M,S)
(IN)    45,0,0,75,0,0
(OUT)   ENTER N FOR NORTH LATITUDE
(OUT)         S FOR SOUTH LATITUDE
(IN)    N
(OUT)    ENTER # OF TOWERS ,
(IN)    2
(OUT)    FOR EACH TOWER, ENTER RATIO,PHASE,SPACE,ORIENT,HEIGTH
(IN)    1,0,0,0,90
(IN)    .5,90,90,90,90
(OUT)   ENTER RMS OR RFACTOR FOR DIRECTIONAL ARRAYS
(OUT)   .......WILL BE CALC. BY PROG. IF ZERO ENTERED
(IN)    0
(OUT)
(OUT)   *** WE ARE IN SUBROUTINE GETK FOR SERIAL # 2000000

(OUT)

(OUT)    READ ERROR  19 ON UNIT 19
(OUT)        ***** INVALID ANTENNA DATA FOR I=   0                              0 "OMNI" ASSUMED....*****
(OUT)   ANT FILE RMS =   0.00  RMS CALC =2188.24
(OUT)    *** CALCULATED K FACTOR ***    , 0.21882405E+04 ,
(OUT)   LISTING OF THE NIGHTTIME OPERATIONS ON  540 KHZ (Y/N)
(IN)    N
(OUT)

(OUT)   HERE ARE THE PARAMETERS TO BE USED FOR SERIAL #       0
(OUT)   STAT  CNT   POWO      LAT       LON       CON (K)
(OUT)     49  CAN   50.00      45.0      -75.0    2188.2
(OUT)

(OUT)      FIELD     PHASE      SPACE      ORIENT      HEIGHT      TYPE

(OUT)

(OUT)       1.0000    0.0000     0.0000     0.0000    90.0000       0
(OUT)       0.5000   90.0000    90.0000    90.0000    90.0000       0
(OUT)   DO YOU WANT TO SEE DETAILED STEPS OF RSS CALCULATIONS? (Y/N)
(IN)    Y
(OUT)

(OUT)     RSS AT SERIAL #  130020; N LAT 28.132  W LONG  81.721; COUNTRY IS USA
(OUT)

(OUT)   SERIAL #          21420      8160    130030         0    188510      4230
(OUT)   COUNTRY             MEX       GIN       USA       CAN       USA       CUB
(OUT)   DIST (KM)        2040.9    1761.3     577.1    1967.3     914.0     983.7
(OUT)   AZIMUTH (DEG)      67.0      29.7     145.5     199.9     200.7     332.7
(OUT)   RAD (MV/M)       3775.7    2185.8     291.8    2900.9     300.5     302.7
(OUT)   THETA (DEG)         0.8       2.2      17.1       1.1       9.8       8.8
(OUT)   F SUB C (UV/M)      3.92      6.22     45.47      4.37     29.24     26.22
(OUT)   COUP LOSS (DB)      0.00      0.00      0.00      0.00      0.00      0.00
(OUT)   LIMIT (MV/M)        2.96      2.72      2.65      2.53      1.76      1.59
(OUT)
(OUT)   RUNNING RSS         2.96      4.02      4.82      5.44
(OUT)
(OUT)   RSS FOR SERIAL #  130020 IS   5.44 MV/M; EMOM IS  2.50 MV/M
(OUT)   THE RSS EXCEEDS EMOM BY   6.76 DB
(OUT)    43  05402130030  R
(OUT)

(OUT)     RSS AT SERIAL #  130030; N LAT 32.552  W LONG  85.036; COUNTRY IS USA
(OUT)

(OUT)   SERIAL #             0     21420    188510    120030
(OUT)   COUNTRY            CAN       MEX       USA       CAN
(OUT)   DIST (KM)       1642.3    1938.1     717.7    1091.7
(OUT)   AZIMUTH (DEG)     215.3      50.3     240.0     189.8
(OUT)   RAD (MV/M)       3117.3    3773.6     295.0     505.1
(OUT)   THETA (DEG)         2.9       1.3      13.3       7.5
(OUT)   F SUB C (UV/M)      7.85      4.59     38.58     22.13
(OUT)   COUP LOSS (DB)      0.00      0.00      0.00      0.00
(OUT)   LIMIT (MV/M)        4.89      3.46      2.28      2.74
(OUT)
(OUT)   RUNNING RSS         4.89      5.99
(OUT)
(OUT)   RSS FOR SERIAL #  130030 IS   5.99 MV/M; EMOM IS  2.50 MV/M
(OUT)   THE RSS EXCEEDS EMOM BY   7.60 DB
```

ANNEX 2

BLOCK DIAGRAM OF THE COMPUTER INSTALLATIONS



HOTEL NACIONAL

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3. If, following negotiations between Administrations, the characteristics of a station have to be modified, form A (see Annex A) should be completed in accordance with the following instructions :

3.1 enter the IFRB serial number;

3.2 complete columns 03 to 09;

3.3 indicate only the modified characteristics (including the frequency, if the station changes channels).

4. The forms B handed to the Secretary of the Working Group shall be used to build up the interim Plan. An updated version of the interim Plan will be reproduced each week together with the recapitulatory weekly calculations.

5. On Monday 23 and 30 November and Monday 7 December, each Administration will receive information on each of their stations appearing in the Basic Inventory as follows:

- an updated extract of their stations in the Basic Inventory.
- an updated extract of the interim Plan
- the updated set of calculations for all its stations in the Basic Inventory.

6. In the week from 7 to 11 December, Committee 4 shall review and adopt formally the stations included in the interim Plan. It should also consider what action should be taken with respect to cases not resolved during the planning exercise, i.e.

- stations in the interim Plan which do not accept the level of interference received from other stations;
- stations which cause an unaccepted level of interference.

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ANNEX A

FORM "A"

REQUEST FOR :

IFRB Serial No.

MODIFICATION ☐ CANCELLATION ☐

(to be filled in by the IFRB)

PART I GENERAL INFORMATION

(01) Administration

Sheet No.

Assigned frequency (kHz)		(02)	
Transmitting station	Name of the station	(03)	
	Call sign	(04)	
	Additional Identification	(05)	
	Station class	(06)	
	Operational Status	(07)	
Country		(08)	
Geographical coordinates of the transmitting station		(09)	W N S

	Station power (kW)	Radiation characteristics of transmitting antenna: Maximum radiation (dB)	Azimuth(s) maximum radiation (degrees)	Sector(s) of limited radiation (degrees)	Maximum radiation in limited sector(s) (dB)	Antenna type	Simple vertical antenna, electrical height (degrees)
DAY-TIME OPERATION	(21)	(22)	(23)	(24)	(25)	(26)	(27)

	Station power (kW)	Radiation characteristics of transmitting antenna: Maximum radiation (dB)	Azimuth(s) maximum radiation (degrees)	Sector(s) of limited radiation (degrees)	Maximum radiation in limited sector(s) (dB)	Antenna type	Simple vertical antenna, electrical height (degrees)
NIGHT-TIME OPERATION	(31)	(32)	(33)	(34)	(35)	(36)	(37)

Hours of operation (GMT)	(42)	

Date :

Delegate/Signature

Date :

Chairman of Group/Signature

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ANNEXE B - ANNEX B - ANEXO B* FORM "B"

STATION ACCEPTEE - STATION ACCEPTED - ESTACION ACEPTADA

DATE/FECHA . . . . . .
ADM. . . . . .

SIGNATURE/
FIRMA . . . . . .

NUMERO DE SERIE/
SERIAL NUMBER/NUMERO SERIE . . . . . .

Eu . . . . . .

STATIONS AFFECTEES/AFFECTED STATIONS/ESTACIONES AFECTADAS

FREQ.	NUM.	ADM.	INTERF.	DELEG.	SIGN. FIRMA
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....

PRES. GROUPE/
PRES. GROUP/PRES. GRUPO
PRES. GROUPE/PRES. GROUP/PRES. GRUPO

SIGN. FIRMA . . . . . .

DATE/FECHA . . . . . .

* Ce formulaire sera fourni à chaque administration avec les données imprimées par l'ordinateur

* This form will be supplied to each administration with the data printed by the computer

* Este formulario sera facilitado a cada administracion con los datos impresos por el computador

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/5(Rev.1)-E
16 November 1981
Original : French

PLANNING GROUPS OF
COMMITTEE 4

Note from the Chairman of Committee 4 (Planning)
to the Chairmen of the Planning Groups

The purpose of this document is to present the following:

Appendix 1 - Data processing facilities of the Technical Secretariat to be used by the Planning Groups

Appendix 2 - Documents to be supplied to delegations and Planning Groups and description of the procedure to be followed in application of Document No. 49

G. COURTEMANCHE
Chairman of Committee 4

Appendices: 2

ARCHIVES U.I.T. GENÈVE

APPENDIX 1

Data processing facilities of the Technical Secretariat to be used by the Planning Groups:

1. Four (4) Siemens terminals are connected to two (2) Siemens computers at ITU, Geneva. The Siemens 7541 (4 MB, 750 kops) computer will be used for data capture and for carrying out the following test programmes:

   1.1 SKYONE : Calculation of usable field strength (E_u) at a given point (the site of a transmitting station or its protected contour). This programme also provides details of the calculations made (sky-wave only).

   1.2 SKYMANY : Calculation of the effect induced by a new station or of a modification to an existing station on all the stations already on a given frequency (sky-wave only).

   1.3 Ground-wave one : Calculation of ground-wave incompatibilities caused by a given station to other preselected stations. Three (3) adjacent channels at a studied frequency will also be included in the calculations.

   1.4 For these three programmes, the results will be printed and distributed to the Chairmen of the Planning Groups (see examples in Annex 1). The Siemens 7760 (4 MB, 1070 kops) computer will be used essentially for the complete calculation of incompatibilities, as employed for developing the incompatibility matrix.

2. Four (4) Scopus terminals are connected to Embratel's IBM 370 computer at Rio. The incompatibility matrix will be calculated on this computer and printed with the aid of the terminals.

3. Use of the equipment mentioned in 1 and 2 above is reserved to the Technical Secretariat and requests for calculations will be submitted using Form C.

4. Two (2) Tektronix 4054 (64 kB) mini-computers with magnetic cassettes and two (2) Zentec machines (64 kB) with floppy discs will be used for conducting the following programmes:

4.1 Distance and azimuth calculations.

4.2 Calculation and plotting of directional antenna patterns.

4.3 Design of simple systems having directional antennas with two or three masts.

Two graph tracers are also available to the Planning Groups. The service and/or interference contours of stations studied can also be plotted on request.

The use of these mini-computers by delegations will be coordinated by the Technical Secretariat.

5. The installation diagram is given in Annex 2.

ANNEXE 1 - ANNEX 1 - ANEXO 1

SKYONE

```
**********************************************************************
**********************************************************************
(IN)    /RUNPAR      DO PRC_SKYONE
(IN)    /FILE DAT_AUSSENDA_MESSONE,LINK=BSE11V,SHARUPD=YES
(IN)    /FILE =EUROAZZE_DAT_REGIS_OCT81,LINK=BSE12,SHARUPD=YES
(IN)    /FILE =EUROPARL_DATA_BASE_ST_DA_FINST,LINK=OSAMP2D,SHARUPD=YES,          RECFORM=,RECSIZE=,KEYLEN=,KEYPOS=,MEASIZE=
        PE=
(IN)    /FILE =EUROMOD_DAT_USA_ILS,LINK=PILSLC,SHARUPD=YES,RECFORM=,RECSIZE=,   KEYLEN=,KEYPOS=,MEASIZE=     EUROP
(IN)    /FILE =EUROMOD_DAT_USA_AUG,LINK=AUGTAUG,SHARUPD=YES,RECFORM=,RECSIZE=,  KEYLEN=,KEYPOS=,MEASIZE=,    EUROP
(IN)    /ECHOG OFLOW=NO
(IN)    /EXEC PRO_SKYONE
(OUT)   %  PSUB LOADING
(OUT)   (MSG) %  %  E560 PRO_SKYONE
(OUT)   BS2000  F O R 1 : FORTRAN PROGRAM "SKYONE"
(OUT)   STARTED ON 210CT81 AT 20:24:22
(OUT)
(OUT)   **********************************************************************
(OUT)
(OUT)                    WELCOME TO SKYONE
(OUT)
(OUT)   **********************************************************************
(OUT)
(OUT)   SKYONE COMPUTES THE RSS AT A SPECIFIED ANTENNA SITE
(OUT)   SKYONE HANDLES ONLY WEST LONGITUDE
(OUT)   **********************************************************************
(OUT)   ENTER FREQ, SERIAL #, EMOP AT SITE (MV/M)
(IN)    540,0,2.5
(OUT)   ENTER N FOR NORTH LATITUDE
(OUT)         S FOR SOUTH LATITUDE
(IN)    N
(OUT)   ENTER SITE COORDS:LAT(D,M,S),LON(D,M,S)
(IN)    45,0,0,75,0,0
(OUT)    540 KHZ; SERIAL #       0; EMOM IS  2.5 MV/M;    N LAT 45  0  0  W LONG  75  0  0
(OUT)   LISTING OF THE NIGHTTIME OPERATIONS ON  540 KHZ (Y/N)
(IN)    N
(OUT)    49  US402000000

(OUT)     RSS AT SERIAL #       0; N LAT 44.999  W LONG  74.999; COUNTRY IS

(OUT)   SERIAL #          126000   120040   120030   124890
(OUT)   COUNTRY              CAN      CAN      CAN      CAN
(OUT)   DIST (KM)          479.1    816.9    724.4    893.5
(OUT)   AZIMUTH (DEG)      220.0    251.1     61.3    276.4
(OUT)   RAD (MV/M)         863.9    829.7    492.0    527.1
(OUT)   THETA (DEG)         20.7     11.4     13.2     10.1
(OUT)   F SUB C (MV/M)     50.99    55.69    38.21    50.20
(OUT)   COUP LOSS (DB)      0.00     0.00     0.00     0.00
(OUT)   EIRIE (MV/M)        9.07     5.59     3.76     3.18
(OUT)
(OUT)   RUNNING RSS         9.07    10.65
(OUT)
(OUT)   RSS FOR SERIAL #       0 IS  10.65 MV/M; EMOM IS  2.50 MV/M
(OUT)   THE RSS EXCEEDS EMOM BY  12.59 DB
(OUT)   ENTER 1 TO DO AGAIN ,
(IN)    0
(OUT)   STOP AT STMT 71 IN SKYONE
(OUT)   BS2000  F O R 1 : FORTRAN PROGRAM "SKYONE  " ENDED PROPERLY AT 20:25:16
(OUT)   CPU - TIME USED :        6.4501 SECONDS
(OUT)   ELAPSED TIME    :       52.7800 SECONDS
(IN)    /ENDP
```

GROUND WAVE ONE

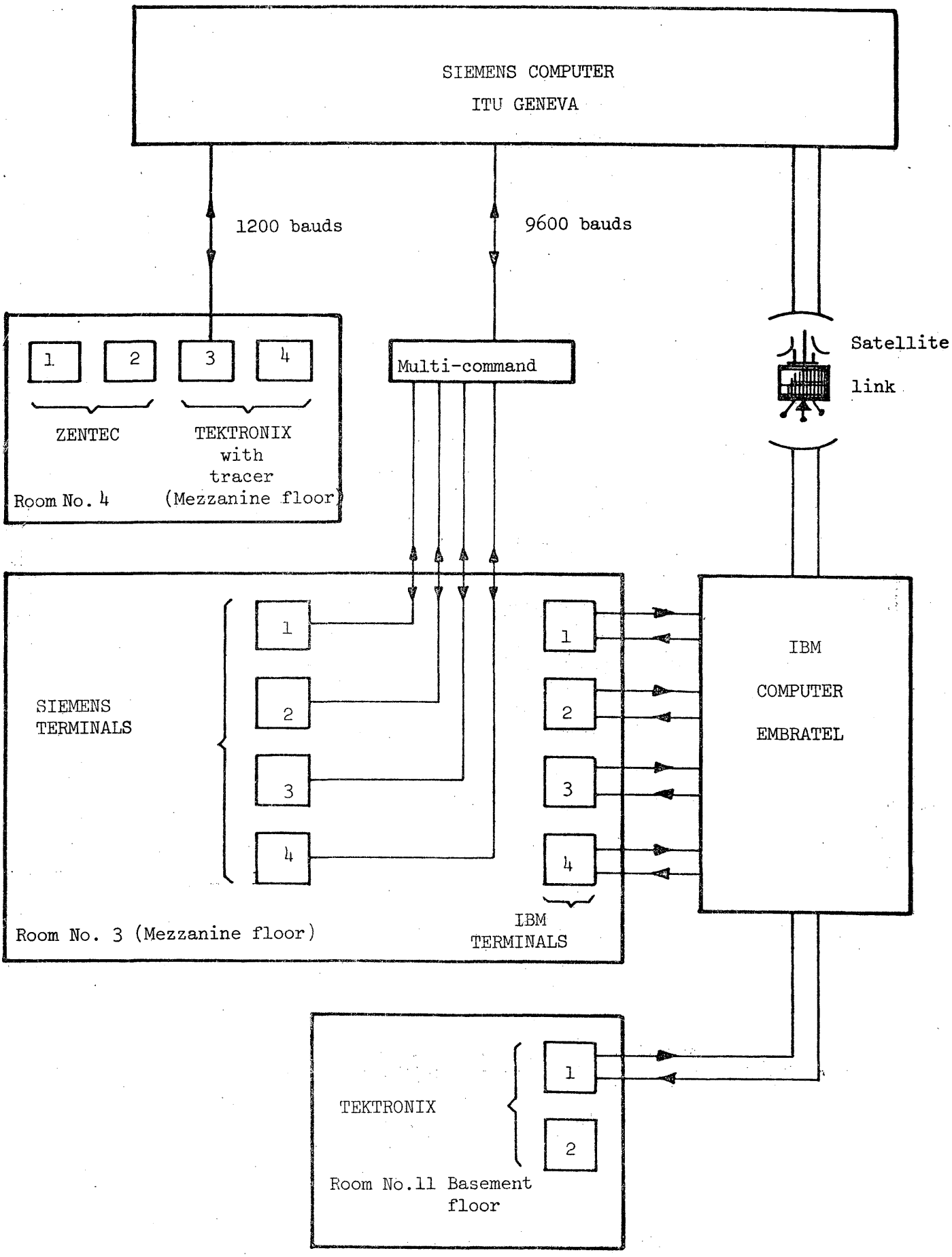
```
(IN)    /ECHNG NFLOW=NO
(IN)    /OPTION MSG=FNL
(IN)    /REMARK      /DO PRC.GDUONE
(IN)    /REMARK      NEW VERSION OF GDUONE
(IN)    /FILE =IDIGOZZE.ANTENNA.REFONE,LINK=DSET19  ,SHARUPD=YES
(IN)    /FILE =IDIGOZZE.DAT.R2.GCPAP.OCT81,LINK=DSET22 ,SHARUPD=YES
(IN)    /FILE =IDIGOZZE.DAT.WRK.DUSIX,LINK=DSET40 ,SHARUPD=YES
(IN)    /FILE =IDIBANI.DATA.BASE.ST.DA.FIRST,LINK=DSAMP20,                    DECFORM=,RECSIZE=,KEYLEN=,KEYPOS=,BLKSIZE=
        PE=,SHARUPD=YES
(IN)    /FILE =IDIBANI.DATA.BASE.CONT.DA,LINK=ISNCONT,                        DECFORM=,RECSIZE=,KEYLEN=,KEYPOS=,BLKSIZE=,
        PE=,SHARUPD=YES
(IN)    /FILE DAT.USA.AUG,LINK=PGIAUG,SHARUPD=YES,RECFORM=,RECSIZE=,          KEYLEN=,KEYPOS=,BLKSIZE=,FCNTYPE=
(IN)    /EXEC PRO.GDUONE
(OUT)   %  P500 LOADING
(OUT)   (MSG) %  %  E560 PRO.GDUONE
(OUT)   MS2000  P O R T R A N PROGRAM "GDUONE"
(OUT)   STARTED ON TROCTRI AT 19:02:01
(OUT)
(OUT)   ********************************************************************************
(OUT)
(OUT)                       WELCOME TO GDUONE
(OUT)
(OUT)   ********************************************************************************
(OUT)
(OUT)   GDUONE PERFORMS A GROUNDWAVE STUDY FOR A SINGLE STATION
(OUT)
(OUT)   COMPUTE POSSIBLE INCOMPABILITIES? (Y/N)
(IN)    Y
(OUT)    TEST AN INTERF. STATION FROM BASIC INVENTORY? (Y/N) ,
(IN)    Y
(OUT)   ENTER FREQ,SERIAL NUMB (E.G.:540,12345) ,
(IN)    540,00001
(OUT)   ENTER D TO DO DAYTIME GROUNDWAVE STUDY
(OUT)         N TO DO NIGHTTIME GROUNDWAVE STUDY
(IN)    D
(OUT)   *** GDUONE: 540000001
(OUT)   GROUNDWAVE PROPAGATION CURVE # 1  FREQ  540
(OUT)
(OUT)     P  SER    CNTY  CL     R      POW     LAT    LON
(OUT)     1      10  ARG  D  1648.60     1 -54.41 -65.23
(OUT)
(OUT)       YIELD     PHASE   SPACE   ORIENT
(OUT)       1.0000     0.00    0.00    0.00
(OUT)   PATTERN TYPE AS IS SUPPLIED GO TO  -10.00
(OUT)    WANT AUTOMATIC PRE-SELECTION ? (Y/N) ,
(IN)    Y
(OUT)                   PRE-SELECTED PROTECTED CONTOURS
(OUT)          FRE CONT  SER     LAT    LON   COUNTRY     AZ      DIST(KM)
(OUT)          0540071000020  -42.77 -65.03  ARG        358.9     1111.8
(OUT)          0540011004700  -39.78 -73.24  CHL __     334.8     1509.9
(OUT)          0540011008060  -51.70 -57.83  FLK __      49.0      403.8
(OUT)          0560071000100  -53.30 -68.47  ARG        283.1       45.9
(OUT)          0560111000100  -53.30 -68.47  ARG        320.0      180.6
(OUT)   GCRPTI: LATIF,LONIF,IDP      5     3
(OUT)     981   982   985  1021  1022  1025  1961  1962  1963
(OUT)   GCRPTI: SITE CONDUCTIVITY, AZIMUTH 5000.00  283.10
(OUT)   GCRPTI: AZ,#CHANGES    1  4
(OUT)   GCRPTI: COND, DISTANCE    5000.00        9.04
(OUT)   GCRPTI: COND, DISTANCE       2.00       15.08
(OUT)   GCRPTI: COND, DISTANCE    5000.00     1098.84
(OUT)   GCRPTI: COND, DISTANCE       2.00     5000.00
(OUT)   GCRPTI: AZ,#CHANGES    2  4
(OUT)   GCRPTI: COND, DISTANCE    5000.00        4.13
(OUT)   GCRPTI: COND, DISTANCE       2.00       20.15
(OUT)   GCRPTI: COND, DISTANCE    5000.00      520.81
(OUT)   GCRPTI: COND, DISTANCE       2.00     5000.00
(OUT)   GCRPTI: AZ,#CHANGES    3  1
(OUT)   GCRPTI: COND, DISTANCE    5000.00     5000.00
(OUT)   GCRPTI: AZ,#CHANGES    4  4
(OUT)   GCRPTI: COND, DISTANCE    5000.00        2.76
(OUT)   GCRPTI: COND, DISTANCE       2.00      222.47
(OUT)   GCRPTI: COND, DISTANCE       3.00      102.62
(OUT)   GCRPTI: COND, DISTANCE    5000.00     5000.00
(OUT)   GCRPTI: AZ,#CHANGES    5  3
(OUT)   GCRPTI: COND, DISTANCE    5000.00        3.30
(OUT)   GCRPTI: COND, DISTANCE       2.00       23.44
(OUT)   GCRPTI: COND, DISTANCE    5000.00     5000.00
(OUT)
(OUT)      AZ       FAD      VALUE     SIGI     RATIO      SIGD
(OUT)             (MV/M)     (DB)      (DB)      (DB)      (DB)
(OUT)    358.9    1648.6     12.1 =    40.0 +    26.0 -    54.0
(OUT)    334.8    1648.6    -47.5 =   -19.5 +    26.0 -    54.0
(OUT)     49.0    1648.6     35.0 =    67.0 +    26.0 -    58.0
(OUT)    283.1    1648.6     -6.2 =    77.2 +   -29.5 -    54.0
(OUT)    320.0    1648.6     -5.2 =    74.8 +     0.0 -    80.0
(OUT)
```

SKY MANY

```
(IN)    /RFNAME        /DD SRC.SKYMANY
(IN)    //FILE DAT.ANTENNA_MEPORS,LINK=DSET19,SHARUPD=YES
(IN)    //FILE =JOIGOZZE.DAT_REGIS.OCT81,LINK=DSET12,SHARUPD=YES
(IN)    //FILE =JOIBAMI.DATA_BASE_SI_DA_FIRST,LINK=DSAMP2D,SHARUPD=YES,          RECFORM=,RECSIZE=,KEYLEN=,KEYPOS=,BLKSI
        ZE=
(IN)    //FILE =JOITHOM.DAT_USA_ILS  ,LINK=ILSEC,SHARUPD=YES,RECFORM=,RECSIZE=,KEYLEN=,KEYPOS=,BLKSIZE=,RCRIVE=
(IN)    //FILE =JOITHOM.DAT_USA_AUG,LINK=AUGTAUG,SHARUPD=YES,RECFORM=,RECSIZE=,  KEYLEN=,KEYPOS=,BLKSIZE=,RCRIVE=
(IN)    /EXEC PRO.SKYMANY
(OUT)   %  P500 LOADING
(OUT)   (MSG) %  %  E540 PRO.SKYMANY
(OUT)   MS2000  F 0 R 1 : FORTRAN PROGRAM "SKYMANY"
(OUT)   STARTED ON 210C181 AT 20:12:18
(OUT)
(OUT)   ********************************************************************************
(OUT)
(OUT)                   WELCOME TO SKYMANY
(OUT)
(OUT)   ********************************************************************************
(OUT)
(OUT)   SKYMANY MOVES A STATION FROM ONE FREQUENCY TO ANOTHER
(OUT)   OR INTRODUCES A NEW STATION ON A FREQUENCY
(OUT)       AND COMPUTES THE RSS IMPACT ON THE NEW FREQUENCY
(OUT)
(OUT)   ********************************************************************************
(OUT)    WANT TO MOVE EXISTING PARAM. IN DATA BASE ? (Y/N) ,
(IN)    N
(OUT)    ENTER COUNTRY ,
(IN)    CAN
(OUT)    ENTER FREQUENCY ,
(IN)    540
(OUT)    ENTER POWER (KW) ,
(IN)    50
(OUT)    ENTER SITE COORDINATES, LAT(D,M,S), LON(D,M,S) ,
(IN)    45,0,0,75,0,0
(OUT)   ENTER N FOR NORTH LATITUDE
(OUT)         S FOR SOUTH LATITUDE
(IN)    N
(OUT)    ENTER # OF TOWERS ,
(IN)    2
(OUT)    FOR EACH TOWER, ENTER RATIO,PHASE,SPACE,ORIENT,HEIGTH ,
(IN)    1,0,0,0,90
(IN)    .5,90,90,90,90
(OUT)   ENTER RMS OR RFACTOR FOR DIRECTIONAL ARRAYS
(OUT)   .......WILL BE CALC. BY PROG. IF ZERO ENTERED
(IN)    0
(OUT)
(OUT)   *** WE ARE IN SUBROUTINE GETK FOR SERIAL # 2000000
(OUT)
(OUT)    READ ERROR  19 ON UNIT 19
(OUT)        ***** INVALID ANTENNA DATA FOR :-   0                          0 'OMNI' ASSUMED...*****
(OUT)   ANT FILE RMS =   0.00  RMS CALC =2188.24
(OUT)    *** CALCULATED K FACTOR ***    , 0.21882405E+04 ,
(OUT)   LISTING OF THE NIGHTTIME OPERATIONS ON  540 KHZ (Y/N)
(IN)    N
(OUT)
(OUT)   HERE ARE THE PARAMETERS TO BE USED FOR SERIAL #        0
(OUT)   STAT  CNT   POWD       LAT      LON       CON (K)
(OUT)     49  CAN   50.00       45.0     -75.0    2188.2
(OUT)
(OUT)       FIELD      PHASE      SPACE      ORIENT      HEIGHT      TYPE
(OUT)
(OUT)        1.0000     0.0000     0.0000     0.0000     90.0000       0
(OUT)        0.5000    90.0000    90.0000    90.0000     90.0000       0
(OUT)   DO YOU WANT TO SEE DETAILED STEPS OF RSS CALCULATIONS? (Y/N)
(IN)    Y
(OUT)
(OUT)     RSS AT SERIAL #  130020; N LAT 28.132  W LONG  81.721; COUNTRY IS USA
(OUT)
(OUT)   SERIAL #          21420      8160    130030         0    188510      6230
(OUT)   COUNTRY             MEX       GTM       USA       CAN       USA       CUB
(OUT)   DIST (KM)        2040.9    1761.3     577.1    1967.3     914.0     983.7
(OUT)   AZIMUTH (DEG)      67.0      29.7     145.5     199.9     200.7     332.7
(OUT)   RAD (MV/M)       3775.7    2185.8     291.8    2900.9     300.5     302.7
(OUT)   THETA (DEG)         0.8       2.2      17.1       1.1       9.8       8.8
(OUT)   F SUB C (UV/M)      3.92      6.22     45.47      4.37     29.26     26.22
(OUT)   COUP LOSS (DB)      0.00      0.00      0.00      0.00      0.00      0.00
(OUT)   LIMIT (MV/M)        2.96      2.72      2.65      2.53      1.76      1.59
(OUT)
(OUT)   RUNNING RSS         2.96      4.02      4.82      5.44
(OUT)
(OUT)   RSS FOR SERIAL #  130020 IS    5.44 MV/M; EMOM IS  2.50 MV/M
(OUT)   THE RSS EXCEEDS EMOM BY    6.76 DB
(OUT)    43  05402130030  B
(OUT)
(OUT)     RSS AT SERIAL #  130030; N LAT 32.452  W LONG  85.056; COUNTRY IS USA
(OUT)
(OUT)   SERIAL #              0     21420    188510    120030
(OUT)   COUNTRY             CAN       MEX       USA       CAN
(OUT)   DIST (KM)        1642.3    1938.1     717.7    1091.7
(OUT)   AZIMUTH (DEG)     215.3      50.3     240.0     189.8
(OUT)   RAD (MV/M)       3117.3    3773.6     295.0     505.1
(OUT)   THETA (DEG)         2.9       1.3      13.3       7.5
(OUT)   F SUB C (UV/M)      7.85      4.59     38.58     22.13
(OUT)   COUP LOSS (DB)      0.00      0.00      0.00      0.00
(OUT)   LIMIT (MV/M)        4.89      3.46      2.28      2.74
(OUT)
(OUT)   RUNNING RSS         4.89      5.99
(OUT)
(OUT)   RSS FOR SERIAL #  130030 IS    5.99 MV/M; EMOM IS  2.50 MV/M
(OUT)   THE RSS EXCEEDS EMOM BY    7.60 DB
```

ANNEX 2

BLOCK DIAGRAM OF THE COMPUTER INSTALLATIONS



HOTEL NACIONAL

A P P E N D I X 2

PROCEDURES AND DOCUMENTS

1. On a weekly basis, Administrations will be given an updated extract of their stations in the Basic Inventory. A copy of the updated Basic Inventory will be available to Administrations for consultation at the Technical Secretariat. During the week, the Secretariat can supply on request information on the characteristics of a station resulting from modifications since the last publication of the Basic Inventory.

2. Every Monday, each Delegation will receive the list of its stations showing the usable field station (Eu) and the sources of interference Together with the above list, each Delegation will receive a form B for each station filled by computer. In cases where the Administration accepts the usable field strength and, where no station of another Administration is affected, the Administration responsible for the station shall sign the form B, have it endorsed by the Chairman of the Working Group and hand it to the Secretary of the Working Group.
In cases where stations of other Administrations are affected, the Administration responsible for the station shall sign the Form B if it accepts the Eu for the station and endeavour to obtain the signatures of the affected Administrations. When all the affected Administrations have signed the form, then the Chairman of the Working Group shall endorse it and hand it to the Secretary of the Working Group .

3. If, following negotiations between Administrations, the characteristics of a station have to be modified, form A (see Annex A) should be completed in accordance with the following instructions :

3.1 enter the IFRB serial number;

3.2 complete columns 03 to 09;

3.3 indicate only the modified characteristics (including the frequency, if the station changes channels).

4. The forms B handed to the Secretary of the Working Group shall be used to build up the interim Plan. An updated version of the interim Plan will be reproduced each week together with the recapitulatory weekly calculations.

5. On Monday 23 and 30 November and Monday 7 December, each Administration will receive information on each of their stations appearing in the Basic Inventory as follows:

- an updated extract of their stations in the Basic Inventory.
- an updated extract of the interim Plan
- the updated set of calculations for all its stations in the Basic Inventory.

6. In the week from 7 to 11 December, Committee 4 should consider what action should be taken with respect to cases not resolved during the planning exercise.

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ANNEX A

FORM "A"

REQUEST FOR :

IFRB Serial No.

MODIFICATION /_/ CANCELLATION /_/ (to be filled in by the IFRB)

PART I GENERAL INFORMATION

(01) Administration Sheet No.

Assigned frequency (kHz)		(02)
Transmitting station	Name of the station	(03)
	Call sign	(04)
	Additional Identification	(05)
	Station class	(06)
	Operational Status	(07)
Country		(08)
Geographical coordinates of the transmitting station		(09) W N S

DAY-TIME OPERATION	Station power (kW)	Radiation characteristics of transmitting antenna: Maximum radiation (dB)	Azimuth(s) maximum radiation (degrees)	Sector(s) of limited radiation (degrees)	Maximum radiation in limited sector(s) (dB)	Antenna type	Simple vertical antenna, electrical height (degrees)
	(21)	(22)	(23)	(24)	(25)	(26)	(27)

NIGHT-TIME OPERATION	Station power (kW)	Radiation characteristics of transmitting antenna: Maximum radiation (dB)	Azimuth(s) maximum radiation (degrees)	Sector(s) of limited radiation (degrees)	Maximum radiation in limited sector(s) (dB)	Antenna type	Simple vertical antenna, electrical height (degrees)
	(31)	(32)	(33)	(34)	(35)	(36)	(37)

Hours of operation (GMT)	(42)

Date : Date :

Delegate/Signature Chairman of Group/Signature

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ANNEXE B - ANNEX B - ANEXO B* FORM "B"

STATION ACCEPTEE - STATION ACCEPTED - ESTACION ACEPTADA

DATE/FECHA . . . . . .
ADM. . . . . .

SIGNATURE/
FIRMA . . . . . .

NUMERO DE SERIE/
SERIAL NUMBER/NUMERO SERIE . . . . . .

Eu . . . . . .

STATIONS AFFECTEES/AFFECTED STATIONS/ESTACIONES AFECTADAS

FREQ.	NUM.	ADM.	INTERF.	DELEG.	SIGN. FIRMA
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....

PRES. GROUPE/
PRES. GROUP/PRES. GRUPO
PRES. GROUPE/PRES. GROUP/PRES. GRUPO

SIGN. FIRMA . . . . . .

DATE/FECHA . . . . . .

* Ce formulaire sera fourni à chaque administration avec les données imprimées par l'ordinateur

* This form will be supplied to each administration with the date printed by the computer

* Este formulario sera facilitado a cada administracion con los datos impresos por el computador

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PAGE LAISSEE EN BLANC INTENTIONNELLEMENT

ANNEX C

REQUEST FOR CALCULATION

FORM "C"

PART I GENERAL INFORMATION

IFRB Serial No.

(01) Administration

Sheet No. (to be filled in by the IFRB)

Assigned frequency (kHz)		(02)	
Transmitting station	Name of the station	(03)	
	Call sign	(04)	
	Additional Identification	(05)	
	Station class	(06)	
	Operational Status	(07)	
Country		(08)	
Geographical coordinates of the transmitting station		(09)	W N S

DAY-TIME OPERATION	Station power (kW)	Radiation characteristics of transmitting antenna: Maximum radiation (dB)	Azimuth(s) maximum radiation (degrees)	Sector(s) of limited radiation (degrees)	Maximum radiation in limited sector(s) (dB)	Antenna type	Simple vertical antenna, electrical height (degrees)
	(21)	(22)	(23)	(24)	(25)	(26)	(27)

NIGHT-TIME OPERATION	Station power (kW)	Radiation characteristics of transmitting antenna: Maximum radiation (dB)	Azimuth(s) maximum radiation (degrees)	Sector(s) of limited radiation (degrees)	Maximum radiation in limited sector(s) (dB)	Antenna type	Simple vertical antenna, electrical height (degrees)
	(31)	(32)	(33)	(34)	(35)	(36)	(37)

Hours of operation (GMT)	(42)	

CALCULATION OPTIONS

SKY ONE
SKY MANY
GDW ONE
MATRIX

Date :

Delegate/Signature

Date :

Chairman of Group/Signature

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/5-E
13 November 1981
Original: French

PLANNING GROUPS OF
COMMITTEE 4

Note from the Chairman of Committee 4 (Planning)
to the Chairmen of the Planning Groups

The purpose of this document is to present the following:

Appendix 1 - Data processing facilities of the Technical Secretariat to be used by the Planning Groups

Appendix 2 - Documents to be supplied to delegations and Planning Groups and description of the procedure to be followed in application of Document No. 49

G. COURTEMANCHE
Chairman of Committee 4

Appendices: 2

ARCHIVES U.I.T. GENÈVE

APPENDIX 1

Data processing facilities of the Technical Secretariat to be used by the Planning Groups:

1. Four (4) Siemens terminals are connected to two (2) Siemens computers at ITU, Geneva. The Siemens 7541 (4 MB, 750 kops) computer will be used for data capture and for carrying out the following test programmes:

   1.1 SKYONE : Calculation of usable field strength (E_u) at a given point (the site of a transmitting station or its protected contour). This programme also provides details of the calculations made (sky-wave only).

   1.2 SKYMANY : Calculation of the effect induced by a new station or of a modification to an existing station on all the stations already on a given frequency (sky-wave only).

   1.3 Ground-wave one : Calculation of ground-wave incompatibilities caused by a given station to other preselected stations. Three (3) adjacent channels at a studied frequency will also be included in the calculations.

   1.4 For these three programmes, the results will be printed and distributed to the Chairmen of the Planning Groups (see examples in Annex 1). The Siemens 7760 (4 MB, 1070 kops) computer will be used essentially for the complete calculation of incompatibilities, as employed for developing the incompatibility matrix.

2. Four (4) Scopus terminals are connected to Embratel's IBM 370 computer at Rio. The incompatibility matrix will be calculated on this computer and printed with the aid of the terminals.

3. Use of the equipment mentioned in 1 and 2 above is reserved to the Technical Secretariat and requests for calculations will be submitted in accordance with the procedure described in Appendix 2.

4. Two (2) Tektronix 4054 (64 kb) mini-computers with magnetic cassettes and two (2) Zentec machines (64 kb) with floppy discs will be used for conducting the following programmes:

4.1 Distance and azimuth calculations.

4.2 Calculation and plotting of directional antenna patterns.

4.3 Design of simple systems having directional antennas with two or three masts.

Two graph tracers are also available to the Planning Groups. The service and/or interference contours of stations studied can also be plotted on request.

The use of these mini-computers by delegations will be coordinated by the Technical Secretariat.

5. The installation diagram is given in Annex 2.

ANNEXE 1 - ANNEX 1 - ANEXO 1

SKYONE

```
****************************************************************************
****************************************************************************
(IN)     /REMARK      DO PPC_SKYONE
(IN)     /FILE DAT.ANTENNA.NEFONE,LINK=DSE11V,SHARUPD=YES
(IN)     /FILE =IUIGUZZE.DAT.REGIS.OCT81,LINK=DSLI12,SHARUPD=YES
(IN)     /FILE =IUIPANI.DATA.BASE.ST.UA.FIRST,LINK=DSAMP2D,SHARUPD=YES,        RECFORM=,RECSIZE=,KEYLEN=   TYPS
         PE=
(IN)     /FILE =IUIIMOP.DAT.USA.ILS,LINK=PILSEC,SHARUPD=YES,RECFORM=,RECSIZE=,  KEYLEN=,KEYPOS=,BLKSIZE=,FCBTYPE
(IN)     /FILE =IUIIMOP.DAT.USA.AUG,LINK=RGIAUG,SHARUPD=YES,RECFORM=,RECSIZE=,  KEYLEN=,KEYPOS=,BLKSIZE=,FCBTYPE
(IN)     /ECHNG UFLOW=NO
(IN)     /EXEC PRO.SKYONE
(OUT)    % P500 LOADING
(OUT)    (MSG) X  X  I560 PRO.SKYONE
(OUT)    BS2000  F O R 1 : FORTRAN PROGRAM "SKYONE"
(OUT)    STARTED ON 21OCT81 AT 20:24:22
(OUT)
(OUT)    ************************************************************************
(OUT)
(OUT)                    WELCOME TO SKYONE
(OUT)
(OUT)    ************************************************************************
(OUT)
(OUT)    SKYONE COMPUTES THE RSS AT A SPECIFIED ANTENNA SITE
(OUT)    SKYONE HANDLES ONLY WEST LONGITUDE
(OUT)    ************************************************************************
(OUT)    ENTER FREQ, SERIAL #, ENOM AT SITE (MV/M)
(IN)     540,0,2.5
(OUT)    ENTER N FOR NORTH LATITUDE
(OUT)          S FOR SOUTH LATITUDE
(IN)     N
(OUT)    ENTER SITE COORDS:LAT(D,M,S),LON(D,M,S)
(IN)     45,0,0,75,0,0
(OUT)     540 KHZ; SERIAL #      0; ENOM IS  2.5 MV/M;    N LAT 45  0  0  W LONG  75  0  0
(OUT)    LISTING OF THE NIGHTTIME OPERATIONS ON  540 KHZ (Y/N)
(IN)     N
(OUT)     49  05402000006
(OUT)
(OUT)      RSS AT SERIAL #         0; N LAT 44.999  W LONG  74.999; COUNTRY IS
(OUT)
(OUT)    SERIAL #           126000   120040   120030   124890
(OUT)    COUNTRY               CAN      CAN      CAN      CAN
(OUT)    DIST (KM)           479.1    816.9    724.4    893.5
(OUT)    AZIMUTH (DEG)       220.0    251.1     61.3    276.4
(OUT)    RAD (MV/M)          805.9    829.7    492.0    527.1
(OUT)    THETA (DEG)          20.7     11.4     13.2     10.1
(OUT)    F SUB C (UV/M)      50.99    33.69    38.21    30.20
(OUT)    COND LOSS (DB)       0.00     0.00     0.00     0.00
(OUT)    LIMIT (MV/M)         9.07     5.59     3.76     3.18
(OUT)
(OUT)    RUNNING RSS          9.07    10.65
(OUT)
(OUT)    RSS FOR SERIAL #        0 IS  10.65 MV/M; ENOM IS  2.50 MV/M
(OUT)    THE RSS EXCEEDS ENOM BY  12.59 DB
(OUT)    ENTER 1 TO GO AGAIN ,
(IN)     0
(OUT)    STOP AT STMT 71 IN SKYONE
(OUT)    BS2000  F O R 1 : FORTRAN PROGRAM "SKYONE  " ENDED PROPERLY AT 20:25:16
(OUT)    CPU - TIME USED  :       6.4501 SECONDS
(OUT)    ELAPSED TIME     :      52.7800 SECONDS
(IN)     /ENDP
```

GROUND WAVE ONE

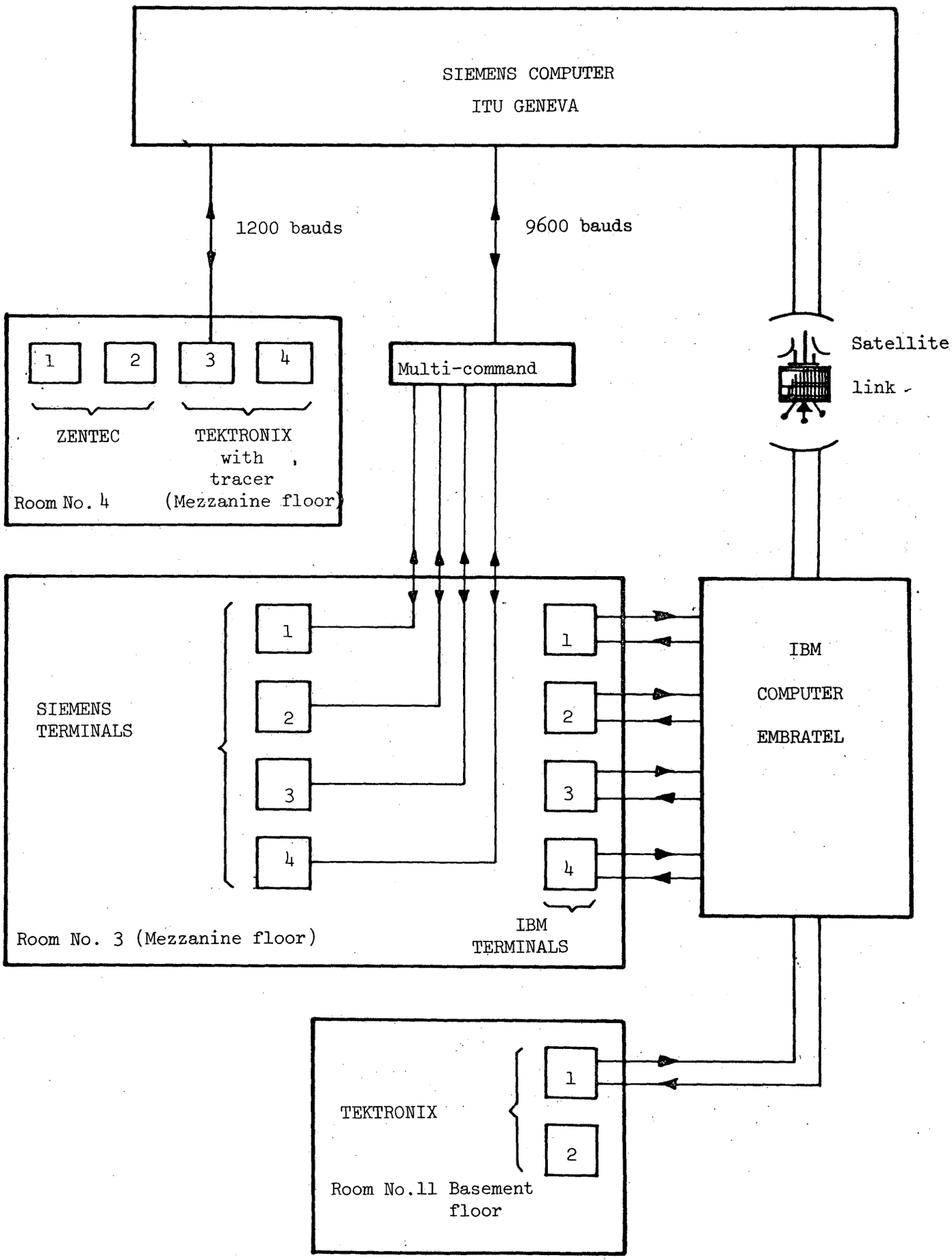
```
(IN)    /ICHNG OFLOW=NO
(IN)    /OPTION MSG=FML
(IN)    /REMARK      /DO PRC.GDWONE
(IN)    /REMARK      NEW VERSION OF GDWONE
(IN)    /FILE =IO1GOZZE.ANTENNA.BEFORE,LINK=DSET19  ,SHARUPD=YES
(IN)    /FILE =IO1GOZZE.DAT.R2.GCPAP.OCT81,LINK=DSET22 ,SHARUPD=YES
(IN)    /FILE =IO1GOZZE.DAT.WRK.DUSTX,LINK=DSET40 ,SHARUPD=YES
(IN)    /FILE =IO1BAHI.DATA.BASE.ST.DA.FIRST,LINK=DSAMP2D,                    RECFORM=,RECSIZE=,KEYLEN=,KEYPOS=,BLKSIZE=
        PE=,SHARUPD=YES
(IN)    /FILE =IO1BAHI.DATA.BASE.CONT.DA,LINK=ISMCONT,                        RECFORM=,RECSIZE=,KEYLEN=,KEYPOS=,BLKSIZE=
        PE=,SHARUPD=YES
(IN)    /FILE DAT.USA.AUG,LINK=PG1AUG,SHARUPD=YES,RECFORM=,RECSIZE=,          KEYLEN=,KEYPOS=,BLKSIZE=,FCBTYPE=
(IN)    /EXEC PRO.GDWONE
(OUT)   % P500 LOADING
(OUT)   (MSG) %  %  E560 PRO.GDWONE
(OUT)   MS2000  F O R 1 : FORTRAN PROGRAM "GDWONE"
(OUT)   STARTED ON IRDCIR1 AT 19:02:01
(OUT)
(OUT)   ********************************************************************************
(OUT)
(OUT)                    WELCOME TO GDWONE
(OUT)
(OUT)   ********************************************************************************
(OUT)
(OUT)   GDWONE PERFORMS A GROUNDWAVE STUDY FOR A SINGLE STATION
(OUT)
(OUT)   COMPUTE ADDESIE INCOMPABILITIES? (Y/N)
(IN)    Y
(OUT)    TEST AN INTERF. STATION FROM BASIC INVENTORY? (Y/N) ,
(IN)    Y
(OUT)   ENTER FREQ,SERIAL NUMB (EX:540,12345) ,
(IN)    540,00001
(OUT)   ENTER D TO DO DAYTIME GROUNDWAVE STUDY
(OUT)         N TO DO NIGHTTIME GROUNDWAVE STUDY
(IN)    D
(OUT)   *** GDWONE: S4000001
(OUT)   GROUNDWAVE PROPAGATION CURVE # 1  FREQ  540
(OUT)
(OUT)    ,P  SER   CNTY  CL     K       ROW     LAT    LON
(OUT)    1      10  ARG  B  1648.60     1 -54.61 -65.23
(OUT)
(OUT)      FIELD     PHASE   SPACE   ORIENT
(OUT)     1.0000     0.00    0.00    0.00
(OUT)   PATTERN TYPE 4D I; SUPPLIED 0D FS  -10.00
(OUT)    WANT AUTOMATIC PRE-SELECTION ? (Y/N) ,
(IN)    Y
(OUT)                  PRE-SELECTED PROTECTED CONTOURS
(OUT)          FRE CONT  SER      LAT    LON  COUNTRY     AZ      DIST(KM)
(OUT)          0540[illegible]0020  -42.77 -65.03  ARG       358.9   1111.8
(OUT)          0540011004700  -39.28 -73.24  CHL __    334.8   1509.5
(IT)           0540011008060  -51.70 -57.83  FLK        49.0    403.8
(IT)           0560071000100  -53.30 -68.47  ARG       283.1     45.3
(OUT)          0560111000100  -53.30 -68.47  ARG       320.0    189.6
(OUT)   GCRPT1: LATIF,LONIF,IDP     1     3
(OUT)     981   982   983  1021  1022  1023  1061  1062  1063
(OUT)   GCRPT1: SITE CONDUCTIVITY, AZIMUTH 5000.00  283.10
(OUT)   GCRPT1: AZ,#CHANGES    1  4
(OUT)   GCRPT1: COND, DISTANCE   5000.00       9.06
(OUT)   GCRPT1: COND, DISTANCE      2.00      15.08
(OUT)   GCRPT1: COND, DISTANCE   5000.00    1098.84
(OUT)   GCRPT1: COND, DISTANCE      2.00    5000.00
(OUT)   GCRPT1: AZ,#CHANGES    2  4
(OUT)   GCRPT1: COND, DISTANCE   5000.00       4.13
(OUT)   GCRPT1: COND, DISTANCE      2.00      20.15
(OUT)   GCRPT1: COND, DISTANCE   5000.00     520.81
(OUT)   GCRPT1: COND, DISTANCE      2.00    5000.00
(OUT)   GCRPT1: AZ,#CHANGES    3  1
(OUT)   GCRPT1: COND, DISTANCE   5000.00    5000.00
(OUT)   GCRPT1: AZ,#CHANGES    4  4
(OUT)   GCRPT1: COND, DISTANCE   5000.00       2.76
(OUT)   GCRPT1: COND, DISTANCE      2.00     222.47
(OUT)   GCRPT1: COND, DISTANCE      3.00     182.62
(OUT)   GCRPT1: COND, DISTANCE   5000.00    5000.00
(OUT)   GCRPT1: AZ,#CHANGES    5  3
(OUT)   GCRPT1: COND, DISTANCE   5000.00       3.30
(OUT)   GCRPT1: COND, DISTANCE      2.00      23.44
(OUT)   GCRPT1: COND, DISTANCE   5000.00    5000.00
(OUT)
(OUT)      AZ      RAD      VALUE     SIGI     RATIO      SIGD
(OUT)              (MV/M)    (DB)      (DB)      (DB)      (DB)
(OUT)    358.9   1648.6    12.1 =   40.0 +   26.0 -   54.0
(OUT)    334.8   1648.6   -47.5 =  -19.5 +   26.0 -   54.0
(OUT)     49.0   1648.6    35.0 =   67.0 +   26.0 -   58.0
(OUT)    283.1   1648.6    -6.2 =   77.2 +  -29.5 -   54.0
(OUT)    320.0   1648.6    -5.2 =   74.8 +    0.0 -   80.0
(OUT)
```

SKY MANY

```
(IN)    /REMARK        /DO PRC.SKYMANY
(IN)    /FILE DAT.ANTENNA.MEDIUM,LINK=DSET11V,SHARUPD=YES
(IN)    /FILE =JD1GOZZE.DAT.REG15.OCT81,LINK=DSET12,SHARUPD=YES
(IN)    /FILE =JD1BANI.DATA.BASE.81.DA.FIRST,LINK=DSAMP20,SHARUPD=YES,          RECFORM=,RECSIZE=,KEYLEN=,DEVPOS=,BLKSI
        ZE=
(IN)    /FILE =JD11HOP.DAT.USA.TLS   ,LINK=RTLSEC,SHARUPD=YES,RECFORM=,RECSIZE=,KEYLEN=,DEVPOS=,MERSIZE=,PCRIVE=
(IN)    /FILE =JD11HOA.DAT.USA.AUG,LINK=RLTAUG,SHARUPD=YES,RECFORM=,RECSIZE=,   KEYLEN=,DEVPOS=,MERSIZE=,PCRIVE=
(IN)    /EXEC PRO.SKYMANY
(OUT)   % PS00 LOADING
(OUT)   (MSG) % % E560 PRO.SKYMANY
(OUT)   RS2000  F O R T : FORTRAN PROGRAM "SKYMANY"
(OUT)   STARTED ON 210CT81 AT 20:12:18
(OUT)
(OUT)   ********************************************************************************
(OUT)
(OUT)                   WELCOME TO SKYMANY
(OUT)
(OUT)   ********************************************************************************
(OUT)
(OUT)   SKYMANY MOVES A STATION FROM ONE FREQUENCY TO ANOTHER
(OUT)   OR INTRODUCES A NEW STATION ON A FREQUENCY
(OUT)       AND COMPUTES THE RSS IMPACT ON THE NEW FREQUENCY
(OUT)
(OUT)   ********************************************************************************
(OUT)    WANT TO MOVE EXISTING PARAM. IN DATA BASE ? (Y/N) ,
(IN)    N
(OUT)    ENTER COUNTRY ,
(IN)    CAN
(OUT)    ENTER FREQUENCY ,
(IN)    540
(OUT)    ENTER POWER (KW) ,
(IN)    50
(OUT)    ENTER SITE COORDINATES, LAT(D,M,S), LON(D,M,S) ,
(IN)    45,0,0,75,0,0
(OUT)   ENTER N FOR NORTH LATITUDE
(OUT)         S FOR SOUTH LATITUDE
(IN)    N
(OUT)    ENTER # OF TOWERS ,
(IN)    2
(OUT)    FOR EACH TOWER, ENTER RATIO,PHASE,SPACE,ORIENT,HEIGTH ,
(IN)    1,0,0,0,90
(IN)    .5,90,90,90,90
(OUT)   ENTER RMS OR R-FACTOR FOR DIRECTIONAL ARRAYS
(OUT)   --------WILL BE CALC. BY PROG. IF ZERO ENTERED
(IN)    0
(OUT)
(OUT)   *** WE ARE IN SUBROUTINE GETK FOR SERIAL # 200000
(OUT)
(OUT)    READ ERROR  19 ON UNIT 19
(OUT)         ***** INVALID ANTENNA DATA FOR :-   0                              0 'OMNI' ASSUMED...*****
(OUT)   ANT FILE RMS =   0.00  RMS CALC =2188.24
(OUT)    *** CALCULATED K FACTOR ***    , 0.21882405E+04 ,
(OUT)   LISTING OF THE NIGHTTIME OPERATIONS ON  540 KHZ (Y/N)
(IN)    N
(OUT)
(OUT)   HERE ARE THE PARAMETERS TO BE USED FOR SERIAL #        0
(OUT)   STAT  CNT   POWO       LAT       LON       CON (K)
(OUT)     49  CAN   50.00       45.0      -75.0     21882
(OUT)
(OUT)       FIELD      PHASE      SPACE      ORIENT      HEIGHT      TYPE
(OUT)
(OUT)        1.0000     0.0000     0.0000     0.0000    90.0000        0
(OUT)        0.5000    90.0000    90.0000    90.0000    90.0000        0
(OUT)   DO YOU WANT TO SEE DETAILED STEPS OF RSS CALCULATIONS? (Y/N)
(IN)    Y
(OUT)
(OUT)     RSS AT SERIAL #  130020; N LAT 28.132  W LONG  81.721; COUNTRY IS USA
(OUT)
(OUT)   SERIAL #          21420      8160    130030         0    188510      6230
(OUT)   COUNTRY             MEX       GTM       USA       CAN       USA       CUB
(OUT)   DIST (KM)        2040.9    1761.3     577.1    1967.3     914.0     983.7
(OUT)   AZIMUTH (DEG)      67.0      29.7     145.5     199.9     200.7     332.7
(OUT)   RAD (MV/M)       3775.7    2185.8     291.8    2900.9     300.5     302.7
(OUT)   THETA (DEG)         0.8       2.2      17.1       1.1       9.8       8.8
(OUT)   F SUB C (UV/M)      3.92      6.22     45.47      4.37     29.26     26.22
(OUT)   COUP LOSS (DB)      0.00      0.00      0.00      0.00      0.00      0.00
(OUT)   LIMIT (MV/M)        2.96      2.72      2.65      2.53      1.76      1.59
(OUT)
(OUT)   RUNNING RSS         2.96      4.02      4.82      5.44
(OUT)
(OUT)   RSS FOR SERIAL #  130020 IS    5.44 MV/M; ENOM IS  2.50 MV/M
(OUT)   THE RSS EXCEEDS ENOM BY    6.76 DB
(OUT)    43  05402130030  R
(OUT)
(OUT)     RSS AT SERIAL #  130030; N LAT 32.452  W LONG  85.056; COUNTRY IS USA
(OUT)
(OUT)   SERIAL #              0     21420    188510    120030
(OUT)   COUNTRY             CAN       MEX       USA       CAN
(OUT)   DIST (KM)        1642.3    1938.1     717.7    1091.7
(OUT)   AZIMUTH (DEG)     215.3      50.3     240.0     189.8
(OUT)   RAD (MV/M)       3117.3    3775.6     295.0     505.1
(OUT)   THETA (DEG)         2.9       1.3      13.3       7.5
(OUT)   F SUB C (UV/M)      7.85      4.59     38.58     22.13
(OUT)   COUP LOSS (DB)      0.00      0.00      0.00      0.00
(OUT)   LIMIT (MV/M)        4.89      3.46      2.28      2.24
(OUT)
(OUT)   RUNNING RSS         4.89      5.99
(OUT)
(OUT)   RSS FOR SERIAL #  130030 IS    5.99 MV/M; ENOM IS  2.50 MV/M
(OUT)   THE RSS EXCEEDS ENOM BY    7.60 DB
```

ANNEX 2

BLOCK DIAGRAM OF THE COMPUTER INSTALLATIONS



HOTEL NACIONAL

APPENDIX 2

PROCEDURES AND DOCUMENTS

1. A weekly table will be prepared by country containing the stations appearing in the updated form of the Basic Inventory. Copies of the table will be available to Administrations for consultation at the Technical Secretariat. During the week, the Secretariat can supply on request information on the characteristics of a station as described in the updated Basic Inventory.

2. Every Monday, each delegation will receive the list of its stations showing the usable field strength (Eu) and the sources of interference. On receipt of this list, each delegation will use form B to provide the Chairman of the Planning Group with the information on the stations for which it accepts the usable field strength (Eu) and which it wishes to have recorded in the provisional Plan. The Secretariat will identify the stations to which the accepted station causes interference and will enter these particulars in form B. The Chairman of the Group will supply a photocopy of this form to the countries concerned, requesting them either to accept entry in the provisional Plan by signing the form or to state their objections.

3. If, following negotiations between Administrations, the characteristics of a station have to be modified, form A (see Annex A) should be completed in accordance with the following instructions :

3.1 enter the IFRB serial number;

3.2 complete columns 03 to 09;

3.3 indicate only the modified characteristics (including the frequency, if the station changes channels).

4. If, for a particular station, the Administration obtains the signature of all the Administrations concerned following successful

negotiations, it shall transmit form B to the Chairman of the Planning Group with a view to the recording of the station concerned in the provisional Plan.

5. The provisional Plan produced as a result of the work of the Planning Groups will be reproduced at the end of each week following the recapitulatory weekly calculation. Each Planning Group will have at its disposal a copy of this table.

6. On Monday 23 and 30 November and Monday 7 December, each Administration will receive two lists; the first list will contain its stations appearing in the provisional Plan and the second, for the rest of its stations, the calculation results derived from the modifications introduced in the course of the week.

7. In the week from 7 to 11 December, Committee 4 should consider what action should be taken on the cases which are not resolved during the planning exercise.

ANNEX A

REQUEST FOR TEST

NEW ☐ MODIFICATION ☐ CANCELLATION ☐

IFRB

CHARACTERISTICS OF REGION 2 BROADCASTING STATIONS IN THE BAND 535 - 1605 kHz

IFRB Serial No. ☐☐☐
(to be filled in by the IFRB)

Date :

Time :

PART I GENERAL INFORMATION

(01) Administration ☐ Sheet No. ☐

Delegate ..... Pigeonhole No. .....

Assigned frequency (kHz)		(02)
Transmitting station	Name of the station	(03)
	Call sign	(04)
	Additional Identification	(05)
	Station class	(06)
	Operational Status	(07)
Country		(08)
Geographical coordinates of the transmitting station		(09) W N S

DAY-TIME OPERATION

Station power (kW)	Radiation characteristics of transmitting antenna: Maximum radiation (dB)	Azimuth(s) maximum radiation (degrees)	Sector(s) of limited radiation (degrees)	Maximum radiation in limited sector(s) (dB)	Antenna type	Simple vertical antenna, electrical height (degrees)
(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Fill in Part II					

NIGHT-TIME OPERATION

Station power (kW)	Radiation characteristics of transmitting antenna: Maximum radiation (dB)	Azimuth(s) maximum radiation (degrees)	Sector(s) of limited radiation (degrees)	Maximum radiation in limited sector(s) (dB)	Antenna type	Simple vertical antenna, electrical height (degrees)
(31)	(32)				(36)	(37)
	Fill in Part II					

Hours of operation (GMT)	(42)	
REMARKS	(44)	

A programme is available to calculate antenna radiation patterns (ZENTEC/TEKTRONIX)

1. Check and complete the form, as required;

2. Enter a cross to indicate action required :

2.1 Computer programme(s) to be initiated :

	Frequency	Serial No	Protected value mV/m	Coordinates
SKY-ONE ☐	.....	.....	.....	.....
SKY-MANY ☐				
GDW ONE ☐			Prot. val. (mV/m)	Protection ratio (dB)
			.....	.....
MATRI ☐				

2.2 The available study results are considered satisfactory ☐

3. The following administrations are concerned by the negotiations required : .....
.....

4. The modification(s) overleaf may be inserted in the Inventory

Date: ..... Time : .....

....

Delegate Chief of planning group

Pigeonhole No .....

5. Person responsible for updating Inventory

Date: .....

Time : ....

Checked by : .....

ANNEXE B - ANNEX B - ANEXO B* FORM "B"

STATION ACCEPTEE - STATION ACCEPTED - ESTACION ACEPTADA

DATE/FECHA . . . . . .
ADM. . . . . .

SIGNATURE/
FIRMA . . . . . .

NUMERO DE SERIE/
SERIAL NUMBER/NUMERO SERIE . . . . . .

Eu . . . . . .

STATIONS AFFECTEES/AFFECTED STATIONS/ESTACIONES AFECTADA

FREQ.	NUM.	ADM.	INTERF.	DELEG.	SIGN. FIRMA
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....

PRES. GROUPE/
PRES. GROUP/PRES. GRUPO
PRES. GROUPE/PRES. GROUP/PRES. GRUPO

SIGN. FIRMA . . . . . .

DATE/FECHA . . . . . .

* Ce formulaire sera fourni à chaque administration avec les données imprimées par l'ordinateur

* This form will be supplied to each administration with the date printed by the computer

* Este formulario sera facilitado a cada administracion con los datos impresos por el computador

INTERNATIONAL TELECOMMUNICATION UNION
REGIONAL BROADCASTING CONFERENCE
(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/6-E
13 November 1981
Original :English

COMMITTEE 5

DRAFT

LAYOUT OF THE REGIONAL AGREEMENT

The following draft layout of the Regional Agreement is presented for the consideration of Committee 5.

1. Preamble
2. Article 1 DEFINITIONS
3. Article 2 FREQUENCY BAND
4. Article 3 EXECUTION OF THE AGREEMENT
5. Article 4 PROCEDURES FOR MODIFICATIONS TO THE PLAN
6. Article 5 NOTIFICATION OF FREQUENCY ASSIGNMENTS
7. Article 6 SPECIAL ARRANGEMENTS [AGREEMENT]
8. Article 7 SCOPE OF APPLICATION OF THE AGREEMENT
9. Article 8 APPROVAL OF THE AGREEMENT
10. Article 9 ACCESSION TO THE AGREEMENT
11. Article 10 TERMINATION OF PARTICIPATION IN THE AGREEMENT
[DENUNCIATION OF THE AGREEMENT]
12. Article 11 ABROGATION OF .....
13. Article 12 DATE OF ENTRY INTO FORCE OF THE AGREEMENT
14. Article 13 DURATION OF THE AGREEMENT
15. Signatures

Miguel PIZARRO A.
Chairman

ARCHIVES U.I.T. GENÈVE

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/7-E
16 November 1981
Original :Engilsh

COMMITTEE 5

PROPOSALS FOR THE DRAFT REGIONAL AGREEMENT

1. The Annex to the present document provides :

- the proposed texts, obtained from Document No. 29, for inclusion as the Preamble, Articles 1 to 3 and 6 to 11 in the draft Regional Agreement;

- the proposed texts relating to the above-mentioned Preamble and the Articles obtained from Documents Nos. 9, 22, 28, 33 and 44, wherever these texts differed from those in Document No. 29.

2. This Annex, which has been prepared as requested by Committe 5 at its first meeting, is presented for the Committee's consideration.

Miguel PIZZARO A.
Chairman

Annex : As mentioned.

ARCHIVES U.I.T. GENÈVE

ANNEX

PREAMBLE

B/29

In order to facilitate relations among the Member Countries of Region 2, mutual understanding, and cooperation on broadcasting in the medium frequency band:

In order to improve the utilization of the frequency band allocated to the medium frequency broadcasting service and achieve a satisfactory broadcasting service in all the countries;

Recognizing that all countries have equal rights, and that, in the application of this Agreement, the needs of each country shall be fulfilled as far as possible;

Recognizing that the protection of mutually accepted services is a major objective for all countries, attempting thereby to bring about better coordination and the use of more efficient facilities;

The delegates of the member states of the International Telecommunication Union listed below, meeting in Río de Janeiro at a Regional Administrative Radio Conference convened under the provisions of the International Telecommunication Convention (Malaga-Torremolinos, 1973), adopt, subject to approval by the competent authorities of their respective countries, the following provisions relating to the broadcasting service in Region 2 for the medium frequency band:

.....

.....

.....

CLM/33

ADD Fully respecting the sovereign right of each country to regulate the medium wave broadcasting service within its territory and to reach special agreements with such countries as it may consider appropriate, without prejudice to other administrations.

Reason : To give substance to the sovereign right of countries, without thereby prejudicing the rights of others.

MOD Recognizing that all countries have equal rights, and that they are to be respected in the application of this Agreement. ~~the needs of each country shall be fulfilled as far as possible~~;

Reason : To uphold a single philosophical principle.

MOD Recognizing that the mutual protection of ~~mutually~~ accepted services is a paramount ~~major~~ objective for all countries, attempting therby to bring about ~~better coordination and the use of more efficient facilities~~; the use of more efficient facilities with a view to improving their operation and coordination between them;

Reason : To establish a logical cause-effect relationship.

SUP The delegates of the member states of ~~the~~ International Telecommunication Union listed below, meeting in Rio de Janeiro at a Regional Administrative Radio Conference convened under the provisions of the International Telecommunication Convention (Malaga-Torremolinos, 1973), adopt, subject to approval by the competent authorities of their respective countries, the following provisions relating to the broadcasting service in Region 2 for the medium frequency waveband:

.....
.....
.....

Reason : In the modification of the structure, form and order of the agreement, it would not be necessary to include this paragraph.

B/29

ARTICLE 1

Definitions

For the purposes of this Agreement, the following terms shall have the meanings defined below:

Union: The International Telecommunication Union;

Secretary-General: The Secretary General of the Union;

I.F.R.B.: The International Frequency Registration Board;

C.C.I.R. The International Radio Consultative Committee;

Convention; The International Telecommunication Convention, (Malaga - Torremolinos 1973.)

Radio Regulations: The Radio Regulations annexed to the Convention;

Region 2: The geographic area defined in number 394 of the Radio Regulations, Geneva, (1979);

Master Register; The Master International Frequency Register;

Agreement: The whole of this Agreement including its Annexes;

Plan: The Plan and its appendices forming Annex 1 to this Agreement and the modifications introduced as a result of the application of the procedures of Article 4.

Contracting Member: Any Member of the Union which has approved this Agreement or acceded to it.

Administration: Any governmental department or service responsible for discharging the obligations undertaken in the Convention on the Radio Regulations.

Station: Medium Frequency Broadcasting Station.

Assignment in accordance with the Agreement: the expression means any frequency asignment appearing in the Plan.

Objectionable interference: the interference caused by a signal that exceeds the maximum permissible field strenght within the protection contour, in accordance with the values specified in Appendix....of Annex 1.

CAN/9 **Plan:** **The Plan and its appendices forming Annex 1 to this Agreement;**

B/28 Radio Regulations: The Radio Regulations (Geneva, 1979) annexed to the Convention;

Agreement: ~~The whole of this Agreement and its Annexes~~; This instrument and its Annexes

Harmful interference : Interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunication service operating in accordance with these Regulations.

Reason : A definition is needed because the term appears in the Agreement. The text is the same as in number 163 of the Radio Regulations (Geneva, 1979).

CLM/33

Convention: The Current International Telecommunication Convention, ~~(Malaga--Torremolinos 1973)~~;

Reason : To link the Union, its organs and bodies with the legal instruments governing it.

Radio Regulations: The Radio Regulations supplementing the provisions of ~~annexed to~~ the Convention;

Reason : To conform with Article 82, number 571 of the Convention.

Agreement: ~~The whole of this Agreement~~ The instrument constituted by the provisions of this document, including its Annexes;

Plan: ~~The Plan and its appendices forming~~ Annex 1 to this Agreement together with its Appendices and the modifications introduced as a result of the application of the procedures of Article 4.

Reason : Clarify the definition and remove the definition within that defined.

Contracting Member: Any Member of the Union which has approved the Agreement or acceded to it.

Administration: Any governmental ~~department~~ body or service responsible for discharging the obligations undertaken in the ~~Convention on the Radio Regulations~~ Agreement.

ARG/44

PLAN: The Plan and its appendices forming Annex 1 to this Agreement and the modifications to the Plan result of the application of the procedures of Article 4.

Assignment in accordance with the Agreement: the expression means any frequency assignment appearing in the Plan or a frequency assignment for which the procedure described in Article 4 of this Agreement has been successfully applied and which has been included in the Plan.

ARTICLE 2

Frequency Band

B/29

2.1 The provisions of this Agreement shall apply to the frequency band 535 to 1605 kHz allocated to the broadcasting service under Article 8 of the Radio Regulations.

CLM/33

The provisions of the ~~this~~ Agreement shall apply to the frequency band 535 to 1605 kHz allocated to the broadcasting service under Article 8 of the Radio Regulations.

ARTICLE 3

B/29

Execution of the Agreement

3.1. The contracting Members shall apply to their stations operating in Region 2 in the frequency band which is subject of this Agreement, the technical characteristics specified in the Plan.

3.2. The Contracting Members shall not alter the technical characteristics of the assignments specified in the Plan, introduce new assignments into the Plan or bring the assignments of the Plan or new assignments into use, except under the conditions set out in Articles 4 and 5 of this Agreement.

3.3. The Contracting Members undertake to study and put into practice the measures necessary to avoid or to reduce any harmful or objectionable interference that might result from application of this Agreement.

CAN/9

1. The Contracting Members shall adopt for their stations operating in Region 2 in the frequency band referred to in this Agreement, the technical characteristics specified in the Plan.

B/28

3.2. The Contracting Members shall not alter the technical characteristics of the assignments specified in the Plan, introduce new assignments into the Plan or bring <u>into service the stations to which the assignments of the Plan correspond</u>, except under the conditions set out in Articles 4 and 5 of this Agreement.

3.2. The Contracting Members shall not alter the technical characteristics of the assignments specified in the Plan, introduce new assignments into the Plan or bring [the assignments] of the Plan or new assignments into use, except under the conditions set out in Articles 4 and 5 of the ~~this~~ Agreement.

CLM/33

3.3. The Contracting Members undertake to study and put into practice the measures necessary to avoid or to reduce any harmful or objectionable interference, ~~that might result from application of this Agreement~~.

1. The contracting Members shall ~~apply to~~ adopt for their stations operating in Region 2 in the frequency band which is subject of this Agreement, the technical characteristics and standards specified in the Plan and its Appendices.

2. The Contracting Members shall not alter the technical characteristics of the assignments specified in the Plan, introduce new assignments into the Plan or bring the assignments ~~of the Plan or new assignments~~ in accordance with Agreement into use, except under the conditions set out in Articles 4 and 5 of this Agreement.

ARG/44

3. The Contracting Members undertake to study and put into practice the measures necessary to avoid or to reduce any ~~harmful or~~ objectionable interference that might result from application of this Agreement.

B/29

ARTICLE 6

Special Agreements

To supplement the procedures provided for under Article 4 of the Agreement and to facilitate application of the procedures to improve utilization of the Plan, Contracting Members may conclude or continue special agreements in accordance with the pertinent provisions of the Convention and the Radio Regulations.

ARTICLE 7

Scope of the Agreement

B/29

7.1 This Agreement is binding upon the Contracting Members in their mutual relations, but not in their relations with noncontracting countries.

7.2 Should a Contracting Member make reservations on application of any provisions of the present Agreement, the other Contracting Members shall not be obligated to respect these provisions in their relations with the Member that has formulated the reservations.

ARTICLE 8

B/29

Approval of the Agreement

Contracting Members shall notify as soon as possible the Secretary General of their approval of this Agreement; the Secretary General shall immediately inform the other Members of the Union.

CAN/9

Contracting Members shall notify the Secretary-General of their approval of this Agreement as soon as possible by depositing an instrument of approval; the Secretary-General shall immediately inform the other Members of the Union.

B/29

ARTICLE 9

Accession to the Agreement

Any Member of the Union in Region 2 that has not signed this Agreement may do so at any time. Accession shall apply to the Plan as it stands at the time of accession, and no reservation may be formulated. The Secretary General shall be notified of the accession and shall immediately inform the other Members of the Union.

CAN/9

1. Any Member of the Union in Region 2 that has not signed this Agreement may at any time deposit an instrument of accession. Accession shall apply to the Plan as it stands at the time of accession, and no reservation may be formulated. The Secretary-General shall be notified of the accession and shall inform immediately the other Members of the Union.

2. Accession to the Agreement shall become effective 30 days after the Secretary-General has received the instrument of accession.

B/28, ARG/44

Any Member of the Union in Region 2 that has not signed this Agreement may do so at any time. Accession shall apply to the Plan as it stands at the time of accession, and no reservation may be formulated. The Secretary General shall be notified of the accession and shall immediately inform the other Members of the Union.

Accession to the Agreement shall take effect 30 days after the date on which the notification is received by the Secretary-General.

ARTICLE 10

B/29

Denunciation of the Agreement

10.1 Any Contracting Member may denounce the present Agreement at any time through a notification sent to the Secretary General, who shall inform the other Members of the Union.

10.2 Denunciation shall become effective one year after the date on which the Secretary General received notification of denunciation.

ARTICLE 11

B/29

Entry into Force of the Agreement

This Agreement shall enter into force on .....

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/8-E
17 November 1981
Original : English/
French/
Spanish

COMMITTEE 5

Information Document

At the request of some delegations, the Regional Agreement on LF/MF Broadcasting, Geneva 1975, is reproduced here for information.

M. PIZARRO A.
Chairman

Annex : 1

ARCHIVES U.I.T. GENÈVE

ANNEX

REGIONAL AGREEMENT

Concerning the Use by the Broadcasting Service of Frequencies in the Medium Frequency Bands in Regions 1 and 3 and in the Low Frequency Bands in Region 1

Preamble

With the object of facilitating relations, mutual understanding and cooperation in the field of LF/MF broadcasting;

with a view to improving the use of the frequency bands allocated to the broadcasting service in order to ensure satisfactory reception of the broadcasting service for all countries;

recognizing that all countries large and small have equal rights and that the needs of all countries and in particular the needs of the developing countries shall be fulfilled as far as possible in the implementation of this Agreement;

the delegates of the following Members of the International Telecommunication Union, meeting in Geneva for a regional administrative conference convened under the provisions of the International Telecommunication Convention (Malaga-Torremolinos, 1973), have adopted, subject to the approval of their respective competent authorities, the following provisions relating to the broadcasting service in Regions 1 and 3 for the medium frequency bands and in Region 1 for the low frequency bands:

ARTICLE 1

Definitions

For the purposes of this Agreement, the following terms shall have the meanings defined below:

Union: The International Telecommunication Union;

Secretary-General: The Secretary-General of the Union;

I.F.R.B.: The International Frequency Registration Board;

C.C.I.R.: The International Radio Consultative Committee;

Convention: The International Telecommunication Convention;

Radio Regulations: The Radio Regulations annexed to the Convention;

Regions 1 and 3: The geographical areas defined in Nos. 126 and 128 to 132 of the Radio Regulations, Geneva, 1959;

Agreement: The whole of this Agreement including its annexes;

Plan: The Plan and its appendices forming Annex 1 to this Agreement;

Contracting Member: Any Member of the Union which has approved or acceded to the Agreement;

Administration: Any governmental department or service responsible for discharging the obligations undertaken in the Convention and the Radio Regulations.

ARTICLE 2

Frequency Bands

The provisions of this Agreement apply to the frequency bands between 150 and 285 kHz and between 525 and 1 605 kHz allocated to the broadcasting service under Article 5 of the Radio Regulations, Geneva, 1959.

ARTICLE 3

Execution of the Agreement

1. The Contracting Members shall adopt, for their broadcasting stations operating in Regions 1 and 3 in the frequency bands referred to in the Agreement, the characteristics specified in the Plan.

2. The Contracting Members shall not bring assignments complying with the Plan into use, change the technical characteristics of stations specified in the Plan, or bring new stations into use, except under the conditions set out in Articles 4 and 5 of this Agreement (see also Resolution No. 7).

3. The Contracting Members shall endeavour to agree on the action required to reduce any harmful interference caused by the application of this Agreement.

ARTICLE 4

Procedure for Modifications to the Plan

1. When a Contracting Member proposes to make a modification to the Plan, i.e. either:

- to change the characteristics of a frequency assignment to a broadcasting station shown in the Plan, whether or not the station has been brought into use, or
- to bring into use an assignment to a broadcasting station not appearing in the Plan, or
- to change the characteristics of a frequency assignment to a broadcasting station for which the procedure in this Article has been successfully applied, whether or not the station has been brought into use, or
- to cancel a frequency assignment to a broadcasting station,

the following procedure shall be applied before any notification is made under the provisions of Article 9* of the Radio Regulations (see Article 5 of this Agreement).

2. In the remainder of the present Article, the term "assignment in accordance with the Agreement" means any frequency assignment appearing in the Plan or for which the procedure of this Article has been successfully applied.

3. *Proposed Changes in the Characteristics of an Assignment or the Bringing into Use of a new Assignment*

3.1 Any administration proposing a change in the characteristics of an assignment or the bringing into use of a new assignment shall seek the agreement of all the administrations having an assignment in accordance with the Agreement, in the same channel or an adjacent channel, which is considered to be affected (see 3.2.5 and 3.3.1).

3.2 *Channels other than Low-Power Channels*

3.2.1 An administration proposing to change the characteristics of an assignment or to bring a new assignment into use shall so inform the I.F.R.B. and furnish the characteristics of the modification or addition in the form adopted in the Plan and its appendices.

3.2.1.1 Where the proposed modification is within the limits defined in 3.2.9, the information shall contain a reference to that paragraph.

3.2.1.2 In all other cases, in order to arrive at the agreement referred to in 3.1, the administration shall notify to the I.F.R.B. the names of the administrations whose agreement it considers should be sought and of those with which agreement has been reached.

3.2.2 The I.F.R.B. shall determine on the basis of Annex 2 to the Agreement the administrations having frequency assignments in accordance with the Agreement which are considered to be affected within the meaning of 3.2.5. The results of these calculations shall be sent immediately by the I.F.R.B. to the administration proposing the modification to the Plan. The I.F.R.B. shall include the names of these administrations in the information received and shall publish the complete information in a special section of its weekly circular.

---

* or the corresponding article of the Radio Regulations currently in force.

3.2.3 The I.F.R.B. shall send a telegram to the administrations listed in the special section of the weekly circular drawing their attention to the information it contains and shall also send to them the results of its calculations.

3.2.4 Any administration which considers that it should have been included in the list of administrations whose frequency assignments are considered to be affected may, giving its reasons for so doing, request the I.F.R.B. to include its name. A copy of the request shall be sent to the administration proposing the modifications to the Plan.

3.2.5 Any assignment may be considered affected when its usable field strength is increased by a value equal to or greater than 0.5 dB as a consequence of the proposed modification to the Plan. The usable field strength is calculated at any point on the boundary of the service area resulting from the first recording of the assignment in the Plan. When the original assignment in the Plan has been modified in accordance with the Agreement, the calculation shall take account of this modification. The increase in the usable field strength is calculated in accordance with Annex 2 to the Agreement.

3.2.6 An administration seeking agreement under 3.1 for daytime operation of a station may, by agreement with the affected administrations, use the simplified method of calculation defined in 3.3.4.3 or 3.4.3.3, as appropriate, of Annex 2 to the Agreement.

3.2.7 An administration may ask the administration proposing the modification for the additional information it considers necessary to calculate the increase of the usable field strength. Similarly, the administration proposing the modification may ask any administration whose agreement it seeks for the additional information it considers necessary. The administrations shall inform the I.F.R.B. of such requests.

3.2.8 Comments from administrations on information published pursuant to 3.2.2 should be sent either directly to the administration proposing the modification or through the I.F.R.B. In any event the I.F.R.B. shall be informed that comments have been made.

3.2.9 The agreement mentioned in 3.1 is not required if the proposed modification either:

- entails no increase in effective monopole radiated power in any direction, or
- relates to a change in the site of the station, within the tolerances specified in 4.9 of Annex 2 to the Agreement.

In either case, the administration intending to modify the Plan may put its project into effect, subject to the application of the provisions of Article 9* of the Radio Regulations.

3.2.10 An administration which has not notified its comments either to the administration concerned or to the I.F.R.B. within a period of sixteen weeks following the date of the weekly circular referred to in 3.2.2 shall be understood to have agreed to the proposed change. This time limit may be extended by eight weeks in the case of an administration which has requested additional information pursuant to paragraph 3.2.7.

3.2.11 If in seeking agreement an administration makes changes in its initial proposal, it shall again apply the provisions of 3.2.1 and the consequent procedure.

3.2.12 If no comments have been received on expiry of the periods specified in 3.2.10, or if agreement has been reached with the administrations which have made comments, the administration proposing the modification may proceed with its project and shall inform the I.F.R.B. indicating the final characteristics of the assignment together with the names of the administrations with which agreement has been reached.

3.2.13 When the proposed modification to the Plan involves a developing country, administrations shall seek a solution conducive to economical development of the broadcasting system of the developing country, giving due consideration to the principles enunciated to this effect in the Preamble to this Agreement.

---

* or the corresponding article of the Radio Regulations currently in force.

3.2.14 The I.F.R.B. shall publish in a special section of its weekly circular the information received under 3.2.12, together with the names of any administrations with which the provisions of this article have been successfully applied. With respect to Contracting Members, the assignment concerned shall enjoy the same status as those appearing in the Plan.

3.3 *Low-Power Channels*

3.3.1 Any administration proposing a change in the characteristics of a frequency assignment in a low-power channel or the bringing into use of a new station in such a channel shall seek the agreement of any other administration when the distance between the proposed station and the nearest point on the boundary of the territory of that other administration is less than the corresponding values given in 4.8.3 of Annex 2 to the Agreement.

3.3.2 After having obtained the agreement of the administrations concerned, the administration proposing the modification shall inform the I.F.R.B. indicating the characteristics of the station together with the names of the administrations with which agreement has been reached.

3.3.3 The I.F.R.B. shall publish this information in a special section of its weekly circular. With respect to Contracting Members the assignment concerned shall enjoy the same status as those appearing in the Plan.

3.3.4 The administration may then proceed with its project.

3.4 *Additional Provisions for Channels in shared Bands*

The provisions of this Article apply also to frequency assignments to broadcasting stations in frequency bands shared with other radiocommunication services. However, the special sections of the I.F.R.B. weekly circular mentioned in 3.2.2 and 3.2.3 which concern the proposed modifications shall be considered by these other services to be for information only (see also Resolution No. 7).

3.5 *Provisions common to all Channels*

3.5.1 If no agreement is reached between the administrations concerned, the I.F.R.B. shall make any study that may be requested by these administrations; the Board shall inform them of the result of the study and shall make such recommendations it may be able to offer for the solution of the problem.

3.5.2 Any administration may at any stage in the procedure described, or before applying it, request the assistance of the I.F.R.B., particularly in seeking the agreement of another administration.

3.5.3 If, after application of the procedure described in this Article, the administrations concerned have been unable to reach agreement, they may resort to the procedure described in Article 50 of the Convention. Administrations may also agree to apply the Optional Additional Protocol to the Convention.

3.5.4 In any case, the relevant provisions of Article 9* of the Radio Regulations shall be applied when assignments are notified. When, no agreement having been reached, the I.F.R.B., following the notification of an assignment, records it in the Master International Frequency Register, the entry shall be accompanied by a symbol indicating that the entry has been made subject to the reservation that no harmful interference will be caused to frequency assignments in conformity with the Agreement.

3.5.5 The I.F.R.B. shall maintain an up-to-date master copy of the Plan, and of Appendix 1 relating to low-power channels, taking account of the application of the procedure specified in this Article; to this end the I.F.R.B. shall prepare a document listing the amendments to be made to the Plan and Appendix 1 as a result of modifications made in accordance with the procedure of this Article and of the addition of new assignments in conformity with the Agreement.

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* or the corresponding article of the Radio Regulations currently in force.

3.5.6 The Secretary-General shall be informed by the I.F.R.B. of these changes made in the Plan and shall publish an up-to-date version of the Plan in an appropriate form as and when the circumstances justify and in any case every three years.

4. *Cancellation of Assignments*

When an assignment in accordance with the Agreement is released, whether or not as a result of a modification (for instance a change of frequency), the administration concerned shall immediately so inform the I.F.R.B. The I.F.R.B. shall publish this information in a special section of its weekly circular.

ARTICLE 5

Notification of Frequency Assignments

1. Whenever an administration intends to put into use an assignment in conformity with the Agreement it shall notify this assignment to the I.F.R.B. in accordance with the provisions of Article 9* of the Radio Regulations. Any such assignment recorded in the Master Register as a result of the application of the provisions of Article 9* of the Radio Regulations, shall, in addition to a date in Column 2a or Column 2b, bear a special symbol in the Remarks column.

2. In relations between Contracting Members, all frequency assignments brought into use in conformity with the Agreement and recorded in the Master Register shall be considered to have the same status, irrespective of the dates entered in Column 2a or Column 2b for such assignments.

ARTICLE 6

Special Arrangements

In addition to the procedures provided for in Article 4 of the Agreement and to facilitate their application with a view to improving the utilization of the Plan, Contracting Members may conclude special arrangements in accordance with the pertinent provisions of the Convention and of the Radio Regulations.

ARTICLE 7

Scope of Application of the Agreement

1. This Agreement shall bind Contracting Members in their relations with one another but does not bind those Members with respect to non-Contracting countries.

2. If a Member makes reservations with regard to any provision of this Agreement, other Members shall be free to disregard that provision in their relations with the Member which has made such reservations.

ARTICLE 8

Approval of the Agreement

Members shall notify their approval of this Agreement, as promptly as possible, to the Secretary-General, who shall at once inform the other Members of the Union.

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* or the corresponding article of the Radio Regulations currently in force.

ARTICLE 9

Accession to the Agreement

1. Any Member of the Union in Regions 1 and 3 which has not signed this Agreement may accede thereto at any time. Such accession shall extend to the Plan as amended at the time of the accession and shall be made without reservation. The Secretary-General shall be notified thereof and he shall inform the other Members of the Union.

2. Accession to the Agreement shall take effect on the date on which the notification of accession is received by the Secretary-General.

3. Any Member of the Union party to the Regional Agreement for the African Broadcasting Area (Geneva, 1966) which accedes to the present Agreement in conformity with paragraphs 1 and 2 of this Article, shall by this act of accession terminate its participation in the Regional Agreement for the African Broadcasting Area and the Plan annexed thereto.

ARTICLE 10

Termination of Participation in the Agreement

1. Any Contracting Member shall have the right at any time to terminate its participation in the Agreement by a notification sent to the Secretary-General who shall inform the other Members of the Union.

2. Such termination of participation shall take effect after a period of one year from the date of receipt, by the Secretary-General, of the said notification.

ARTICLE 11

Abrogation of the European Broadcasting Convention (Copenhagen, 1948) and annexed Copenhagen Plan

Additional Protocol I to the Final Acts of the Conference provides for the abrogation of the European Broadcasting Convention (Copenhagen, 1948) and the annexed Copenhagen Plan.

ARTICLE 12

Abrogation of the Regional Agreement for the African Broadcasting Area (Geneva, 1966) and the Plan annexed thereto

Additional Protocol II to the Final Acts of the Conference provides for the abrogation of the Regional Agreement for the African Broadcasting Area (Geneva, 1966) and the Plan annexed thereto.

ARTICLE 13

Effective Date of the Agreement

The Agreement shall enter into force on twenty-three November, one thousand nine hundred and seventy-eight at 0001 hours GMT.

ARTICLE 14

Duration of the Agreement

1. The Agreement and the annexed Plan have been established with a view to meeting the requirements of the broadcasting services in the bands concerned for a period of eleven years from the date of entry into force of the Agreement.

2. The Agreement shall remain in force until it is revised by a competent conference of the Members of the Union in Regions 1 and 3.

IN WITNESS WHEREOF, the Delegates of the Members of the Union mentioned above have, on behalf of their respective competent authorities, signed this Agreement in a single copy in the Chinese, English, French, Russian and Spanish languages, in which, in case of dispute, the French text shall prevail. This copy shall remain deposited in the archives of the Union. The Secretary-General shall forward one certified true copy to each Member in Regions 1 and 3.

Done at Geneva, 22 November 1975.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/9-E
18 November 1981
Original : English

COMMITTEE 4

Draft Note from Committee 4 to
Specific Working Party (Technical) of Plenary

In response to Document No. 53 from the Specific Working Party (Technical) of Plenary, the Planning Committee is of the opinion that the technical criteria to be annexed to the Agreement should include the relevant parts of Chapters 1 to 6 of the Report to the Second Session of the Conference with their associated annexes together with agreed modifications resulting from proposals submitted to this Second Session.

Should Committee 5 request you to prepare other technical annexes, Committee 4 would be interested to comment where appropriate on the results of your deliberations on these matters.

G. COURTEMANCHE
Chairman, Committee 4

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INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

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COMMITTEE 4

Draft Note from Committee 4 to Committee 5

Committee 4 took note that Appendix 1 under Article 12 of the Radio Regulations on the matter of notification and recording in the Master International Register of Frequency Assignments specifies that the "carrier power" be recorded instead of the "station power" as defined in section 1.5 of the Report to the Second Session of the Conference. Therefore, it recommends to Committee 5 that a note be included in the section of the Agreement dealing with notification of frequency assignments stating that the IFRB will record the assignments of Region 2 in accordance with the Plan with a special symbol to indicate that the recorded power is the "station power".

Committee 5 should also note that, in the Plan, the antenna height will be expressed in "electrical degrees" rather than in "metres" despite the fact that the above noted Appendix 1 calls for recording of antenna heights in the Master Register to be expressed in "metres".

G. COURTEMANCHE
Committee 4

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INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

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COMMITTEE 5

Draft reply to the Chairman of Technical Group

In establishing the Regional Agreement, the Committee 5 refers to an annex to the Agreement which will contain the technical criteria and the method for the calculation of the objectionable and harmful interference. This annex is also expected to contain all additional information which may facilitate the application of the procedure of Article 4 of the Agreement (Modifications to the Plan).

Committee 5 expects the above-mentioned annex to be prepared by the Technical Group and would appreciate being informed of all decisions taken in this respect so as to be able to comment upon them as appropriate.

The definitions of "objectionable interference" and "harmful interference", adopted by Committee 5 are reproduced below for your information.

Objectionable interference : The interference caused by a signal that exceeds the maximum permissible field strength within the protected contour, in accordance with the values specified in Appendix... of Annex 1 .

Harmful interference : Interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunication service operating in accordance with the Radio Regulations.

M. PIZARRO A.
Chairman

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INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

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COMMITTEE 5
COMMISSION 5
COMISIÓN 5

TERMS OF REFERENCE FOR THE WORKING GROUPS
MANDATS DES GROUPES DE TRAVAIL
MANDATO DE LOS GRUPOS DE TRABAJO

Terms of Reference for Working Group 5B

Taking into account the decision of Committee 5, to draft the text, in the three languages, of the Articles 1, 2, 3, 6, 7, 8, 9, 10 and 11 and to make the editorial changes as appropriate.

Mandat du Groupe de travail 5B

Compte tenu de la décision prise par la Commission 5, élaborer dans les trois langues les textes des Articles 1, 2, 3, 6, 7, 8, 9, 10 et 11 et y apporter les amendements rédactionnels appropriés.

Mandato del Grupo de trabajo 5B

Habida cuenta de la decisión adoptada por la Comisión 5, elaborar el texto de los Artículos 1, 2, 3, 6, 7, 8, 9, 10 y 11 en los tres idiomas e introducir los cambios de redacción apropiados.

ARCHIVES U.I.T. GENÈVE

Terms of Reference for Working Group 5B

Taking into account the discussions in Committee 5, to examine in detail the proposals relating to Articles 4, 5 and 12 of the Agreement and to present to Committee 5

- texts of the above mentioned Articles whose consensus has been reached; and
- texts for which a consensus could not be reached, by including them in square brackets.

Mandat du Groupe de travail 5B

Compte tenu des débats de la Commission 5, étudier en détail les propositions relatives aux Articles 4, 5 et 12 de l'Accord et présenter à la Commission 5:

- les parties des textes des Articles susmentionnés pour lesquelles il est arrivé à un consensus,
- les parties des textes pour lesquelles il n'a pas été possible de parvenir à un consensus en les faisant figurer entre crochets.

Mandato del Grupo de Trabajo 5B

Habida cuenta de las deliberaciones de la Comisión 5, examinar detalladamente las proposiciones relativas a los artículos 4, 5 y 12 del Acuerdo, así como someter a la Comisión 5

- los textos de los referidos artículos sobre los que se haya llegado a un consenso, y
- los textos sobre los que no se haya podido llegar a un consenso, que figurarán entre corchetes.

M. PIZARRO A.
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

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COMMITTEE 5

PROPOSALS FOR THE DRAFT REGIONAL AGREEMENT

(ARTICLES 4, 5 AND 12)

1. The Annex to the present document provides :

- the proposed texts, obtained from Document No. 29, for inclusion as Articles 4, 5 and 12 in the draft Regional Agreement ; and

- the proposed texts relating to the above-mentioned Articles obtained from Documents Nos. 9, 22, 28, 33, 44, 50 and 56, wherever these texts differed from those in Document No. 29.

2. This Annex has been prepared as requested by Committee 5.

Miguel PIZZARO A.
Chairman

Annex : As mentioned.

ARCHIVES U.I.T. GENÈVE

ARTICLE 4

B/29

Procedure to be followed for Modifications to the Plan

4.1. When a Contracting Member proposes:

— to change the characteristics of a frequency assignment to a station shown in the Plan, whether or not the station has been brought into use.

- to introduce a new assignment into the Plan, or

- to cancel a frequency assignment to a station,

the following procedure shall be applied before any notification is made under the provisions of Article 12 of the Radio Regulations (see Article 5 of this Agreement).

CLM/33

Procedure ~~to be followed~~ for Modifications to the Plan

1. In the present Article the expression "assignment in
CAN/9 accordance with the Agreement" means any frequency assignment appearing in the Plan, or for which the procedure of this Article has been successfully applied.

2. When a Contracting Member proposes:

- to change the characteristics of a frequency assignment to a station shown in the Plan, whether or not the station has been brought into use, or

- to introduce a new assignment into the Plan, or

- to bring into use a new station not appearing in the Plan, or

- to change the characteristics of a frequency assignment to a station for which the procedure in this Article has been successfully applied, whether or not the station has been brought into use, or

- to cancel a frequency assignment to a station;

the following procedure shall be applied before any notification is made under the provisions of Article 12 of the Radio Regulations (see Article 5 of this Agreement).

B/29

4.2. Proposed changes in the characteristics of an assignment or the introduction of a new assignment.

4.2.1 Any administration proposing to change the characteristics of an assignment or introduce a new assignment shall seek the agreement of any administration that has an assignment in accordance with the Agreement in the same channel or in adjacent channels with separation up to 30 kHz and that is considered to be adversely affected in accordance with the provisions of 4.2.1.7 of this Article.

CAN/9

3. Proposed Changes in the Characteristics of an Assignment, Introduction of a New Assignment or the Bringing into Use of a New Station.

3.1 Any administration proposing to change the characteristics of an assignment, introduce a new assignment or bring a new station into use, shall seek the agreement of any administration that has an assignment in accordance with the Agreement in the same channel or in adjacent channels with separation up to 30 kHz and that is considered adversely affected in accordance with the provisions of 3.9.

B/28

4.2.1 Any administration proposing to change the characteristics of an assignment or introduce a new assignment shall seek the agreement of ~~any administration that has an assignment~~ all administrations that have assignments in accordance with the Agreement in the same channel or in adjacent channels with separation up to 30 kHz and that ~~is~~ are considered to be adversely affected in accordance with the provisions of 4.2.1.7 of this Article.

B/29

4.2.1.1 An Administration proposing to change the characteristics of an assignment or introduce a new assignment shall so inform the I.F.R.B. and notify the characteristics of the modification or new assignment in the format specified in the Plan.

CAN/9

3.2 An administration proposing to change the characteristics of an assignment, introduce a new assignment or bring a new station into use shall so inform the I.F.R.B. and notify the characteristics of the modification or new assignment in the format specified in the Plan.

ARG/44

An Administration proposing to change the characteristics of an assignment or introduce a new assignment shall so inform the I.F.R.B. ~~and notify the characteristics of the modification or new assignment in the format specified in the Plan.~~ and send it the information referred to in Appendix ( ) to Annex I to this Agreement.

B/56

2.1.1 An Administration proposing to change the characteristics of an assignment or introduce a new assignment shall ~~so inform the I.F.R.B. and notify the characteristics of the modification or new assignment in the format specified in the Plan,~~ , transmit to the IFRB the information mentioned in Appendix/M/ to the Plan not more than three years prior to the date of implementation of such change OR of entry into service of the station corresponding to the new assignment. At the same time, it may send a letter to the administrations affected to request their agreement, with a copy of the correspondence to the IFRB.

B/29

4.2.1.2 If the modification proposed is of a type described in 4.2.1.19 the information sent to the I.F.R.B. shall contain a reference to that paragraph.

B/28

SUP

Reason: The information mentioned in Appendix /M/ must refer to the situation envisaged in 2.1.10; the text of this Article is simplified; establishing a maximum period of notice will make the Plan more reliable and is consistent with 2.1.24.

B/29

4.2.1.3 In cases not specified in 4.2.1.10, in order to seek the agreement contemplated in 4.2.1, the interested administration shall, at the same time, inform the I.F.R.B. of the names of the Administrations with which it considers an attempt must be made to reach an agreement, and the names of those whose agreement has already been obtained.

B/56 SUP

Reason : The information referred to in Appendix (M) should mention the situation described in section 2.1.10;

B/29

4.2.1.4 The I.F.R.B. shall determine, by using Annex / / to the Agreement those administrations whose assignments in accordance with the Agreement are considered adversely affected in accordance with 4.2.1.7 and shall, as soon as possible, forward the results of its calculations to the Administration proposing the modification to the Plan. The I.F.R.B. shall add the names of these administrations to the information received and shall publish all the information in special section of its weekly circular.

CAN/9

3.5 The I.F.R.B. shall determine, by using Annex [ ] to the Agreement, those administrations whose assignments in accordance with the Agreement are considered adversely affected in accordance with the provisions of 3.9 and shall immediately forward the results of its calculations to the administration proposing the modification to the Plan. The I.F.R.B. shall add the names of these administrations to the information received, and shall publish all the information in a special section of its weekly circular.

CLM/33

The IFRB shall determine whether objectionable interference is produced, using annex ( ) to the Agreement, shall communicate the results to the administration proposing to modify the Plan, indicating the name of the stations and the administrations concerned, and shall at the same time publish these results in a special section of its weekly circular.

Reason : Clarify the text discribing this procedure.

ARG/44

The I.F.R.B. shall determine, by using Annex / / to the Agreement those administrations whose assignments in accordance with the Agreement are considered adversely affected in accordance with 4.2.1.7 and shall, as soon as possible, forward the results of its calculations to the Administration proposing the modification to the Plan. ~~The I.F.R.B. shall add the of its weekly circular.~~ At the same time, the IFRB shall publish in a special section of its weekly circular the information sent pursuant to the provisions of Section 2.1.1, its calculation results and the names of the administrations affected.

B/56 4.2.1.4. **The IFRB shall publish in a special section of its weekly circular the information transmitted to it in** accordance with the provisions of **2.1.1, together with the results of its** calculations **performed on the basis of Annex ( ) to this Agreement to determine which administrations can be considered affected in accordance with the provisions of 2.1.7.**

B/29

4.2.1.4 a) The I.F.R.B. shall also determine the effect of the proposed modification on pending modifications already received by the I.F.R.B. but which have not yet been included in the Plan.

The I.F.R.B. shall forward the results of its calculations to the administrations whose proposed modifications would adversely affect, or would be adversely affected by, other pending modification proposals not yet included in the Plan.

If the incompatibilities between the proposals cannot be resolved, the I.F.R.B. shall publish the results of its calculations and their effect on other proposals in a special section of its weekly circular.

ARG/44

The IFRB shall also determine the effect of the proposed modification on the pending modifications already received by the IFRB but not yet included in the Plan. The IFRB shall effect this determination only when the subsequent proposal has been transmitted to it within the period specified for the forwarding of comments in the pending proposal (2.1.11). Hence, if the proposed modification is submitted after this time limit has expired, the IFRB shall not determine the effect of this modification on the pending modifications.

When appropriatte, the I.F.R.B. shall forward the results of its calculations to the administrations whose proposed modifications would adversely affect, or would be adversely affected by, other pending modification proposals not yet included in the Plan.

B/28

The Board shall as soon as possible transmit the results of its calculations to the administration intending to modify the Plan and shall offer what suggestions it can to avoid possible incompatibilities.

Reason: To make it clearer that the IFRB will publish the information received and the results of its technical examinations, having regard to any proposed modifications that have not yet been included in the Plan.

B/28 **4.2.1.4 b)** If the Board receives information that is incomplete as regards the characteristics specified in Appendix (M) it shall immediately request the informing administration by the fastest channel to let it have additional information as soon as possible. Only after receiving the missing data shall it commence the calculations mentioned in 2.1.4 with a view to their subsequent publication in the special section of its weekly circular.

Reason: To reduce or obviate the need to request further information and thus shorten the negotiating time for updating the Plan.

B/29

4.2.1.5 The I.F.R.B. shall send to the administrations listed in the special section of its weekly circular a telegram drawing their attention to the publication of this information and shall forward the result of its calculations to them.

CAN/9

3.6 The I.F.R.B. shall send to the administrations listed in the special section of its weekly circular a telegram informing them of the publication and shall forward the result of its calculations to them.

B/28

The I.F.R.B. shall send to the administrations listed in the special section of its weekly circular a telegram drawing their attention to the publication of this information and shall forward the result of its calculations to them, together with full information of a technical nature and such suggestions as it can to avoid possible incompatibilities.

Reason: To facilitate application of the procedure and make it more flexible.

B/29

4.2.1.6 An administration which is considered to be entitled to appear on the list of administrations whose frequency assignments have been considered to be adversely affected may request the I.F.R.B. to include it on that list, within /60 days/ from the date of publication, indicating the reasons therefore. Also, a copy of the request will be sent to the administration proposing the modification to the Plan.

CAN/9

3.8 An administration that considers it should have been included on the list of administrations whose frequency assignments are considered to be adversely affected may request the I.F.R.B. to include it on that list, within 30 days from the date of publication, indicating the reasons therefor. A copy of the request will be sent to the administration proposing the modification to the Plan.

CLM/33

An administration which is considered to be entitled to appear on the list of administrations whose frequency assignments have been considered to be adversely affected may request the I.F.R.B. to include it on that list, within 60 days from the date of publication in the special section of its weekly circular, indicating the reasons therefor. Also, a copy of the request will be sent to the administration proposing the modification to the Plan.

ARG/44

An administration which is considered to be entitled to appear on the list of administrations whose frequency assignments have been considered to be adversely affected may requestthe I.F.R.B. to include it on that list, within 60 consecutive days from the date of publication provided in 2.1.4, indicating the technical reasons therefor. Also, a copy of the request will be sent to the administration proposing the modification to the Plan.

B/56 4.2.1.6. Any administration which, after examination of the information published by the IFRB, considers itself entitled to appear on the list of administrations regarded as being adversely affected according to section 2.1.7, may request the IFRB to include it in the procedure initiated under 2.1.1 ~~in that list, within (60 days) from the date of publication, indicating the reasons~~ therefor. A copy of the request shall at the same time be sent to the administration intending to modify the Plan, together with any relevant comments and justifications.

4.2.1.6 a) An administration which receives a request as provided in 2.1.1 shall immediately acknowledge receipt thereof by telegram. If the administration requesting agreement receives no acknowledgement within fifteen days of the date of the IFRB weekly circular in which the information in accordance with 2.1.3 is published it shall send a telegram requesting such acknowledgement, to which the addressee administration shall reply within a further period of fifteen days.

4.2.1.6 b) If the administration requesting acknowledgement of receipt within the second period of fifteen days it shall so inform the IFRB.

./..

4.2.1.6 c) The Board shall send a telegram to the administration whose agreement is sought, drawing its attention to the deadline for transmitting comments to the administration seeking agreement.

B/29

4.2.1.7 Any assignment in accordance with the Agreement may be regarded as adversely affected when appropriate calculations determine that objectionable interference occurs as a result of a proposed modification to the Plan. The calculation determining the possibility of objectionable interference shall be based on Annex [ ] to this Agreement.

CAN/9

3.9 Any assignment in accordance with the Agreement shall be considered adversely affected when appropriate calculations determine that objectionable interference occurs as a result of a proposed modification to the Plan. The calculations determining the possibility of objectionable interference shall be based on Annex [ ] to this Agreement.

ARG/44

Any assignment in accordance with the Agreement ~~may~~ shall be regarded as adversely affected when appropriate calculations determine that objectionable interference occurs as a result of a proposed modification to the Plan. The calculation determining the possibility of objectionable interference shall be based on Annex [ ] to this Agreement.

B/28

2.1.7 Any administration ~~Any assignment in accordance with the Agreement~~ may be regarded as adversely affected if, after performing the appropriate calculations, it determines objectionable interference, as a result of the proposal to modify the Plan: ~~when appropriate calculations determine that objectionable interference occurs as a result of a proposed modification to the Plan.~~

a) to its assignments in accordance with the Plan; and

b) to its proposed modifications already sent to and received by the Board but not yet included in the Plan.

The calculation determining the possibility of objectionable interference shall be based on Annex [ ] to this Agreement.

2.1.7.1 On receipt of a request made in accordance with the provisions of 2.1.1 the administration affected shall rapidly study the matter from the standpoint of any possibly objectionable interference in accordance with 2.1.7.

B/56 2.1.7 A An administration which receives a request in accordance with 2.1.1 and considers that the proposed modification to the Plan in question is acceptable shall signify its agreement as soon as possible but not later than sixty days from the date of publication of the relevant weekly circular, to the administration seeking agreement.

2.1.7 B An administration which receives a request in accordance with 2.1.1 and considers that the proposed modification to the Plan is unacceptable shall communicate to the administration which sent the request its reasons within sixty days from the date of publication of the relevant IFRB weekly circular. It shall also offer any information or suggestions it deems useful for bringing about a satisfactory solution to the problem. The administration seeking agreement shall endeavour to adapt its requirements in so far as possible, having regard to any comments received.

B/29

4.2.1.8 An administration may request from an administration proposing a modification to the Plan, the supplementary information identified in Annex [ ]. Similarly the administration that proposes a modification to the Plan may ask any administration for such supplementary information as it may consider necessary to determine whether objectionable interference will be caused. The administration shall inform the I.F.R.B. of such request.

CAN/9

3.10 An administration may request from an administration proposing a modification to the Plan, the supplementary information identified in Annex [ ]. Similarly the administration that proposes modification to the Plan may ask any administration for such supplementary information as it may consider necessary to determine whether objectionable interference will be caused. The administration asking for supplementary information shall inform the I.F.R.B. of its request.

CLM/33

SUP

Reason : Unnecessary, since the calculations described in 4.2.1.7 require all the data according to the annex.

ARG/44

An administration may request from an administration proposing a modification to the Plan, the supplementary information identified in Annex [ ] within the period specified in the first paragraph of 2.1.11.
Similarly the administration that proposes a modification to the Plan may ask any administration for such supplementary information as it may consider necessary to determine whether objectionable interference will be caused. The administration shall inform the I.F.R.B. of such request.

SUP

B/56

REASON : Appendix (M) should contain sufficient of the necessar information to enable objectionable interference to be calculated in accordance with the methods adopted by the RABC.

B/29

4.2.1.9 Comments from administrations on the information published in compliance with the provisions of 4.2.1.4 shall be sent either directly to the administration that is proposing the change or through the I.F.R.B. but the I.F.R.B. must always be informed that comments have been made.

CLM/33

Comments from administrations on the information published in compliance with the provisions of 4.2.1.4 shall be sent either directly to the administration that is proposing the change or through the I.F.R.B. but the I.F.R.B. must always be informed. ~~that comments have been made~~.

B/56

Comments from administrations on the information published in compliance with the provisions of 2.1.4 shall be sent ~~either~~ preferably directly to the administration that is proposing the change or through the I.F.R.B. but the I.F.R.B. must always be informed that comments have been made.

B/29

4.2.1.10 The agreement mentioned in 4.2.1 is not required if the proposed modification either:

- entails no increase in effective monopole radiated power in any direction, or

- relates to a change in the site of the station within the tolerances specified in [ ] of Annex [ ] to the Agreement, or

- involves notification of a new station on the same frequency, submitted simultaneously with the notification of the cancellation of an assignment under 4.3.1, provided that no objectionable interference is caused to assignments in accordance with the Agreement or such interference does not exceed that previously caused.

In such cases, the administration intending to modify the Plan may put its project into effect subject to the application of the relevant provisions of Article 12 of the Radio Regulations.

ARG/44

Replace last paragraph by the following:

In such cases, the administration proposing the modification of the Plan shall so inform the IFRB to enable the latter, should this section be applicable, to publish its finding in a special section of its weekly circular. Once the IFRB has published its finding, the administration intending to modify the Plan may put its project into effect, subject to the application of the relevant provisions of Article 12 of the Radio Regulations.
If the provisions of this section are inapplicable, the IFRB shall return the information to the administration which sent it.

The third sub-paragraph of the new paragraph 2.1.10 is amended as follows :

MEX/50

involves the simultaneons notification ~~of a new station on the same frequency, submitted simultaneously with the notification~~ of the cancellation of an assignment under 4.1, and the notification of a new station on the same frequency, provided that no objectionable interference is caused to assignments in accordanc with the Agreement or such interference does not exceed that previously caused.

/...

The agreement mentioned in 2.1. is required only if the proposed modification decreases the station power.

B/56 In such cases, the administration intending to modify the Plan ~~may put its project into effect, subject to the application of the relevant provisions of Article 12 of the Radio Regulations.~~ shall so inform the Board which shall publish the the information in a special section of its weekly circular. The administration intending to modify the Plan may carry out its project subject to the application of Article N12.

REASON : The only modification from which no increase in objectionable interference will probably arise, thus enabling the agreement envisaged in 2.1 to be dispensed with, is a decrease in station power (see more detailed comments in 2.4.3 of the document introducing this proposal).

B/29

4.2.1.11 It shall be considered that any administration that has not forwarded its comments to the administration that is proposing the modification or to the I.F.R.B. within a period of [90 days] following the date of the weekly circular referred to in 4.2.1.4 to the proposed change. However, an additional [60 days] may be extended to an administration that requests supplementary information in accordance with the provisions of 4.2.1.8, unless the information identified in Annex [ ] was already forward and the I.F.R.B. so informed.

CAN/9

3.13 Any administration that has not forwarded its comments to the administration that is proposing the modification or to the I.F.R.B. within a period of 60 days following the date of the weekly circular referred to in 3.5, shall be considered to have agreed to the proposed change. This time limit may be extended by 60 days for an administration that has requested supplementary information in accordance with the provisions of 3.10, unless the information identified in Annex [ ] was already forwarded and the I.F.R.B. so informed.

CLM/33

It shall be considered that any administration that has not forwarded its comments to the administration that is proposing the modification or to the I.F.R.B. within a period of [90 days] following the date of the weekly circular referred to in 4.2.1.4 has agreed to the proposed change. However, an additional [60 days] may be extended to an administration that requests supplementary information in accordance with the provisions of 4.2.1.8, ~~unless the information identified in Annex [ ] was already forward and the I.F.R.B. so informed.~~

Reason : It should be merely a question of time limits after which administrations are deemed to have agreed to the change.

4.2.1.11 Contd.

ARG/44

It shall be considered that any administration that has not forwarded its comments to the administration that is proposing the modi-fication or to the IFRB within a period of [90 consecutive days] following the date of the weekly circular referred to in 4.2.1.4 to the proposed change. However, an additional ~~[60 days]~~ 30 days may be extended to an administration that requests supplementary information **in accordance with the provisions of** 4.2.1.8, **unless the information identified in** Annex [ ] **was already forward and the I.F.R.B. so informed.**

'B/56

2.1.11 **It shall be considered that any administration** that has not forwarded its comments to the administration that is proposing the modification or to the I.F.R.B. within a period of ~~[90~~ 60 days] following the date of the weekly circular referred to in 4.2.1.4 has agreed to the proposed change. ~~However, an additional [60 days] may be extended to an administration that requests supplementary information in accordance with the provisions of 4.2.1.8, unless the information identified in Annex [ ] was already forward and the I.F.R.B. so informed.~~

REASON : The Board will have to publish the information referred to in Appendix (M) only if it receives them complete.

B/29

4.2.1.12 If in seeking agreement an administration makes changes in its proposal, the provisions of 4.2.1 and the consequent procedure shall again be applied.

B/56

2.1.12 If, in seeking agreement, an administration makes ~~changes in its proposal,~~ the alterations in its proposed modification, provisions of 2.2.1 and the consequent procedure shall again be applied.

REASON : To clarify the text.

B/29

4.2.1.13 If no comments have been received on expiry of the periods specifiedin 4.2.1.11 or if an agreement has been reached with the administration that submitted comments, the administration proposing the modification may proceed with its project and shall inform the I.F.R.B. of such action indicating the final characteristics of the assignment and the names of the administrations with which agreement has been reached.

ARG/44

If no comments have been received on expiry of the periods specifiedin 4.2.1.11 or if an agreement has been reached with the administration that submitted comments, the administration proposing the modification ~~may proceed with its project and~~ shall inform the I.F.R.B. of such action indicating the final characteristics of the assignment and the names of the administrations with which agreement has been reached.

B/56

2.1.13 If no comments have been received on expiry of the periods specifiedin 2.1.11 or if an agreement has been reached with the administration that submitted comments, the administration proposing the modification ~~may proceed with its project and~~ shall inform the I.F.R.B. of such action indicating the final characteristics of the assignment and the names of the administrations with which agreement has been reached and from which no observations have been forthcoming.

REASON : The Administration intending to modify the Plan must inform the IFRB of the final situation as regards application of this Article. However, in implementing its project, it shall proceed as described in Article 5 of this Agreement.

B/29

4.2.1.14 The I.F.R.B. shall publish the information received under 4.2.1.13 in a special section of its weekly circular and indicate the names of the administrations with which the provisions of this Article have been successfully applied. When agreement has been reached between the administrations involving modifications, the same legal status recognized for an assigment in accordance with the Agreement shall apply to the assignment in question.

CAN/9

3.16 The I.F.R.B. shall publish the information received under 3.15 in a special section of its weekly circular and indicate the names of the administrations with which the provisions of this Article have been successfully applied. The frequency asignment concerned shall enjoy the same legal status recognized for an assignment in accordance with the Agreement.

ARG/44

The I.F.R.B. shall publish the information received under 4.2.1.13 in a special section of its weekly circular, ~~and~~ indicate the names of the administrations with which the provisions of this Article have been successfully applied and include the assignment in the Plan. When agreement has been reached between the administrations involving modifications, the same legal status recognized for an assigment in accordance with the Agreement shall apply to the assignment in question.

B/56

2.1.14 The I.F.R.B. shall publish all the information received under 2.1.13 in a special section of its weekly circular ~~and indicate the names of the administrations with which the provisions of this Article have been successfully applied. When agreement has been reached between the administrations involving modifications~~ and shall immediately proceed to modify the Plan. The same legal status recognized for an assigment in accordance with the Agreement shall apply to the assignment in question.

B/29

4.2.1.15 Should the administrations involved fail to reach agreement, the I.F.R.B., shall conduct such studies as those administrations may request; the I.F.R.B. shall inform the administrations of the findings of its studies and shall submit appropriate recommendations for resolution of the problem.

ARG/44

Should the administrations involved fail to reach agreement, ~~the I.F.R.B.~~, and if the administration which proposed the modification to the Plan insists, the following procedure shall be applied:

a) The proposing administration shall attempt to introduce the necessary changes in its proposal in such a way that no objectionable interference is caused to assignments in conformity with the Agreement. If such modifications are made, the provisions of section 2.14 shall apply.

b) If it again proves impossible to obtain the agreement of the administrations which consider themselves to be adversely affected, the proposing administration consider themselves to be adversely affected, the proposing which are included in the plan but have not been put into service. For this purpose, it may request the assistance of the IFRB. Once the new assignment has been selected, the provisions of section 2.14 shall be applied.

c) If it proves impossible to apply sub-section b) above or if disagreement persists, in the event that the proposing administration should make a proposal exceeding the limits specified in Appendix ( ) to Annex I to this Agreement, the proposal shall be subject to the agreement of all adversely affected administrations.

d) Should agreement be obtained, the proposing administration shall so inform the IFRB in the manner prescribed in section 2.15 and the IFRB shall proceed as provided in section 2.16.

B/56 ADD 2.1.15 A If the Administrations concerned accept the proposed recommendations, the Administration intending to modify the Plan shall so inform the Board which shall proceed to modify the Plan.

ADD 2.1.15 B Should disagreement persist, the IFRB shall re-examine the proposed modification to the Plan from the standpoint of any possibly objectionable interference that may be caused to Administrations :

a) whose assignments are in accordance with the Plan;

b) whose requests for modifications to the Plan have been received by the IFRB but not yet included in the Plan.

Once it is certain that all possible engineering solutions have been considered, the IFRB shall submit new recommendations for solving the problem. Should no other alternatives be available, the IFRB may suggest that the Administrations involved establish Special Agreements - as provided in this Agreement - whereby the problem may be solved even if technical criteria different from those mentioned in Appendix (1) to the Plan have to be accepted.

B/56 ADD 2.1.15 C **Should disagreement further persist, the IFRB shall examine the proposed modification to the Plan from the standpoint of objectionable interference in all channels in the band. If in all cases the Board isssues an unfavourable finding, it shall determine which channel is least affected and so inform the administration seeking agreement and any administrations which may be affected. At the same time the Board shall transmit to the administration seeking agreement appropriate recommendations for reducing or eliminating incompatibilities.**

ADD 2.1.15 D **The administration proposing the amendment to the Plan shall endeavour to meet its requirements in that channel and, once again, shall resort to all the engineering options within its power to try to eliminate or at least minimize incompatibilities with administrations which may be affected.**

ADD 2.1.15 E **If it is impossible to apply the procedure in 2.1.15 d) in respect of the least affected channel determined in accordance with 2.1.15 a) and if for that channel the usable field strength of administrations which may be affected has not been increased by more than 1.94 dB in relation to the initial situation under the Plan, the proposed modification shall be entered in the Plan if the administration seeking agreement so requests.**

B/56

2.1.15 F **If the usable field strength of the administration interfered with has been increased by more than 1.94 dB for the channel least affected, the Board shall offer recommendations to the administration seeking agreement with a view to lowering that usable field strength to a value of not more than 1.94 dB. The Board shall inform the administrations affected of its findings and of the recommendations made to the administration seeking agreement.**

2.1.15 G **If the administration seeking agreement accepts the recommendations and so requests, the Board shall enter the assignment in the Plan and publish the final situation in a special section of its weekly circular.**

REASON : **To guarantee access to the Plan without prejudice to the acquired rights of other administrations and without** detriment of the technical principles of the Plan.

B/29

4.2.1.16 Any administration may, during application of the procedure for modification of the Plan or before initiating such procedure, request assistance form the I.F.R.B., especially in securing agreement of another administration.

ARG/44

Any administration may, during application of the procedure for modification of the Plan or before initiating such procedure, request technical assistance from the I.F.R.B., ~~especially in securing agreement of another administration.~~

B/56

.2.1.16 Any administration, particularly one in need of technical assistance, may, during application of the procedure for modification of the Plan or before initiating such procedure, request assistance from the I.F.R.B., especially in securing the agreement of another administration referred to in section 2.1.

B/29

4.2.1.17 If, after application of the procedure described in this Article, the administrations concerned are unable to reach an agreement, they may resort to the procedure established in Article 50 of the Convention. The administrations also may apply, by common agreement, the Optional Additional Protocol to the Convention.

B/56

SUP

B/29

4.2.1.18 [In any case, the pertinent provisions of Article 12 of the Radio Regulations shall apply for notification of the assignment to the I.F.R.B. in accordance with Article 5.]

CAN/9

3.20 In any case, the pertinent provisions of Article 12 of the Radio Regulations shall apply for notification of the assignment and subsequent technical examination by the I.F.R.B. If no agreement has been reached when the assignment is notified in accordance with Article 5, the I.F.R.B. shall proceed to list it in the Master Register with a symbol to indicate that the assignment is listed subject to the condition that no harmful interference will be caused to assignments in accordance with the Agreement.

SUP

CLM/33

Reason : The modification is prescribed in Section 4.1 above, once the modification procedure has already been initiated.

ARG/44

Once the procedure prescribed in this Article has been carried out and agreement has been reached on the proposal to modify the Plan, the relevant provisions of Article 12 of the Radio Regulations (see Article 5) shall be applied for the modification of assignments to the IFRB.

EX/50

2.1.18 In any case, the pertinent provisions of Article [N12/9] of the Regulations shall apply for notification of assignments to the IFRB. If no agreement is reached, when the assignment has been notified the IFRB shall record it in the Master Register, accompanied by a symbol to indicate that the entry has been made on condition that no objectionable interference is caused to assignments in accordance with the Agreement.

Reason : The deletion of the square brackets is proposed; reference shoul be made to the fact that objectionable interference is involved.

B/56

SUP

REASON : The principle of guaranteed access to the Plan introduced in the Agreement makes 2.1.17 and 2.1.18 redundant.

B/56 ADD 2.1.18 A **Without prejudice to the foregoing provisions, if circumstances so warrant an administration may in exceptional instances initiate the procedure described in this article with a view to securing a provisional entry in the Register of a modification to the Plan not yet included therein. In such cases, the administration concerned shall simultaneously send to the IFRB the calculations it has made to demonstrate the non-existence of objectionable interference to administrations :**

a) **whose assignments are in accordance with the Plan,**

b) **whose request for modifications to the Plan have been received by the IFRB but not yet included in the Plan.**

ADD 2.1.18 B **The IFRB shall ascertain whether the administration concerned will produce objectionable interference to the other mentioned in 2.1.18 a) and shall communicate the results of its examination to the administration concerned as quickly as possible.**

ADD 2.1.18 C **After receiving the information from the Board with a favourable finding, the administration concerned shall notify the assignment to the IFRB in accordance with the provisions of Article 12 of the Regulations. If the IFRB reaches a favourable finding with regard to the application of Article 12 of the Regulations, it shall provisionally enter the assignment in the Register until the provisions of this article are fully complied with, whereupon the entry in the Register shall become final.**

B/29

4.2.1.19 The I.F.R.B. shall keep an up-to-date master copy of the Plan as modified by application of the procedure specified in this Article.

B/29

4.2.1.20 The I.F.R.B. shall inform the Secretary General of any modifications to the Plan. The Secretary General shall publish new editions of the Plan at appropriate intervals not to exceed [two years]. Modifications to the Plan shall be published by quarterly supplements keeping the same format.

CAN/30

3.22 The I.F.R.B. shall inform the Secretary-General of any modifications to the Plan. The Secretary-General shall publish new editions of the Plan at appropriate intervals, not to exceed three years. Modifications to the Plan shall be published by quarterly recapitulative supplements keeping the same format.

B/56

2.1.20 The I.F.R.B. shall inform the Secretary General of any modifications to the Plan. The Secretary General shall publish new editions of the Plan at appropriate intervals not ~~of to exceed~~ [two years] as from the date of entry into force of the Agreement. Modifications to the Plan shall be published by quarterly supplements keeping the same format.

B/29

4.3 Cancellation of an Assignment.

4.3. When an administration decides to cancel assignment in accordance with the Agreement, the administration shall immediately notify the I.F.R.B. The latter shall publish this cancellation in a special section of its weekly circular.

In reporting the cancellation, the administration shall provide the following information for publication in the weekly circular:

- Frequency
- Call sign
- Location (city, state and geographical coordinates)
- Effective radiated power
- Actual or planned date of shutdown
- Hours of operation

An assignment shall be considered cancelled from the date indicated in the I.F.R.B.'s published announcement of cancellation.

ARG/44

Replace the first two paragraphs by the following:

When an administration decides to cancel an assignment in accordance with the Agreement, it shall immediately notify the IFRB, which shall publish it in a special section of its weekly circular. The notification shall contain the information shown below.

B/56 3.1 When an administration decides to stop using an assignment in accordance with the Agreement, it shall immediately notify the I.F.R.B. which shall publish this cancellation in a special section of its weekly circular.

In such cases the administration shall provide the following information for publication in the weekly circular:

- Frequency
- Call sign
- Location (city, state and geographical coordinates)
- Effective radiated power
- Actual or planned date of shutdown
- Hours of operation

An assignment shall be considered cancelled from the date indicated in the I.F.R.B.'s published announcement of cancellation.

REASON : The date indicated should be the actual date upon which operations cease.

B/29

4.3.2 Simultaneously with the notification of the cancellation of an assignment, the notifying administration may notify a new assignment on the same frequency as the cancelled assignment, provided that the conditions under 4.2.1.10 of the present Article are met.

ARG/44 Remove square brackets

B/56 SUP

B/29

4.4 Assignments in the Plan but not in service.

4.4.1 Assignments appearing in the Plan and that have not been brought into service within a period of four years shall be the subject of consultations between the I.F.R.B. and the affected administration with reference to the suitability of deleting such assignments from the Plan and publishing the notification of such deletion in the weekly circular.

Assignments appearing in the Plan and that have not been brought into service one year before the revision of the Agreement ~~within a period of four years~~ shall be the subject of consultations between the I.F.R.B. and the affected administration with reference to the suitability of deleting such assignments from the Plan and publishing the notification of such deletion in the weekly circular.

ARG/44

SUP 4.4

MEX/50

3.3.1 Assignments for new stations included in the Plan before the date of entry into force of the Agreement and which are not brought into service within four years shall be the subject of consultations between the IFRB and the proposing administration to examine the advisability of deleting the assignment from the Plan and publishing the modification of the cancellation in its weekly circular.

B/56

Assignments that appearing in the Plan but have not been notified to the IFRB as having been ~~and that have not been~~ brought into service within a period of four years as from the date of entry into force of the Agreement shall be the subject of consultations between the IFRB and the affected administration with reference to the suitability of deleting such assignments from the Plan. ~~and publishing the notification of such~~ If a positive reply is received, the IFRB shall publish the deletion in the weekly circular.

B/29

4.4.2 **Assignments introduced in the Plan as a result of the application of the procedures of this Article and that have not been brought into service within a period of [four] years shall be the subject of consultations between the I.F.R.B. and the affected administration with reference to the suitability of deleting such assignments from the Plan and publishing the notification of such deletion in the weekly circular.**

CLM/33

Assignments introduced in the Plan as a result of the application of the procedures of this Article and that have not been brought into service one year before the revision of the Agreement ~~within a period of [four] years~~ shall be the subject of consultations between the I.F.R.B. and the affected administration with reference to the suitability of deleting such assignments from the Plan and publishing the notification of such deletion in the weekly circular.

MEX/50

3.3.2 Assignments introduced after the date of entry into force of this Agreement shall also be regarded as terminated and shall be deleted from the Plan if they are not brought into service within [four years] from the date of their inclusion in the Plan.

B/56

~~Assignments~~ Modifications introduced in the Plan as a result of the application of the procedures of this Article ~~and that have not been~~ but not notified to the I.F.R.B. as having been brought into service within a period of ~~[four] years~~ three years as from the date of publication in the special section of the weekly circular as mentioned in 7.1.1 of this Article shall be the subject of consultations between the I.F.R.B. and the affected administration with reference to the suitability of deleting such assignments from the Plan. ~~and publishing the notification of such~~ If a positive reply is received, the I.F.R.B. shall publish the deletion in the weekly circular.

B/29

4.4.3 The deletion of assignments from the Plan in accordance with sub-paragraphs 1 and 2 above may be deferred for a maximum period of one year if the affected administration notifies the I.F.R.B. that more time is required to bring the assignment into service and demonstrates that the necessary measures have been taken to bring the assignment into service within a reasonable period of time.

MEX/50

3.3.3 The termination of an assignment and its deletion from the Plan in accordance with sections 1 and 2 above shall not be deferred for more than [one year] if the Administration responsible for the proposal informs the IFRB that it needs more time to bring the assignment into service and shows that the necessary measures have been taken to bring the assignment into service within a reasonable time.

B/56

On expiry of the periods mentioned in sections 4.1 and 4.2, **the administration concerned having stated that it needs more time to bring into service the assignment and shown that the necessary steps have been taken to bring it into service, the said periods may be extended by a maximum of a further year, whereafter the assignment shall be deleted from the Plan and the IFRB shall publish the information in a special section of its weekly circular.**

REASON : The modifications and additions proposed above are designed to make **the Plan** more realistic.

ARTICLE 5

Notification of frequency assignments

B/29

5.1 When an administration proposes to bring into use an assignment in accordance with the Agreement, it shall notify it to the I.F.R.B. in accordance with the provision of Article 12 of the Radio Regulations. The Board shall examine each notice in order to determine whether the notified assignment is in accordance with the Agreement. If its conclusion is favorable, the Board will proceed according to the provisions of Article 12 of the Radio Regulations. Equal rights shall be attached to all frequency assignments brought into use, operated in accordance with the Agreement and recorded in the Master Register irrespective of the date in Column 2a.

CAN/9

1. When an administration proposes to bring into use an assignment in conformity with the Agreement, it shall notify it to the I.F.R.B. in accordance with the provisions of Article 12 of the Radio Regulations. Any such assignment recorded in the Master Register as a result of application of the provisions of Article 12 of the Radio Regulations shall bear a special symbol under the Remarks column and a date under column 2.a or under column 2.b.

CAN/9

2. When relations between Contracting Members are involved, equal consideration shall be given to all frequency assignments brought into use in accordance with the Agreement and recorded in the Master Register, regardless of the date that appears in column 2.a or column 2.b.

ARG/44

5.1.1 When an administration proposes to bring into use an assignment in accordance with the Agreement, it shall notify it to the I.F.R.B. in accordance with the provision of Article 12 of the Radio Regulations. The Board shall examine each notice in order to determine whether the notified assignment is in accordance with the Agreement. If its conclusion is favorable, the Board will proceed according to the provisions of Article 12 of the Radio Regulations.

5.1.2 In relations between Contracting Members, equal consideration shall be given to all frequency assignments brought into service in accordance with the Agreement and recorded in the Master Register irrespective of the date entered in columm (2a or 2b).

B/28

1. When an administration proposes to bring into use an ~~assignment-in-accordance-with-the-Agreement~~ station, it shall notify the corresponding assignment to the IFRB in accordance with the provisions of Article 12 of the Radio Regulations.

The Board shall examine each notice in order to determine whether the ~~notified-assignment~~ the corresponding assignments are in accordance with the Agreement and, if a favourable finding is reached, shall proceed according to the provisions of Article 12 of the Radio Regulations.

Equal rights shall be accorded to all ~~frequency-assignments~~ stations brought into use if their assignments are in accordance with the Agreement and recorded in the Master Register, irrespective of the date in column 2a or 2b.

REASON : To improve the drafting of the text, the term "station" being already defined in Article 1 of this Agreement.

B/29

5.2 Should an administration insist in notifying a frequency assignment for which Article 4 could not be applied successfully, the assignement shall be recorded in the Master Register only after the notifying administration has indicated that the assignment would be operated in accordance with Nos. 342 and 1419 of the Radio Regulations. The date of receipt of the notification shall be entered in Column 2 b.

ARG/44 SUP

B/28 SUP

Reason : In accordance with the new wording proposed for Article 4 of this Agreement and also in view of Section 1 of Article 5 of this Agreement, the IFRB will enter in the Master Register the stations corresponding to assignments in conformity with the Plan. In any case, there would be no point in notifying an assignment for which the procedure of Article 4 had not been successfully applied; if this is the case, it is because objectionable interference has been detected in all the channels of the band in excess of the limit increase in Eu established to ensure access to the Plan. In such situations, the IFRB shall not record the assignment even with a reference to numbers 342 and 1219 of the Regulations. These cases would have to be settled by establishing Special Agreements as provided for in Article 6 of this Agreement.

B/29

5.3 Should a complaint of harmful interference arise involving two stations of which one is operating subject to the provisions of No. 1419 of the Radio Regulations, harmful interference will be deemed to be experienced by the station operating in accordance with the Plan if the parameters of the station operating subject to the provisions of No. 1419 are such that the calculations prescribed in Annex [ ] to this Agreement when performed by the Board, show that objectionable interference will be caused.

ARG/44 SUP

B/28 SUP

Reason: See 5.2

ARTICLE 12

B/29

Duration of the Agreement

The Agreement shall remain in effect until it is revised by a competent Administrative Radio Conference of Region 2.

ARG/44

The Agreement and the annexed Plan shall remain in effect until they are revised by a competent Administrative Radio Conference of Region 2.

B/28

1. The Agreement and the Plan were established with a view to meeting the requirements of the medium wave broadcasting services for a period of 10 years from the date of entry into force of the Agreement.

2. The Agreement shall remain in effect until it is revised by a competent Administrative Radio Conferenc of Region 2.

B/28

Abrogation of the South American Radiocommunication Agreement

The Contracting Members parties to the South American Radiocommunication Agreement, Buenos Aires, 1935, revised in Santiago de Chile, 1940, agree to the abrogation of all the provisions of that Agreement which conflict with the provisions of the present Agreement, and particularly those of Articles 5,6,7,8 and 9, and such passages of Articles 10,11 and 12, as may apply to radio broadcasting.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/14-E
23 November 1981
Original : English

PLANNNING GROUPS OF COMMITTEE 4

Note by Chairman of Committee 4

DIVISION OF RESPONSIBILITIES WITHIN THE PLANNING TEAMS

During the planning exercises conducted by the Panel of Experts in Geneva, four planning teams were formed, having primary responsibility for areas of Region 2 as set out in the Map, Chapter 3, Figure 2 of the Report to the Second Session of the Conference prepared by the IFRB. The areas for Team A and Team B were defined by an arbitrary line through the mid-U.S.A.

The planning teams found it convenient to define the areas of responsibility by placing this line along specific state boundaries, so that the planning responsibility for any station could be determined easily by reference to the two letter symbol designating the state in which it was located.

The planning during the Second Session can be aided by use of the division within the U.S.A. determined by the Panel of Experts.

A chart of the Team A and Team B responsibilities together with a map of the continental U.S.A. are given in Annex.

ARCHIVES U.I.T. GENÈVE

A N N E X

Team A		Team B	
AK	ALASKA (ALS)	AL	ALABAMA
CT	CONN.	AR	ARKANSAS
DE	DELAWARE	AZ	ARIZONA
IA	IOWA	CA	CALIFORNIA
ID	IDAHO	CO	COLORADO
IL	ILLINOIS	FL	FLORIDA
IN	INDIANA	GA	GEORGIA
KY	KENTUCKY	KS	KANSAS
MA	MASS.	LA	LOUISIANA
MD	MARYLAND	MO	MISSOURI
ME	MAINE	MS	MISSISSIPPI
MI	MICHIGAN	NC	N. CAROLINA
MN	MINNESOTA	NM	NEW MEXICO
MT	MONTANA	NV	NEVADA
ND	N. DAKOTA	OK	OKLAHOMA
NE	NEBRASKA	SC	S. CAROLINA
NH	NEW HAMPSHIRE	TN	TENNESEE
NJ	NEW JERSEY	TX	TEXAS
NY	NEW YORK	UT	UTAH
OH	OHIO	also: *	
OR	OREGON	PTR	Puerto Rico
PA	PENNA	VIR	Virgin Isl.
RI	RHODE IS.	HWA	Hawaii
SD	S. DAKOTA	MDW	Midway
VA	VIRGINIA		
VT	VERMONT		
WA	WASHINGTON		
WI	WISCONSIN		
WV	WEST VIRGINIA		
WY	WYOMING		

also:

ALS ALASKA (AK)

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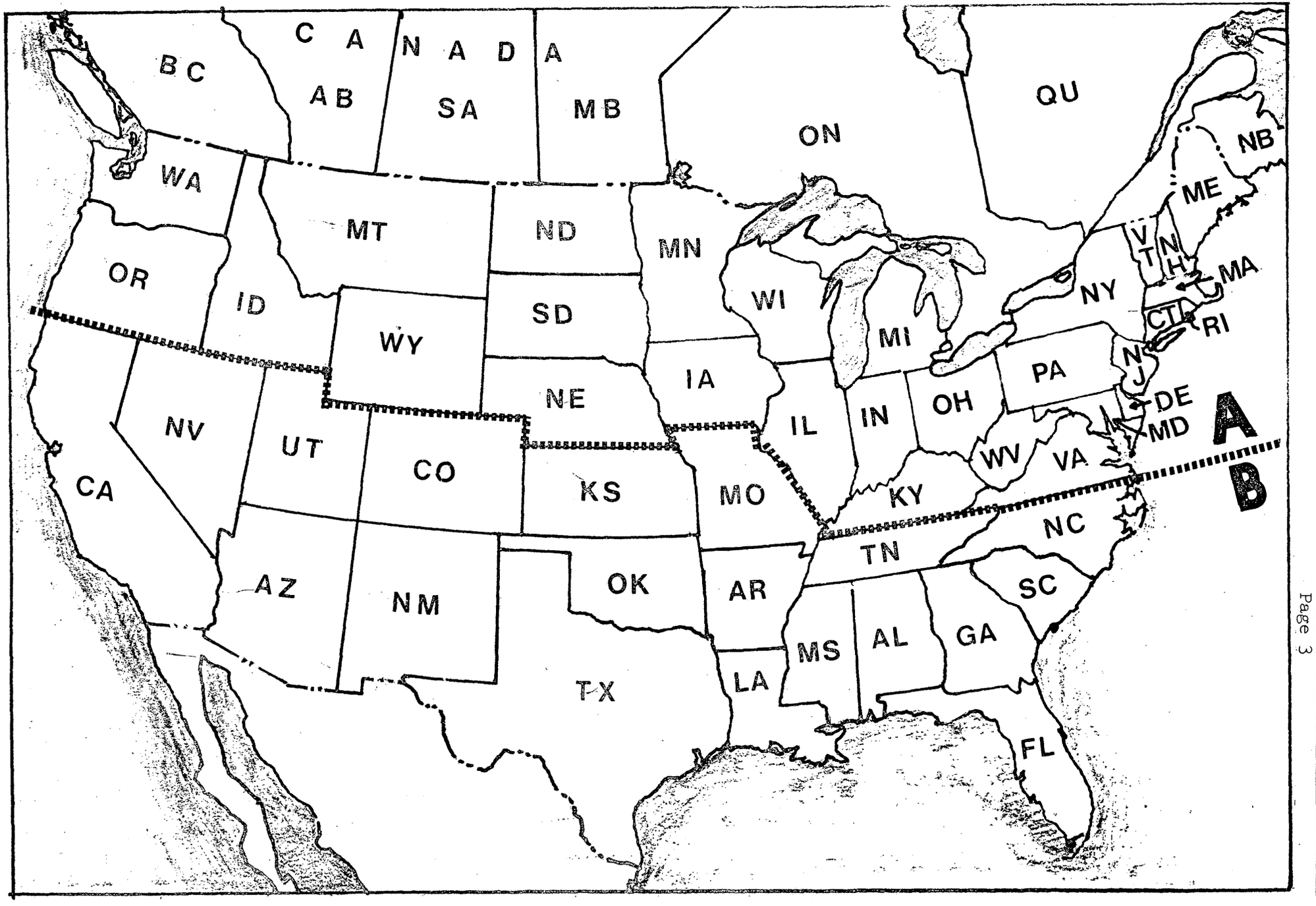
* Three letter symbols are separated from the main U.S.A. listing in the inventory.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INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

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SPECIAL TECHNICAL WORKING GROUP OF THE PLENARY

RESPONSE TO DOCUMENT No. 53

In establishing the Regional Agreement, the Committee 5 refers to an annex to the Agreement which will contain the technical criteria and the method for the calculation of the objectionable interference. This annex is also expected to contain all additional information which may facilitate the application of the procedure of Article 4 of the Agreement (Modifications to the Plan).

Committee 5 expects the above-mentioned annex to be prepared by the Technical Group and would appreciate being informed of all decisions taken in this respect so as to be able to comment upon them as appropriate.

The definitions of "objectionable interference" and "harmful interference", adopted by Committee 5 are reproduced below for your information.

Objectionable interference : The interference caused by a signal that exceeds the maximum permissible field strength within the protected contour, in accordance with the values specified in / Appendix ... of Annex 1 /.

Harmful interference : Interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunication service operating in accordance with the Radio Regulations.

M. PIZARRO A.
Chairman of Committee 5

ARCHIVES U.I.T. GENÈVE

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/16(Rev.1)-E
24 November 1981
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COMMITTEE 4

Draft note from the Chairman of Committee 4

Proposed Format for the Final Plan, the Interim Plan and the List of Stations not yet included in the Interim Plan

The present document is intended to indicate suggested layouts for :

- the Final Plan to be filled in near the end of the Conference after adoption of its content by Committee 4;
- the Interim Plan;
- the List of Stations not yet included in the Interim Plan;

Part I-A : Basic characteristics of stations appearing in the Final Plan (excluding information on directional antennae)

Part-I B : Basic characteristics of stations appearing in the Interim Plan (excluding information on directional antennae)

Part I-C : Basic characteristics of stations not yet included in the Interim Plan (excluding information on directional antennae)

Part II-A : Characteristics of directional antennae including top-loaded or sectionalized omnidirectional antennae or description of radiation in various sectors in the absence of information on directional antennae

Part II-B : Supplementary information for modified expanded (augmented) directional antenna systems

Part II-C : Supplementary information for top-loaded/sectionalized towers used by omnidirectional and directional antenna systems

G. COURTEMANCHE
Chairman, Committee 4

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PART I-A

Basic characteristics of stations appearing in the Final Plan (excluding information on directional antennae)

This information is to be filled in near the end of the Conference

Column No.	Description
1.	IFRB Serial Number;
2.	Assigned frequency (kHz);
3.	Symbol designating the country of the geographical area in which the station is located (see Table 1 of the Preface to the International Frequency List);
4.	Name of the station (locality in which the station is situated);
5.	Geographical coordinates of the transmitting station in degrees, minutes and seconds;
6.	Call sign;
7.	Station class (A, B or C);
8.	Hours of operation (D for daytime, N for night-time);
9.	Station power (kW);
10.	Type of antenna : A, for simple vertical antenna; B, for directional antenna including top-loaded or sectionalized omnidirectional antenna: C, for radiation limitations in the absence of directional antenna information;
11a	For omnidirectional antenna, electrical height (degrees);
11b	For omnidirectional antenna, radiated field strength in the horizontal plane in mV/m at 1 km;
12	Reference values to be defined by the Conference for use in the application of the procedure for modifications to the Plan after its entry into force; Several problems may be tied to this question, which should be studied by Committee 5 and the Specific Working Group (Technical) of Plenary, taking into account the workload implications for the IFRB;
13	Remarks of a permanent nature.

PART I-B

Basic characteristics of stations appearing in the Interim Plan
(excluding information on directional antennae)

These stations include:

- those for which the usable field stregth is accepted and for which the interference caused to other stations is either below the E_{nom} or accepted by the Administrations concerned;

- those for which the usable field strenth is not accepted and for which the interference caused to other stations is either below the E_{nom} or accepted by the Administrations concerned.

Column No.	Description
1.	IFRB Serial Number;
2.	Assigned frequency (kHz);
3.	Symbol designating the country or the geographical area in which the station is located (see Table 1 of the Preface to the International Frequency List);
4.	Name of the station (locality in which the station is situated);
5.	Geographical coordinates of the transmitting station in degrees, minutes and seconds:
6.	Call sign:
7.	Station class (A, B or C);
8.	Hours of operation (D for daytime, N for night-time);
9.	Station power (kW);
10.	Type of antenna : A, for simple vertical antenna; B, for directional antenna including top-loaded or sectionalized omnidirectional antenna; C, for radiation limitations in the absence of directional antenna information;
11a	For omnidirectional antenna, electrical height (degrees);
11b	For omnidirectional antenna, radiated field strength in the horizontal plane in mV/m at 1 km;
12a	Nominal usable field strength (E_{nom}) in mV/m;
12b	Usable field strength (E_u) in mV/m;
13.	Operating status (O = operating, P = planned);

Station(s) from which interference is received :

14a	Symbol designating the country or the geographical area in which the station is located;

14b IFRB Serial Number:

14c Contribution to the interference received (Field strength of the received interfering signal in mV/m multiplied by the protection ratio);

15. Symbol indicating whether or not the E_u is accepted (A = accepted, R = refused);

Station(s) to which interference is caused :

16a Symbol designating the country or geographical area in which the station is located;

16b IFRB Serial Number;

16c Field strength of the caused interfering signal in mV/m multiplied by the protection ratio;

17. Reserved;

18. Remarks.

PART I-C

Basic characteristics of stations not yet included in the Interim Plan (excluding information on directional antennae)

This list includes all stations in the Basic Inventory which have not yet been included in the Interim Plan.

Column No.	Description
1.	IFRB Serial Number;
2.	Assigned frequency (kHz);
3.	Symbol designating the country or the geographical area in which the station is located (see Table 1 of the Preface to the International Frequency List);
4.	Name of the station (locality in which the station is situated);
5.	Geographical coordinates of the transmitting station in degrees, minutes and seconds;
6.	Call sign;
7.	Station class (A, B or C);
8.	Hours of operation (D for daytime, N for night-time);
9.	Station power (kW);
10.	Type of antenna : A, for simple vertical antenna; B, for directional antenna including top-loaded or sectionalized omnidirectional antenna; C, for radiation limitations in the absence of directional antenna information;
11a	For omnidirectional antenna, electrical height (degrees);
11b	For omnidirectional antenna, radiated field strength in the horizontal plane in mVm/m at 1 km;
12a	Nominal usable field strength (E_{nom}) in mV/m;
12b	Usable field strength (E_u) in mV/m;
13.	Operating status (O = operating, P = planned);

Station(s) from which interference is received :

14a	Symbol designating the country or the geographical area in which the station is located;
14b	IFRB Serial Number;

14c Contribution to the interference received (Field strength of the received interfering signal in mV/m multiplied by the protection ratio);

15. Symbol indicating cases where the E_u is accepted;

Station(s) to which interference is caused :

16a Symbol designating the country or geographical area in which the station is located;

16b IFRB Serial Number;

16c Field strength of the caused interfering signal in mV/m multiplied by the protection ratio;

17. Symbol indicating cases where the caused interference is accepted by the Administrations concerned;

18. Remarks.

PART II-A

Characteristics of directional antennae including top-loaded or sectionalized omnidirectional antennae or description of radiation in various sectors in the absence of information on directional antennae

Section I : Characteristics of directional antennae including top-loaded or sectionalized omnidirectional antennae

Column No.	Description
1.	IFRB Serial Number,
2.	Name of station (locality in which the station is situated) (preceded by the frequency in kHz);
3.	Hours of operation (D for daytime, N for night-time);
4.	Total number of towers;
	Tower number; This column shows the serial number of towers, as they will be described in columns 6 to 12;
	Tower field ratio; This column indicates the ratio of tower field to the field in the reference tower;
7.	Phase difference ($\pm$ degrees); This column indicates, in degrees, the positive or negative difference in the phase angle of the field in the tower with respect to the field in the reference tower, (a minus sign means negative, absence of a sign means positive);
8.	Electrical tower spacing (degrees); This column indicates, in degrees, the electrical spacing of the tower from the tower shown in column 10;
9.	Angular tower orientation (degrees); This column indicates, in degrees referred to True North, the angular orientation of the tower from the tower indicated in column 10;
10.	Reference tower indicator; This column may contain 0 or 1, with the following significance : 0 = spacing and orientation have been shown with reference to tower No 01 1 = spacing and orientation have been shown with respect to the previous tower;
11.	Electrical height of tower (degrees);

12. Tower structure;
This column may contain 0, 1 or 2 with the following significance :

0 = simple vertical monopole
1 = top-loaded
2 = }
3 = }
4 = }
5 = } code to be used in conjunction with Part II-C for various designs of
6 = } sectionalized towers
7 = }
8 = }
9 = }

13. Theoretical r.m.s. value (mV/m at 1 km);

14. K factor : no loss multiplying constant in mV/m at 1 km;

15. Type of pattern : T = theoretical
E = expanded
M = modified expanded (augmented)

16. Special Q factor for expanded and modified expanded (augmented) patterns in mV/m at 1 km (to replace the normal expanded pattern quadrature factor when special precautions are taken to ensure pattern stability);

17. Supplementary information.

Section II : Radiation in various sectors in the absence of information on directional antennae

In the absence of a detailed description of the directional antenna system, an indication of the radiation limitations in specific sectors is required. In these cases, the radiation pattern (0^{o} - 360^{o}) is subdivided in sectors with an indication of the maximum radiation in the horizontal plane for each sector.

Column No.	Description
18.	Sector for which the maximum radiation is specified (degrees) with reference to True North;
19.	The maximum radiated field strength in the sector described in column 18, in the horizontal plane in mV/m at 1 km;
20.	Remarks.

PART II-B

Supplementary information for modified expanded (augmented) directional antenna systems

Note : This information is supplied for a modified expanded (augmented) antenna radiation pattern as indicated in column 15 of Part II-A.

Column No.	Description
1.	IFRB Serial Number;
2.	Assigned frequency (kHz);
3.	Name of the station (locality where the station is situated);
4.	Hours of operation (D for daytime, N for night-time);
5.	Total number of augmentations;
6.	Augmentation No.;
7.	Radiated field strength at central azimuth of augmentation (mV/m at 1 km);
8.	Central azimuth of augmentation (degrees);
9.	Total span of augmentation (degrees);
10.	Supplementary information.

PART II-C

Supplementary information for top-loaded/sectionalized towers used by omnidirectional and directional antenna systems

When an antenna tower is top-loaded or sectionalized, column 12 in Part II-A will be in the range from 1 through 9, inclusive. The value in column 12 of Part II-A describes the particular type of top-loading or sectionalization which is used, as described below :

Column No.	Description
1.	IFRB Serial Number;
2.	Assigned Frequency (kHz);
3.	Name of the station (locality where the station is situated);
4.	Hours of operation (D for daytime, N for night-time);
5.	Tower No.;

6.

Value in Col. 12 (Part II-A)	Description
1	Electrical height of the antenna tower (degrees)
2	Height of lower section (degrees)
3	Height of lower section (degrees)
4	Height of lower section (degrees)
5	Height of lower section (degrees)
6	Overall height of tower (degrees)
7	Height of lower section (degrees)
8	Height of lower section (degrees)
9	Centre of bottom dipole (degrees)

7.

Value in Col. 12 (Part II-A)	Description
1	Difference between apparent electrical height (based on current distribution) and actual height (degrees)
2	Difference between apparent electrical height of lower section (based on current distribution) and actual height of lower section (degrees)
3	Blank
4	Blank
5	Height of upper section (degrees)
6	Height of lower section (degrees)
7	Total height of antenna (degrees)
8	Height of upper section (degrees)
9	Centre of top dipole (degrees)

Column No.		Description
8.	Value in Col. 12 (Part II-A)	Description
	1	Blank
	2	Total height of antenna (degrees)
	3	Blank
	4	Blank
	5	Current distribution factor
	6	Blank
	7	Current ratio of loop currents in the two elements
	8	Scaling factor so that $f(\theta)$ is 1.0 in horizontal plane
	9	Blank
9.	Value in Col. 12 (Part II-A)	Description
	1	Blank
	2	Difference between apparent electrical height (based on current distribution) of the total tower and the actual height of the total tower (degrees)
	3	Blank
	4	Blank
	5	Ratio of maximum current in the top section to maximum current in the bottom section
	6	Blank
	7	Blank
	8	The absolute ratio of the real component of current to the imaginary component of current at the point of maximum amplitude
	9	Blank

INTERNATIONAL TELECOMMUNICATION UNION
REGIONAL BROADCASTING CONFERENCE
(SECOND SESSION) RIO DE JANEIRO, 1981

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COMMITTEE 4

Draft note from the Chairman of Committee 4

Proposed Format for the Final Plan, the Interim Plan and the List of Stations not yet included in the Interim Plan

The present document is intended to indicate suggested layouts for :

- the Final Plan to be filled in near the end of the Conference after adoption of its content by Committee 4;
- the Interim Plan;
- the List of Stations not yet included in the Interim Plan;

Part I-A : Basic characteristics of stations appearing in the Final Plan (excluding information on directional antennae)

Part-I B : Basic characteristics of stations appearing in the Interim Plan (excluding information on directional antennae)

Part I-C : Basic characteristics of stations not yet included in the Interim Plan (excluding information on directional antennae)

Part II-A : Characteristics of directional antennae including top-loaded or sectionalized omnidirectional antennae or description of radiation in various sectors in the absence of information on directional antennae

Part II-B : Supplementary information for modified expanded (augmented) directional antenna systems

Part II-C : Supplementary information for top-loaded/sectionalized towers used by omnidirectional and directional antenna systems

G. COURTEMANCHE
Chairman, Committee 4

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PART I-A

Basic characteristics of stations appearing in the Final Plan (excluding information on directional antennae)

This information is to be filled in near the end of the Conference

Column No.	Description
1.	IFRB Serial Number;
2.	Assigned frequency (kHz);
3.	Symbol designating the country of the geographical area in which the station is located (see Table 1 of the Preface to the International Frequency List);
4.	Name of the station (locality in which the station is situated);
5.	Geographical coordinates of the transmitting station in degrees, minutes and seconds;
6.	Call sign;
7.	Station class (A, B or C);
8.	Hours of operation (D for daytime, N for night-time);
9.	Station power (kW);
10.	Type of antenna : A, for simple vertical antenna; B, for directional antenna including top-loaded or sectionalized omnidirectional antenna; C, for radiation limitations in the absence of directional antenna information;
11a	For omnidirectional antenna, electrical height (degrees);
11b	For omnidirectional antenna, radiated field strength in the horizontal plane in mV/m at 1 km;
12	Reference values to be defined by the Conference for use in the application of the procedure for modifications to the Plan after its entry into force; Several problems may be tied to this question, which should be studied by Committee 5 and the Specific Working Group (Technical) of Plenary, taking into account the workload implications for the IFRB;
13	Remarks of a permanent nature.

PART I-B

Basic characteristics of stations appearing in the Interim Plan (excluding information on directional antennae)

These stations include:

- those for which the usable field stregth is accepted and for which the interference caused to other stations is either below the E_{nom} or accepted by the Administrations concerned;

- those for which the usable field strenth is not accepted and for which the interference caused to other stations is either below the E_{nom} or accepted by the Administrations concerned.

Column No.	Description
1.	IFRB Serial Number;
2.	Assigned frequency (kHz);
3.	Symbol designating the country or the geographical area in which the station is located (see Table 1 of the Preface to the International Frequency List);
4.	Name of the station (locality in which the station is situated);
5.	Geographical coordinates of the transmitting station in degrees, minutes and seconds:
6.	Call sign:
7.	Station class (A, B or C);
8.	Hours of operation (D for daytime, N for night-time);
9.	Station power (kW);
10.	Type of antenna : A, for simple vertical antenna; B, for directional antenna including top-loaded or sectionalized omnidirectional antenna; C, for radiation limitations in the absence of directional antenna information;
11a	For omnidirectional antenna, electrical height (degrees);
11b	For omnidirectional antenna, radiated field strength in the horizontal plane in mV/m at 1 km;
12a	Nominal usable field strength (E_{nom}) in mV/m;
12b	Usable field strength (E_{nom}) in mV/m;
13.	Operating status (O = operating, P = planned);
Station(s) from which interference is received :	
14a	Symbol designating the country or the geographical area in which the station is located;

14b IFRB Serial Number;

14c Contribution to the interference received
(Field strength of the received interfering signal in mV/m multiplied by the protection ratio);

15. Symbol indicating whether or not the E_u is accepted (A = accepted, R = refused);

Station(s) to which interference is caused :

16a Symbol designating the country or geographical area in which the station is located;

16b IFRB Serial Number;

16c Field strength of the caused interfering signal in mV/m multiplied by the protection ratio;

17. Reserved;

18. Remarks.

PART I-C

Basic characteristics of stations not yet included in the Interim Plan (excluding information on directional antennae)

This list includes all stations in the Basic Inventory which have not yet been included in the Interim Plan.

Column No.	Description
1.	IFRB Serial Number;
2.	Assigned frequency (kHz);
3.	Symbol designating the country or the geographical area in which the station is located (see Table 1 of the Preface to the International Frequency List);
4.	Name of the station (locality in which the station is situated);
5.	Geographical coordinates of the transmitting station in degrees, minutes and seconds;
6.	Call sign;
7.	Station class (A, B or C);
8.	Hours of operation (D for daytime, N for night-time);
9.	Station power (kW);
10.	Type of antenna : A, for simple vertical antenna; B, for directional antenna including top-loaded or sectionalized omnidirectional antenna: C, for radiation limitations in the absence of directional antenna information;
11a	For omnidirectional antenna, electrical height (degrees);
11b	For omnidirectional antenna, radiated field strength in the horizontal plane in mVm/m at 1 km;
12a	Nominal usable field strength (E_{nom}) in mV/m;
12b	Usable field strength (E_{nom}) in mV/m;
13.	Operating status (O = operating, P = planned);

Station(s) from which interference is received :

14a	Symbol designating the country or the geographical area in which the station is located;
14b	IFRB Serial Number;

14c Contribution to the interference received (Field strength of the received interfering signal in mV/m multiplied by the protection ratio);

15. Symbol indicating cases where the E_u is accepted;

Station(s) to which interference is caused :

16a Symbol designating the country or geographical area in which the station is located;

16b IFRB Serial Number;

16c Field strength of the caused interfering signal in mV/m multiplied by the protection ratio;

17. Symbol indicating cases where the caused interference is accepted by the Administrations concerned;

18. Remarks.

PART II-A

Characteristics of directional antennae including top-loaded or sectionalized omnidirectional antennae or description of radiation in various sectors in the absence of information on directional antennae

Section I : Characteristics of directional antennae including top-loaded or sectionalized omnidirectional antennae

Column No.	Description
1.	IFRB Serial Number;
2.	Name of station (locality in which the station is situated) (preceded by the frequency in kHz);
3.	Hours of operation (D for daytime, N for night-time);
4.	Total number of towers;
5.	Tower number; This column shows the serial number of towers, as they will be described in columns 6 to 12;
6.	Tower field ratio; This column indicates the ratio of tower field to the field in the reference tower;
7.	Phase difference ($\pm$ degrees); This column indicates, in degrees the positive or negative difference in the phase angle of the field in the tower with respect to the field in the reference tower, (a minus sign means negative, absence of a sign means positive);
8.	Electrical tower spacing (degrees); This column indicates, in degrees, the electrical spacing of the tower from the tower shown in column 10;
9.	Angular tower orientation (degrees); This column indicates, in degrees referred to True North, the angular orientation of the tower from the tower indicated in column 10;
10.	Reference tower indicator; This column may contain 0 or 1, with the following significance : 0 = spacing and orientation have been shown with reference to tower No. 01 1 = spacing and orientation have been shown with respect to the previous tower;
11.	Electrical height of tower (degrees);

12. Tower structure;
This column may contain 0, 1 or 2 with the following significance :

0 = simple vertical monopole
1 = top-loaded
2 = }
3 = }
4 = }
5 = } code to be used in conjunction with Part II-C for various designs of
6 = } sectionalized towers
7 = }
8 = }
9 = }

13. Theoretical r.m.s. value (mV/m at 1 km);

14. K factor : no loss multiplying constant in mV/m at 1 km;

15. Type of pattern : T = theoretical
E = expanded
M = modified expanded (augmented)

16. Special Q factor for expanded and modified expanded (augmented) patterns in mV/m at 1 km (to replace the normal expanded pattern quadrature factor when special precautions are taken to ensure pattern stability);

17. Supplementary information.

Section II : Radiation in various sectors in the absence of information on directional antennae

In the absence of a detailed description of the directional antenna system, an indication of the radiation limitations in specific sectors is required. In these cases, the radiation pattern (0° - 360°) is subdivided in sectors with an indication of the maximum radiation in the horizontal plane for each sector.

Column No.	Description
15.	Sector for which the maximum radiation is specified (degrees) with reference to True North;
16.	The maximum radiated field strength in the sector described in column 15, in the horizontal plane in mV/m at 1 km;
17.	Remarks.

PART II-B

Supplementary information for modified expanded (augmented) directional antenna systems

Note : This information is supplied for a modified expanded (augmented) antenna radiation pattern as indicated in column 14 of Part II-A.

Column No.	Description
1.	IFRB Serial Number;
2.	Assigned frequency (kHz);
3.	Name of the station (locality where the station is situated);
4.	Hours of operation (D for daytime, N for night-time);
5.	Total number of augmentations;
6.	Augmentation No.;
7.	Radiated field strength at central azimuth of augmentation (mV/m at 1 km);
8.	Central azimuth of augmentation (degrees);
9.	Total span of augmentation (degrees);
10.	Supplementary information.

PART II-C

Supplementary information for top-loaded/sectionalized towers used by omnidirectional and directional antenna systems

When an antenna tower is top-loaded or sectionalized, column 12 in Part II-A will be in the range from 1 through 9, inclusive. The value in column 12 of Part II-A describes the particular type of top-loading or sectionalization which is used, as described below :

Column No.		Description
1.	IFRB Serial Number;	
2.	Assigned Frequency (kHz);	
3.	Name of the station (locality where the station is situated);	
4.	Hours of operation (D for daytime, N for night-time);	
5.	Tower No.;	
6.	Value in Col. 12 (Part II-A)	Description
	1	Electrical height of the antenna tower (degrees)
	2	Height of lower section (degrees)
	3	Height of lower section (degrees)
	4	Height of lower section (degrees)
	5	Height of lower section (degrees)
	6	Overall height of tower (degrees)
	7	Height of lower section (degrees)
	8	Height of lower section (degrees)
	9	Centre of bottom dipole (degrees)

Value in Col. 12 (Part II-A)	Description
1	Difference between apparent electrical height (based on current distribution) and actual height (degrees)
2	Difference between apparent electrical height of lower section (based on current distribution) and actual height of lower section (degrees)
3	Blank
4	Blank
5	Height of upper section (degrees)
6	Height of lower section (degrees)
7	Total height of antenna (degrees)
8	Height of upper section (degrees)
9	Centre of top dipole (degrees)

Value in Col. 12 (Part II-A)	Description
1	Blank
2	Total height of antenna (degrees)
3	Blank
4	Blank
5	Current distribution factor
6	Blank
7	Current ratio of loop currents in the two elements
8	Scaling factor so that $f(\theta)$ is 1.0 in horizontal plane
9	Blank

Value in Col. 12 (Part II-A)	Description
1	Blank
2	Difference between apparent electrical height (based on current distribution) of the total tower and the actual height of the total tower (degrees)
3	Blank
4	Blank
5	Ratio of maximum current in the top section to maximum current in the bottom section
6	Blank
7	Blank
8	The absolute ratio of the real component of current to the imaginary component of current at the point of maximum amplitude
9	Blank

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/17-E
24 November 1981
Original : English

TECHNICAL GROUP

DRAFT REPORT OF SUB-GROUP

OF

SPECIAL TECHNICAL WORKING GROUP OF THE PLENARY

4.4 Special procedures governing skywave interference calculations

4.4.1 Canada, Denmark (for Greenland), French Department of Saint Pierre and Miquelon, Mexico and the United States of America will calculate the value of interfering skywave signals that each receives from Canada, Greenland, Saint Pierre and Miquelon, Mexico and the United States of America for Class A, B and C stations on the basis of skywave field strength 10 % of the time.

4.4.2 In circumstances involving one or more of the administrations named in 4.4.1 and one or more administrations that have elected to use skywave field strength, 50 % of the time, for interfering signals, the following procedures shall apply.

4.4.2.1 If the administration electing to use skywave field strength, 50 % of the time, for interfering signals, proposes to enter a station into the Plan or modify the operating characteristics of a station that has already been admitted into the Plan, then all calculations of the value of skywave interference shall be made using the skywave field strength, 50 % of the time, for interfering signals.

4.4.2.2 If an administration electing to use skywave field strength, 10 % of the time, for interfering signals proposes to enter a station into the Plan or modify the operating characteristics of a station that has already been admitted into the Plan, then :

- If the administration receiving interference is one that elects to use skywave field strength, 50 % of the time for interfering signals, calculations of the value of skywave interference shall be made using the skywave field strength, 50 % of the time, for interfering signals.

- If the administration receiving interference is one that elects to use skywave field strength, 10 % of the time, for interfering signals, calculations of the value of skywave interference shall be made using the skywave field strength, 10 % of the time, for interfering signals.

4.4.3 Except as prescribed in 4.4.1 and 4.4.2, the skywave field strength, 50 % of the time, shall be used in calculating the field strength of an interfering skywave signal.

W.H. HASSINGER
Chairman, Sub-Group

ARCHIVES U.I.T. GENÈVE

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/18-E
24 November 1981
Original : English

WORKING GROUP 5B

PROPOSALS FOR THE DRAFT REGIONAL AGREEMENT

The Annex to the present document contains those proposals, relating to Article 4, upon which the Working Group has still to take a decision.

ORLANDO GALLO
Chairman

Annex : 1

ARCHIVES U.I.T. GENÈVE

B/29

4.2.1.2 If the modification proposed is of a type described in 4.2.1.10 the information sent to the I.F.R.B. shall contain a reference to that paragraph.

B/29

4.2.1.10 The agreement mentioned in 4.2.1 is not required if the proposed modification either:

- entails no increase in effective monopole radiated power in any direction, or
- relates to a change in the site of the station within the tolerances specified in [ ] of Annex [ ] to the Agreement, or
- involves notification of a new station on the same frequency, submitted simultaneously with the notification of the cancellation of an assignment under 4.3.1, provided that no objectionable interference is caused to assignments in accordance with the Agreement or such interference does not exceed that previously caused.

In such cases, the administration intending to modify the Plan may put its project into effect subject to the application of the relevant provisions of Article 12 of the Radio Regulations.

ARG/44 Replace last paragraph by the following:

In such cases, the administration proposing the modification of the Plan shall so inform the IFRB to enable the latter, should this section be applicable, to publish its finding in a special section of its weekly circular. Once the IFRB has published its finding, the administration intending to modify the Plan may put its project into effect, subject to the application of the relevant provisions of Article 12 of the Radio Regulations.
If the provisions of this section are inapplicable, the IFRB shall return the information to the administration which sent it.

The third sub-paragraph of the new paragraph 2.1.10 is amended as follows :

MEX/50 involves the simultaneons notification ~~of a new station on the same frequency, submitted simultaneously with the notification~~ of the cancellation of an assignment under 4.1, and the notification of a new station on the same frequency, provided that no objectionable interference is caused to assignments in accordanc with the Agreement or such interference does not exceed that previously caused.

The agreement mentioned in 2.1. is required only if the proposed modification decreases the station power.

B/56 In such cases, the administration intending to modify the Plan ~~may put its project into effect, subject to the application of the relevant provisions of Article 12 of the Radio Regulations~~.
shall so inform the Board which shall publish the the information in a special section of its weekly circular. The administration intending to modify the Plan may carry out its project subject to the application of Article N12.

REASON : The only modification from which no increase in objectionable interference will probably arise, thus enabling the agreement envisaged in 2.1 to be dispensed with, is a decrease in station power (see more detailed comments in 2.4.3 of the document introducing this prop sal).

PROPOSED COMPROMISE WORDING OF 4.2.1.10

4.2.1.10 If a change to an assignment in accordance with the Agreement entails no increase in effective monopole radiated power in any direction, or relates to a change in site within the tolerances specified in Annex ( ) to the Agreement, it shall not be considered a modification to the Plan.

The Agreement mentioned in 4.2.1 is not required if a modification entails no increase in station power although effective monopole radiated power may be increased in some directions, or relates to a change in site beyond the tolerances referred to above, provided that no objectionable interference is caused to assignments in accordance with the Agreement or such interference does not exceed that previously accepted in the Plan. In the latter case, the administration proposing the modification to the Plan shall so inform the IFRB to enable the latter, should this section be applicable, to publish its finding in a special section of its weekly circular and to include the modification in the Plan.

If the provisions of this section are inapplicable the IFRB shall return the information to the administration which submitted it. Otherwise the administration proposing modification of the Plan may put its project into effect subject to the application of the relevant provisions of Article 5.

B/56 ADD 2.1.15 C **Should disagreement further persist, the IFRB shall examine the proposed modification to the Plan from the standpoint of objectionable interference in all channels in the band. If in all cases the Board isssues an unfavourable finding, it shall determine which channel is least affected and so inform the administration seeking agreement and any administrations which may be affected. At the same time the Board shall transmit to the administration seeking agreement appropriate recommendations for reducing or eliminating incompatibilities.**

ADD 2.1.15 D **The administration proposing the amendment to the Plan shall endeavour to meet its requirements in that channel and, once again, shall resort to all the engineering options within its power to try to eliminate or at least minimize incompatibilities with administrations which may be affected.**

ADD 2.1.15 E **If it is impossible to apply the procedure in 2.1.15 d) in respect of the least affected channel determined in accordance with 2.1.15 a) and if for that channel the usable field strength of administrations which may be affected has not been increased by more than 1.94 dB in relation to the initial situation under the Plan, the proposed modification shall be entered in the Plan if the administration seeking agreement so requests.**

B/56 **2.1.15F** **If the usable field strength of the administration interfered with has been increased by more than 1.94 dB for the channel least affected, the Board shall offer recommendations to the administration seeking agreement with a view to lowering that usable field strength to a value of not more than 1.94 dB. The Board shall inform the administrations affected of its findings and of the recommendations made to the administration seeking agreement.**

2.1.15G **If the administration seeking agreement accepts the recommendations and so requests, the Board shall enter the assignment in the Plan and publish the final situation in a special section of its weekly circular.**

REASON : To guarantee access to the Plan without prejudice to the acquired rights of other administrations and without detriment of the technical principles of the Plan.

B/56 ADD 2.1.18 A **Without prejudice to the foregoing provisions, if circumstances so warrant an administration may in exceptional instances initiate the procedure described in this article with a view to securing a provisional entry in the Register of a modification to the Plan not yet included therein. In such cases, the administration concerned shall simultaneously send to the IFRB the calculations it has made to demonstrate the non-existence of objectionable interference to administrations :**

a) **whose assignments are in accordance with the Plan,**

b) **whose request for modifications to the Plan have been received by the IFRB but not yet included in the Plan.**

ADD 2.1.18 B **The IFRB shall ascertain whether the administration concerned will produce objectionable interference to the others mentioned in 2.1.18 a) and shall communicate the results of its examination to the administration concerned as quickly as possible.**

ADD 2.1.18 C **After receiving the information from the Board with a favourable finding, the administration concerned shall notify the assignment to the IFRB in accordance with the provisions of Article 12 of the Regulations. If the IFRB reaches a favourable finding with regard to the application of Article 12 of the Regulations, it shall provisionally enter the assignment in the Register until the provisions of this article are fully complied with, whereupon the entry in the Register shall become final.**

B/29

4.3.2 Simultaneously with the notification of the cancellation of an assignment, the notifying administration may notify a new assignment on the same frequency as the cancelled assignment, provided that the conditions under 4.2.1.10 of the present Article are met.

ARG/44 Remove square brackets

B/56 SUP

B/29 **4.4 Assignments in the Plan but not in service.**

ARG/44 SUP 4.4

4.4.1 Assignments appearing in the Plan and that have not been brought into service within a period of four years shall be the subject of consultations between the I.F.R.B. and the affected administration with reference to the suitability of deleting such assignments from the Plan and publishing the notification of such deletion in the weekly circular.

CLM/33 Assignments appearing in the Plan and that have not been brought into service one year before the revision of the Agreement ~~within a period of four years~~ shall be the subject of consultations between the I.F.R.B. and the affected administration with reference to the suitability of deleting such assignments from the Plan and publishing the notification of such deletion in the weekly circular.

MEX/50 3.3.1 Assignments for new stations included in the Plan before the date of entry into force of the Agreement and which are not brought into service within four years shall be the subject of consultations between the IFRB and the proposing administration to examine the advisability of deleting the assignment from the Plan and publishing the modification of the cancellation in its weekly circular.

B/56 **Assignments that appearing in the Plan but have not been notified to the IFRB as having been ~~and that have not been~~ brought into service within a period of four years as from the date of entry into force of the Agreement shall be the subject of consultations between the IFRB and the affected administration with reference to the suitability of deleting such assignments from the Plan. ~~and publishing the notification of such~~ If a positive reply is received, the IFRB shall publish the deletion in the weekly circular.**

B/29

4.4.2 Assignments introduced in the Plan as a result of the application of the procedures of this Article and that have not been brought into service within a period of [four] years shall be the subject of consultations between the I.F.R.B. and the affected administration with reference to the suitability of deleting such assignments from the Plan and publishing the notification of such delction in the weekly circular.

CLM/33

Assignments introduced in the Plan as a result of the application of the procedures of this Article and that have not been brought into service one year before the revision of the Agreement ~~within a period of [four] years~~ shall be the subject of consultations between the I.F.R.B. and the affected administration with reference to the suitability of deleting such assignments from the Plan and publishing the notification of such deletion in the weekly circular.

MEX/50

3.3.2 Assignments introduced after the date of entry into force of this Agreement shall also be regarded as terminated and shall be deleted from the Plan if they are not brought into service with [four years] from the date of their inclusion in the Plan.

B/56

~~Assignments~~ Modifications introduced in the Plan as a result of the application of the procedures of this Article ~~and that have not been~~ but not notified to the I.F.R.B. as having been brought into service within a period of ~~[four]~~ years three years as from the date of publication in the special section of the weekly circular as mentioned in 2.1.1 of this Article shall be the subject of consultations between the I.F.R.B. and the affected administration with reference to the suitability of deleting such assignments from the Plan. ~~and publishing the notification of such~~ If a positive reply is received, the I.F.R.B. shall publish the deletion in the weekly circular.

B/29

4.4.3 The deletion of assignments from the Plan in accordance with sub-paragraphs 1 and 2 above may be deferred for a maximum period of one year if the affected administration notifies the I.F.R.B. that more time is required to bring the assignment into service and demonstrates that the necessary measures have been taken to bring the assignment into service within a reasonable period of time.

MEX/50

3.3.3 The termination of an assignment and its deletion from the Plan in accordance with sections 1 and 2 above shall not be deferred for more than [one year] if the Administration responsible for the proposal informs the IFRB that it needs more time to bring the assignment into service and shows that the necessary measures have been taken to bring the assignment into service within a reasonable time.

B/56

On expiry of the periods mentioned in sections 4.1 and 4.2, the administration concerned having stated that it needs more time to bring into service the assignment and shown that the necessary steps have been taken to bring it into service, the said periods may be extended by a maximum of a further year, whereafter the assignment shall be deleted from the Plan and the IFRB shall publish the information in a special section of its weekly circular.

REASON : The modifications and additions proposed above are designed to make the Plan more realistic.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Addendum No.2 to
Document No. DT/19-E
1 December 1981
Original : English

SPECIAL TECHNICAL
WORKING GROUP
OF THE PLENARY

ANNEX 2

TECHNICAL DATA TO BE USED IN APPLICATION OF THE AGREEMENT

Add the text of Appendix 4 to read :

APPENDIX 4

PROCEDURES FOR THE CALCULATION OF THE NORMALIZED VERTICAL RADIATION FROM TOP-LOADED AND SECTIONALIZED ANTENNAE

Basically, the formula is :

$$f(\theta) = \frac{E_\theta}{E_o}$$

Where :

E_θ is the radiation at a desired vertical angle, θ.

E_o is the radiation in the horizontal plane.

Specific formulae for typical top-loaded and sectionalized antennae comprise the remainder of this Appendix.

The formulae which follow use one or more of four variables A B, C and D. There is a correspondence between A, B, C, and D and columns 6, 7, 8 and 9, respectively, of Part II-C of Document No. DT/16(Rev.1) 24 November 1981.*

1. Top-loaded antenna (when column 12 of Part II-A of Document No. DT/16(Rev.1) 24 November 1981*, is 1).

$$f(\theta) = \frac{\cos B \cos(A \sin\theta) - \sin\theta \sin B \sin(A \sin\theta) - \cos(A+B)}{\cos\theta \left[\cos B - \cos(A+B) \right]}$$

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* The Editorial Committee is requested to replace this reference by the appropriate one throughout this text.

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Where :

A = Electrical height of the antenna tower.

B = Difference between the apparent electrical height (based on current distribution) and the actual height (A).

θ = The vertical angle with respect to the horizontal plane.

For derivations of the formula, see "General Considerations of Tower Antennae for Broadcasting Use", by H.E. Gihring and G.H. Brown, Proceedings of the Institute of Radio Engineers, Vol.23, No. 4, April, 1935, page 311 at 345; "A critical Study of the Characteristics of Broadcast Antennas as Affected by Antenna Current Distribution", by G.H. Brown, Proceedings of the Institute of Radio Engineers, Vol. 24, No. 1, January, 1936, page 48 at 54.

Note : When B is zero (i.e., when there is no top-loading), the formula reduces to that of a simple vertical antenna.

2. Sectionalized tower (when column 12 of Part II-A of Document DT/16(Rev.1)*, 24 November 1981, is 2)

$$f(\theta) = \frac{[\cos B \cos(A \sin\theta) - \cos(A+B)] \sin(C+D-A) + \sin B [\cos D \cos(C \sin\theta) - \sin\theta \sin D \sin(C \sin\theta) - \cos(C+D-A) \cos(A \sin\theta)]}{\cos\theta \{[\cos B - \cos(A+B)] \sin(C+D-A) + \sin B [\cos D - \cos(C+D-A)]\}}$$

Where :

A = actual height of the lower section,

B = the difference between the apparent electrical height (based on current distribution) of the lower section and the actual height of the lower section (A),

C = actual total height of the antenna,

D = the difference between the apparent electrical height (based on current distribution) of the total tower and the actual height of the total tower (C).

θ = the vertical angle with respect to the horizontal plane.

This formula is derived in "Performance of Sectionalized Broadcasting Towers" by Carl E. Smith, D.B. Hutton, and W.G. Hutton, preprint, IRE Transactions on Broadcast Transmission Systems, January 10, 1955.

3. Administrations proposing to use other types of antenna should furnish details of their characteristics together with a radiation diagram.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Addendum No. 1 to
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27 November 1981
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SPECIAL TECHNICAL
WORKING GROUP
OF THE PLENARY

ANNEX 2

TECHNICAL DATA TO BE USED IN APPLICATION OF THE AGREEMENT

1. Add a new § 9.3 to read :

9.3 Synchronized networks

In addition to the standards specified elsewhere, the following additional standards apply to synchronized networks.

In a synchronized network the difference in carrier frequency between any two transmitters in the network shall not exceed 0.1 hertz.
The modulation delay between any two transmitters in the network shall not exceed 100 μs, when measured at either transmitter site.

For the purposes of determining interference caused by synchronized networks, the following procedure shall be applied. If any two transmitters are less than 400 km apart, the network shall be treated as a single entity, the value of the composite signal being determined by the quadratic addition of the interfering signals from all the individual transmitters in the network. If the distances between all the transmitters are equal to or greater than 400 km, the network shall be treated as a set of individual transmitters.

For the purposes of determining skywave interference received by any one member of a network, the value of the interference caused by the other elements of the network shall be determined by the quadratic addition of the interfering signals from all of those elements. In any case, where groundwave interference is a factor, it shall be taken into account."

2. Add a new Chapter 5, to read :

Chapter 5

RADIATION CHARACTERISTICS OF TRANSMITTING ANTENNAE

5. In carrying out the calculations contained in Chapters 2 and 3, Administrations may wish to take account of the following:

5.1 Omnidirectional antennae

Figure 1 of Chapter 3 shows the characteristics field of a simple vertical antenna as functions of its length, and of the radius of the ground system. The characteristic field of an antenna with a loss-less ground system is also shown for comparison.

It is clear that the characteristic field strength increases as the loss in the ground system is reduced to zero and as the antenna height is increased up to 0.625 λ .

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The increased characteristic field strength for antenna lengths up to 0.625 λ is obtained at the expense of radiation at high angles as shown graphically in Figure 1a of Chapter 3 and numerically in Table II of Chapter 3.

5.2 Consideration of the radiation patterns of directional antennae

5.2.1 Calculation procedures are given in Appendix 3.

5.2.2 Numerous methods of calculating directional antenna patterns (in both the horizontal and vertical planes) are in use by various administrations, including methods resulting in theoretical patterns, expanded patterns, and modified expanded patterns. Other methods may also be employed, provided they are acceptable to the administrations affected. Subject to the above, the method employed by an Administration shall be used by the IFRB in determining the radiation from that Administration's directional antennae, subject to the condition that the method results in a complete description of the radiation in the horizontal and vertical planes.

5.3 Top-loaded and sectionalized antennae

5.3.1 Calculation procedures are given in Appendix 4.

5.3.2 Many stations employ top-loaded or sectionalized towers, either because of space limitations or to vary the radiation characteristics from those of a simple vertical antenna. This is done to achieve desired coverage or reduction of interference.

5.3.3 Administrations using top-loaded or sectionalized antennae shall supply information concerning the tower structure of the antennae to assist in the determination of the vertical radiation characteristics of the antennae. Normally, one of the formulae in Appendix 4 shall be employed. Other formulae may also be employed, provided they are acceptable to the Administrations affected. Subject to the above, the formula employed by an Administration shall be used the IRFB in the determination of the vertical radiation characteristics of the antennae.

3. Add the following Appendices :

APPENDIX 1

ATLAS OF GROUND CONDUCTIVITY

At the Second Session fo the Conference, it was agreed that :

1. A large-scale map of ground conductivity would be annexed to each signed copy of the Agreement.

2. A small-scale reproduction of the map referred to in § 1 would be annexed to each copy of the Final Acts.

APPENDIX 2

FIELD-STRENGTH CURVES FOR GROUND-WAVE PROPAGATION

These curves are reproduced in Annex D to the Report to the Second Session of the Conference.

APPENDIX 3

CALCULATION OF DIRECTIONAL ANTENNA PATTERN

Introduction

This Appendix describes directional antenna calculations methods to be employed in connection with the calculation of the field strength produced at a given point.

1. General equations

The theoretical directional antenna radiation pattern is calculated employing the following equation which sums the field strength from the elements in the array:

$$E(\phi,\theta)_{th} = \left| K \sum_{i=1}^{n} F_i \, f_i(\theta) \, \angle \Psi_i + S_i \cos\theta \cos(\phi_i - \phi) \right| \qquad (1)$$

$E(\phi,\theta)_{th}$ is the theoretical inverse distance field strength at one kilometre in mV/m for the given azimuth and elevation

K is the multiplying constant in mV/m which determines the basic pattern size (see paragraph 2.1 of this Appendix for derivation of K)

n is the number of elements (towers) in the direction array

i is the ith element in the array

F_i represents the current ratio of the ith element in the array relative to the current in the reference tower

θ is the vertical elevation angle, in degrees, measured from the horizontal plane

$f_i(\theta)$ is the vertical plane field strength distribution factor of the ith element

$$f_i(\theta) = \frac{\cos(G_i \sin\theta) - \cos G_i}{(1 - \cos G_i)\cos\theta} \qquad (2)$$

G_i is the electrical height of the ith element (tower) in degrees

S_i is the electrical spacing of the ith element from the reference element in degrees

ϕ_i is the orientation of the ith element from the reference element (with respect to True North), in degrees

ϕ is the azimuth with respect to True North, in degrees

ψ_i is the electrical phase angle of the current in the ith element (with respect to the reference element), in degrees.

The equation employed in the calculation of directional antenna patterns assumes that:

- the currents in the elements are sinusoidal,

- there are no losses in the element or in the ground

- the antenna elements are fed at their base, and

- the distance to the computation point is large in relation to the directional array spacing.

2. Determination of values and constants

2.1. Determination of the multiplying constant, K, for an array

The multiplying constant, K, for the loss-free case may be computed by integrating the power flow over the hemisphere, deriving an r.m.s. field strength, and comparing the result with the case where the power is radiated uniformly is all directions over the hemisphere.

Thus $$K = \frac{E_s \sqrt{P}}{r.m.s._h} \quad *) \quad mV/m$$

where

K : no loss multiplying constant

E_s : reference level for uniform radiation over a hemisphere and is 244.95*

P : antenna input power (kW)

$r.m.s._h$: root-mean-square effective field intensity over the hemisphere (based on a multiplying constant of unity) which may be obtained by integrating the r.m.s. at each vertical angle over the hemisphere. The integration can be made using the trapozoidal method of approximation.

$$r.m.s._h = \left\{ \frac{\pi \Delta}{180} \left[\frac{r.m.s.^2(\theta = 0^o)}{2} + \sum_{m=1}^{L} r.m.s._{m\Delta}^2 \cos m\Delta \right] \right\}^{1/2} \quad (3)$$

where

Δ : the interval, in degrees, between the equally spaced sampling points at the different elevation angles θ

m : an integer from 1 to L, which gives the elevation angle θ in degrees when multiplied by Δ, i.e. $\theta = m\Delta$

L : one less than the number of intervals $\left(L = 90/\Delta - 1\right)$

$r.m.s._\theta$: the root mean square field strength at the spacified elevation angle θ

---

*) $E_s = \left[\frac{120\pi \times 1000 \times P}{2\pi R^2} \right]^{1/2} \times 10^3 \; mV/m$

Where R is the distance from the antenna in km. For 1 kW uniformly radiated over a hemisphere, the value E_s at 1 km is 244.95 mV/m.

$$r.m.s._{\theta} : \left[\sum_{i=1}^{n} \sum_{j=1}^{n} F_i f_i(\theta) F_j f_j(\theta) \cos \Psi_{ij} J_0(S_{ij} \cos\theta) \right]^{\frac{1}{2}} \quad (4)$$

where

i : the ith element

j : the jth element

n : the number of elements in the array

F_i : the current ratio of the ith element

$f_i(\theta)$: the vertical plane distribution factor of the ith element (see equation (2))

F_j : the current ratio of the jth element

$f_j(\theta)$: the vertical plane distribution factor of the jth element

Ψ_{ij} : the difference in electrical phase angles of the currents in the ith and jth elements in the array

S_{ij} : the spacing in degrees between the ith and jth elements in the array

$J_0(S_{ij} \cos\theta)$: the Bessel function of the first kind and zero order of the apparent spacing between the ith and jth towers.

2.2. Relationship of field strength to antenna current

The field strength resulting from a current flowing in a vertical antenna element is:

$$E = \frac{R_c I \left[\cos(G \sin\theta) - \cos G \right]}{2\pi r \cos\theta} \times 10^3 \quad mV/m \quad (5)$$

where

E : the field strength in mV/m

R_c : the resistivity of free space ($R_c = 120\pi$ ohms)

I : the current at the current loop, in amperes

G : the electrical height of the element, in degrees

r : the distance from the antenna, in metres

θ : the vertical elevation angle, in degrees.

At one kilometre and in the horizontal plane ($\theta = 0^o$) :

$$E = \frac{120\pi I [1 - \cos G]}{2\pi (1\,000)} \times 10^3 \quad \text{mV/m} \qquad (6)$$

$$E = 60\, I [1 - \cos G] \quad \text{mV/m} \qquad (7)$$

2.3 Determination of no-loss loop current

For a uniform cross-section tower or a similar type of directional array element, the no-loss loop current (the current at the current maximum) is:

$$I_i = \frac{KF_i}{60\ (1 - \cos G_i)} \qquad (8)$$

where

I_i : the loop current in amperes in the ith element

K : the no-loss multiplying constant computed as shown in paragraph 2.1 of this Appendix.

F_i : the current ratio for the ith element

G_i : the electrical height of the ith element in degrees

If the tower is less than 90 electrical degrees in height, the base current is computed by multiplying the loop current by sin G.

2.4. Array power loss

Power is loss in a directional antenna system for various reasons, including ground losses, antenna coupling losses, etc. The loss resistance for the array may be assumed to be in series with the element base resistances to account for all losses. The power loss is:

$$P_{loss} = \frac{1}{1\,000} \sum_{i=1}^{n} R_i \, I_i^2 \qquad (9)$$

where

P_{loss} : the total power loss is kilowatts

i : the ith element

n : the number of elements in the array

R_i : the assumed loss resistance in ohms (one ohm, unless otherwise notified) for the ith tower

I_i : the loop current (or base current if element is less than 90 electrical degrees in height) for the ith tower

2.5. Determination of an adjusted multiplying constant

The multiplying constant, K, can be modified to account for power loss in the antenna system as follows:

$$K_{loss} = K \left(\frac{P}{P + P_{loss}} \right)^{\frac{1}{2}} \qquad (10)$$

where

K_{loss} : the multiplying constant after adjustment for the assumed loss resistance

K : the no-loss multiplying constant computed in paragraph 2.1 of this Appendix

P : the array input power

P_{loss} : the total power loss in kilowatts.

2.6 Determination of expanded pattern values

The expanded pattern is determined as follows :

$$E_{EXP}(\phi,\theta) = 1.05 \sqrt{\left| E_{TH}(\phi,\theta) \right|^2 + Q^2}$$

Where :

$E_{EXP}(\phi,\theta)$ = Expanded pattern radiation at a particular azimuth, ϕ, and a particular vertical angle, θ.

$E_{TH}(\phi,\theta)$ = Theoretical pattern radiation at a particular azimuth, ϕ, and a particular vertical angle, θ.

Q = Quadrature factor, computed as :

$$Q = Q_o \, g(\theta)$$

Where Q_o is the Q on the horizontal plane, and is normally the greater of the following two quantities :

$10 \sqrt{\text{power in kW}}$

(If the power is less than 1.0, use 1.0)

or

(0.025) (RSS)

Where RSS is the root sum square of the fields of the towers :

$$RSS = K \sqrt{\sum_{i=1}^{n} f_i^2}$$

Where K is the multiplying constant of the theoretical pattern,

n is the number of towers

f_i is the field ratio of the i^{th} tower

g (θ) is computed as follows :

If the height of the shortest tower is less than or equal to 180 degrees, then :

g (θ) = f (θ) for the shortest tower,

Where f (θ) is the vertical plane distribution factor, normalized so f (θ) = 1 when θ = 0.

If the height of the shortest tower is greater than 180 degrees, then :

$$g(\theta) = \frac{\sqrt{\lfloor f(\theta) \rfloor^2 + 0.0625}}{1.030776}$$

Where f (θ) is the vertical plane distribution factor for the shortest tower, as defined above.

Note : In comparing the heights of the antenna towers to determine the shortest tower, the total apparent height (as determined by current distribution) is used for top-loaded and sectionalized towers.

2.7 Determination of modified expanded pattern values

The purpose of the modified expanded pattern is to put one or more "patches" on an expanded pattern. Each "patch" is referred to as an "augmentation". The augmentation may be positive (when it is greater than the expanded pattern) or negative (when it is less than the expanded pattern). In no case shall the augmentation be so negative that the modified expanded pattern radiation is below the theoretical radiation.

Spans of augmentation may overlap. That is, an augmentation may itself be augmented by a subsequent augmentation. To insure that the calculations are properly made, the augmentations are handled in increasing order of central azimuth of augmentation, starting at true North. If more than one augmentation has the same central azimuth, then they are considered in order by decreasing span. (i.e., the one with the larger span is handled first.) If more than one augmentation has the same central azimuth and the same span, then they are considered in ascending order of augmented radiation.

$$E_{MOD}(\phi,\theta) = \sqrt{\lfloor E_{EXP}(\phi,\theta) \rfloor^2 + g^2(\theta) \lfloor \sum_{i=1}^{a} A_i \cos^2\left(180 \frac{\Delta i}{S_i}\right) \rfloor}$$

Where :

$E_{MOD}(\phi,\theta)$ = Modified expanded pattern radiation at a particular azimuth, ϕ, and a particular vertical angle, θ.

$E_{EXP}(\phi,\theta)$ = Expanded pattern radiation at a particular azimuth, ϕ, and a particular vertical angle, θ.

$g(\theta)$ = The same as described for the expanded pattern.

a = The number of augmentations.

Δi = The difference between the azimuth at which the radiation is desired, ϕ, and the central azimuth of augmentation of the i^{th} augmentation. Note that Δi must be less than or equal to one-half of S_i.

S_i = The total span of the i^{th} augmentation.

$A_i = E^2_{MOD}(\phi_i,o) - E^2_{INT}(\phi_i,o)$

Where :

ϕ_i = The central azimuth of augmentation of the i^{th} augmentation.

$E_{MOD}(\phi_i,o)$ = The modified expanded horizontal plane radiation at the central azimuth of augmentation of the i^{th} augmentation, after applying the i^{th} augmentation, but before applying subsequent augmentations.

$E_{INT}(\phi_i,o)$ = An interim value of radiation in the horizontal plane at the central azimuth of augmentation of the i^{th} augmentation. The interim value is the radiation obtained from applying previous augmentations (if any) to the expanded pattern, but before applying the i^{th} augmentation.

Note : When A_i is negative, there is negative augmentation; when A_i is positive, there is positive augmentation. A_i must not be so negative that $E_{MOD}(\phi,\theta)$ drops below $E_{TH}(\phi,\theta)$ of any azimuth, ϕ, or vertical angle, θ.

APPENDIX 4

CALCULATION PROCEDURES FOR TOP-LOADED AND SECTIONALIZED ANTENNAE

The text of this Appendix, which is in course of preparation, will form Addendum 2 to Document No. DT/19.

APPENDIX 5

ADDITIONAL TECHNICAL INFORMATION

This Appendix contains additional technical material and examples of methods of calculation which, it is felt, will be of assistance to Administrations in performing their calculations to establish their plans.

1. Examples of field strength calculations for homogeneous paths

a) Determination of the electrical field strength at a certain distance from a station.

Consider a station with a power of a 5 kW at 1 240 kHz. The antenna has a characteristic field strength for 1 kW of 306 mV/m at one kilometre.

The electrical field strength at a distance of 40 km is to be determined for a conductivity of 4 mS/m throughout the path.

Graph 20 consists of three pairs of scales to be used with the other graphs of Annex D. Each pair contains one scale labelled in decibels and another in millivolts per metre. Each pair can be cut out and trimmed as a unit to be used as sliding ordinate scales. The scales allow graphical conversion between decibels and millivolts per metre, and are used to make graphical determinations of field strengths. Alternate methods of making caltulations on graphs 1 to 19 may be used, including the use of dividers to adjust for values of E_R that differ from 100 mV/m at 1 km. However, any method used will follow steps similar to those discussed below.

For both omnidirectional and directional antenna systems the value of E_R must be found. For omnidirectional systems E_R can be determined by using the following formulae :

$$E_R = E_c \sqrt{P}$$

if field strengths are expressed in mV/m.

$$E_R = E_c \quad \underline{\text{OR}} \quad + \quad 10 \log P$$

if field strengths are expressed in dB (μV/m).

From graph 15 (1 180 - 1 240 kHz) we obtain a field strength of 45.5 dB (μV/m) which corresponds to 188 μV/m from the curve corresponding to 4 mS/m.

Therefore

$$E = E_0 \frac{E_c}{100}\sqrt{P} = \frac{188 \times 306}{100}\sqrt{5} = 1286 \ \mu V/m \ \text{ or } 62.2 \text{ dB } (\mu V/m)$$

b) Determination of the distance at which a certain electric field strength is obtained.

On the basis of the data from the preceding example, at what distance can a field strength of 500 μV/m or 54 dB(μV/m) be obtained ?

Since the antenna involved has a characteristic field strength for 1 kW of 306 mV/m at one kilometre and the station power is 5 kW, i.e. conditions different from those of Graphs 1 to 19 (100 mV/m at 1 km), the field strength value must be determined before referring to the corresponding figure.

The calculated value is

$$E_0 = \frac{100E}{E_c\sqrt{P}} = \frac{100 \times 500}{306 \times \sqrt{5}} = 73.1 \ \mu V/m \ \text{ or } 37.3 \text{ dB } (\mu V/m)$$

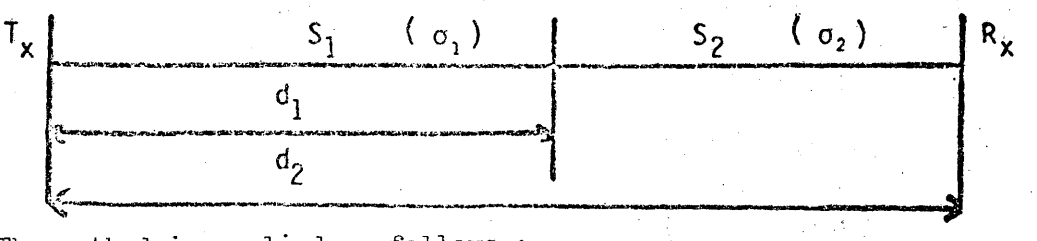
Taking the corresponding curve at 4 S/m in graph 15, we arrive at 37.3 dB (μV/m) at 62 km.

2. Non-homogeneous paths

The equivalent distance or Kirke method is to be used. Details of the method are given below.

Graphs 1 to 20 can be used to determine the field strength in mixed conductivity paths by the equivalent distance or Kirke method.

Consider a path whose sections S_1 and S_2 have endpoint distances corresponding to d_1 and d_2, and conductivities σ_1 and σ_2 respectively, as shown on the following figure :



The method is applied as follows :

a) Taking sections S_1 first, we read the field strength corresponding to conductivity σ_1 at distance d_1 on the graph corresponding to the operational frequency (Appendix 2).

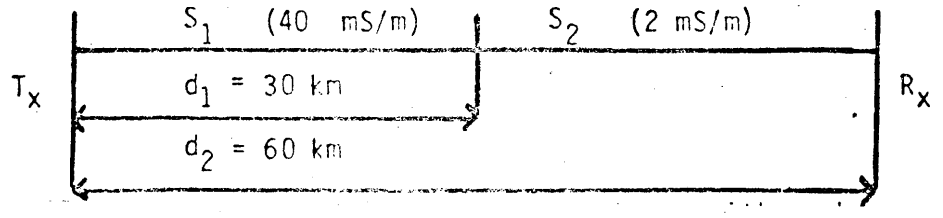
b) As the electric field strength remains constant at the soil discontinuity, the value immediately after the point of discontinuity must be equal to that obtained in a) above. As the conductivity of the second section is σ_2, the curve corresponding to conductivity σ_2 gives the equivalent distance to that which would be obtained at the same electric field strength arrived at in a). This equivalent distance is d. Distance d is larger than d_1 when σ_2 is larger than σ_1. Otherwise d is less than d_1.

c) The electric field strength at the real distance d_2 is determined by taking note of the corresponding curve for conductivity σ_2 similar to that obtained at equivalent distance $d + (d_2 - d_1)$.

d) For successive paths with different conductivities, procedures b) and c) are repeated.

Example :

Consider the following path :



For a 25 kW station at 1 000 kHz and an antenna with a characteristic field strength of 100 mV/m, what field strength is obtained at 60 km ?

- In graph 12 we obtain on the 40 mS/m curve a field strength of 69 dB (μV/m) or 2.8 mV/m at the point of discontibuity (30 km).

We obtain the same field strength at 9.5 km (d=9.5 km) on the 2 mS/m curve.

The equivalent distance for d_2 = 60 km, is $d + (d_2 - d_1)$ = 9.5 + (60-30) = 39.5 km.

From the 2 mS/m curve we obtain a field of 43 dB (μV/m) or 141 μV/m at 39.5 km.

Lastly, we calculate the field strength :

$$E = E_o \times \frac{E_c}{100} \sqrt{P} = 141 \times \frac{100}{100} \times \sqrt{25} = 705 \quad \mu V/m$$

Taking the preceding example, at what distance will the 500 μV/m contour be ?

First we determine the electric field strength :

$$E_o = \frac{100E}{E_o \sqrt{P}} = \frac{100E}{100 \sqrt{25}} \times 500 = 100 \ \mu V/m$$

Following the 40 mS/m curve of graph 12, we note that at 30 km the electric field strength is 69 dB (μV/m) or 2.8 mV/m. This value is higher than the one we seek (0.1 mV/m), therefore, we shall have a distance greater than 30 km.

The equivalent distance for a 2 mS/m conductivity is 9.5 km.

Following the 2 mS/m curve, we find the 100 μV/m or 40 dB (μV/m) contour at 46 km giving us the equivalent distance. The true distance is 46 46 + (30 - 9.5) km = 66.5 km.

Note : The IFRB has a computer program available to Administrations.

3. Path parameters

If a_T and b_T respectively are the latitude and longitude of the transmitting terminal, and a_R and b_R are those of the receiving terminal, then the path parameters may be calculated as follows North and East are considered positive; South and West negative. These parameters apply to the calculation of the short great-circle path.

- Great-circle path distance

$$d = 111.18 \times d^\circ \quad \text{km}$$

where

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

- Geographic azimuth of the path from either terminal

For the transmitting terminal, for example,

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

determined such that $0^\circ \leq \alpha < 180^\circ$. The geographical bearing in degrees East of North to the receiving terminal is a_T if $\sin (b_R - b_T) \geq 0$ or is $(360^\circ - a_T)$ if $\sin (b_R - b_T) < 0$. The same equation, with the latitudes reversed, is used for the receiving terminal.

- Path midpoint latitude

$$a = \arcsin \left[\sin a_T \cos (d^\circ/2) + \cos a_T \sin (d^\circ/2) \cos a_T \right]$$

- Path midpoint longitude

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

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

4. Example illustrating the use of the RSS method and the 50% exclusion principle

Interfering signal (1)	Interfering signal field strength		Protection ratio (dB)	Individual usable field strength contribution (Eu)		Calculated RSS		Remarks
	(μV/m)	(dB(μV/m))		dB(μV/m)	(μV/m)	dB(μV/m)	(μV/m)	
A	140	42.9	26	68.9	2800			
C	130	42.3	26	68.3	2600	71.6	3812	$\sqrt{A^2 + C^2}$
B	125	41.9	26	67.9	2500	73.2	4555	Individual Eu greater than 50% of $\sqrt{A^2 + C^2}$ therefore $\sqrt{A^2 + C^2 + B^2}$
D	65	36.3	26	62.3	1300			Individual Eu less than 50% of $\sqrt{A^2 + C^2 + B^2}$ therefore disregard
E	52	34.3	26	60.3	1040			idem

(1) In descending order of individual usable field strength contribution (Eu)

5. Simplified method of calculating skywave interference to Class A stations

The determination of interference to a Class A station using the RSS calculation on a site-to-contour basis can be simplified in the following way:

1) The site-to-site RSS usable field strength for the station to be protected is determined. The contributors to the RSS are identified. (The number of contributions are limited mathematically by the 50% exlcusion rule to a maximum of 5, these being the most significant).

2) For each contributor to the RSS, a protection point at the intersection of the skywave protected contour and the great circle line between the protected transmitter site and the contributor transmitter site is identified. (When only non-directional stations are involved this would be the worst case point for site-to-contour protection.)

3) Where directional stations are involved, the interfering signal is calculated on a site-to-site basis, using the one or more radiation maxima in the arc towards the protected contour. If one or more signals prove to be contributors to the previously established RSS usable field strength in point 1 above, protection points shall be identified at the intersections of the protected contour and the great circle lines along the azimuths corresponding to these radiation maxima.

4) To determine protection to Class A stations in accordance with this procedure, for each contributor to the site-to-site RSS as defined above, a calculation is made of the usable field strength contribution at each protection point. The results of such calculations are to be employed as in paragraph 4.6.3.

Should a more complex approach be deemed necessary by any affected administration, further consultations leading to agreement between all administrations concerned shall be undertaken on a case-by-case basis.

6. Receiver image considerations

For planning purposes, an administration in evaluating the frequency most appropriate for use by a station, nay consider applying an additional ground-wave protection consideration, the receiver image constraint, to minimize the possibility for interference created by the characteristics of receivers within the service contours of stations in the same area.

In areas where usable channels are scarce, however, administrations may wish to implement assignments despite this constraint.

If an Administration in noise zone 1 wishes to apply this procedure, it should ensure that the field strength of a station with a frequency that is 900 to 920 kHz higher than the frequency of the station to be protected, is not more than 29.5 dB above the protected contour of 500 μV/m for that station. This is the same level of protection as that required for the second adjacent channel.

If an Administration in noise zones 2 and 3 wishes to apply this procedure it should alter the value for the protected contour using the values of nominal field strengths contained in Table IV of Chapter 4.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Corrigendum No. 1 to
Document No. DT/19-E
26 November 1981

TECHNICAL GROUP

ANNEX 2

TECHNICAL DATA TO BE USED IN APPLICATION OF THE AGREEMENT

1. Page 1, § 1.2 Replace "§4" by "Chapter 4"

2. Spanish text only

Trayectos no homogenos

Suprimir la frase entre parenteses "(La Administración.....computador)".

3. Page 31, § 4.8

Noise zone 1 Replace "zones 2 and 3" by " zone 2".

4. Page 31, § 4.8

Noise zone 2

Replace the text by the following :

"Covers the area within the line defined by the coordinates 20° S - 45° W, the meridian 45° W to the coordinates 16° N - 45° W, the parallel 16° N to the coordinates 16° N - 68° W, the meridian 68° W to the coordinates 20° N - 68° W, the parallel 20° N to the coordinates 20° N - 80° W, the meridian 80° W, the northeast coast of Panama, the frontier between Panama and Colombia, the southeast coast of Panama and the meridian 82° W to the parallel 20° S, and the parallel 20° S, with the exception of Chile and Paraguay parallel 20° S until the frontier between Paraguay and Brazil until 45o W. Bolivia is entirely included in noise zone 2 as are the islands belonging to Colombia, the Columbian archipelago or the Galapagos islands (Equador)."

5. Page 32

Replace the map by the revised map annexed, in which the boundaries of the noise zones have been redrawn in accordance with § 4.8.

Annex : 1

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ANNEX

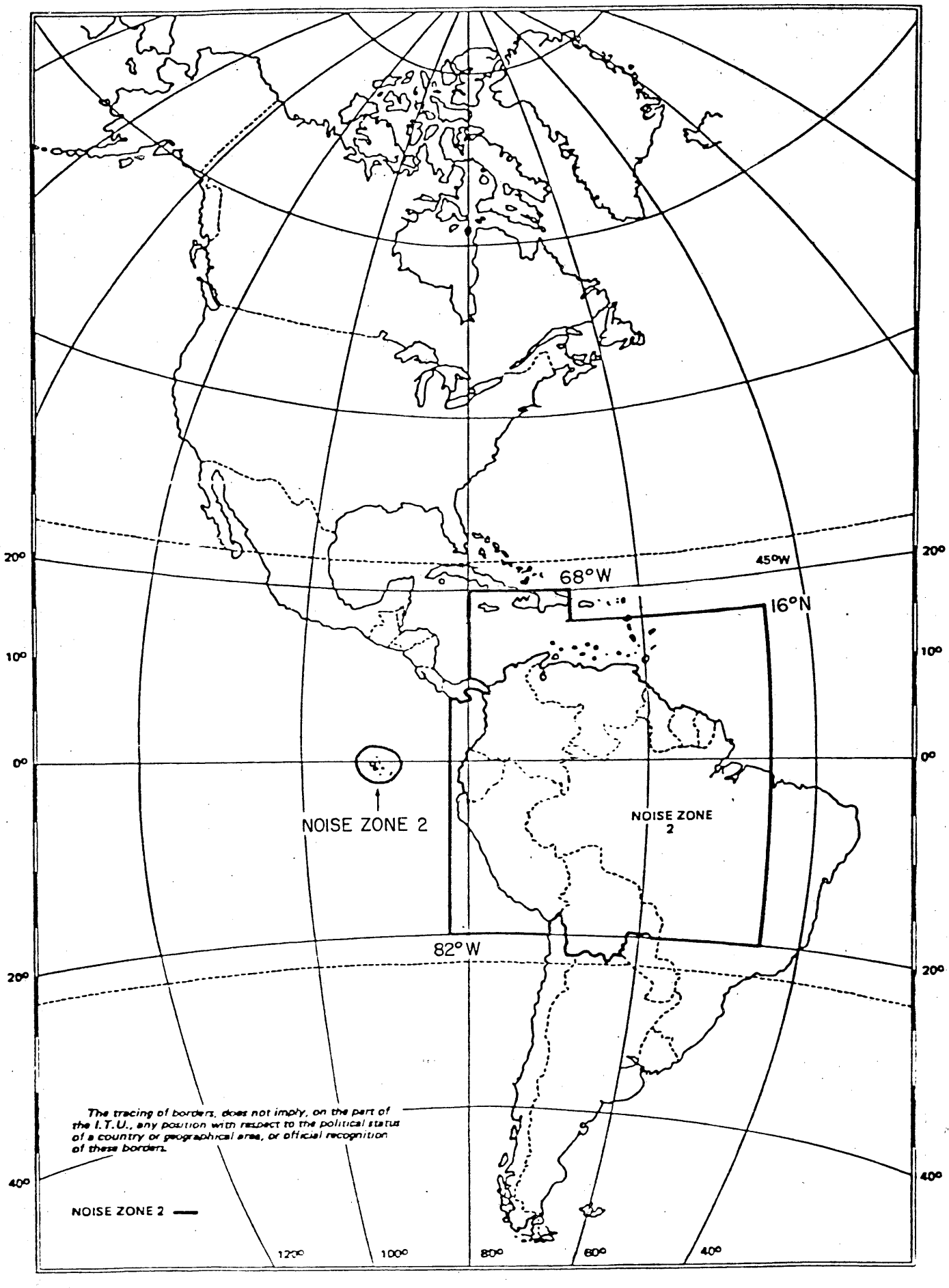

FIGURE 1 - MAP SHOWING THE LIMITS OF THE NOISE ZONES

INTERNATIONAL TELECOMMUNICATION UNION
REGIONAL BROADCASTING CONFERENCE
(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/19-E
25 November 1981
Original : English

TECHNICAL GROUP

ANNEX 2

TECHNICAL DATA TO BE USED IN APPLICATION OF THE AGREEMENT

Chapter 1

DEFINITIONS AND SYMBOLS

In addition to the definitions given in the Radio Regulations, the following definitions and symbols apply to ~~the Plan for Region 2~~ this agreement.

1.1 Broadcasting channel (in AM)

A part of the frequency spectrum, equal to the necessary bandwidth of AM sound broadcasting stations, and characterized by the nominal value of the carrier frequency located at its centre.

1.2 Class A station (see Note 4 to § 4).

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 contiguous rural areas 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.

1.5 Station power

Unmodulated carrier power supplied to the antenna system, excluding the feeder line.

1.6 Characteristic field strength (E_c)

The field strength, at a reference distance of 1 km in a horizontal direction, of the groundwave signal propagated along perfectly conducting ground for 1 kW fed to the antenna, taking into account losses in a real antenna.

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Note: a) The gain (G) of the transmitting antenna relative to an ideal short vertical antenna is given in dB by the following equation:

$$G = 20 \log \frac{E_c}{300}$$

where E_c is in units of mV/m.

~~equivalent~~

b) The effective monopole radiated power (e.m.r.p.) is given in dB(1 kW) by the following equation:

$$e.m.r.p. = 10 \log P_t + G$$

Where P_t is the transmitter power in kW.

1.7 Protected contour

Continuous line that determines the area of primary or secondary service which is protected from objectionable interference.

1.8 Audio-frequency (AF) protection ratio

Agreed minimum value of the audio-frequency signal-to-interference ratio corresponding to a subjectively defined reception quality. This ratio may have different values according to the type of service desired.

1.9 Radio-frequency protection ratio

The desired radio-frequency signal-to-interference ratio which, in well-defined conditions, makes it possible to obtain the audio-frequency protection ratio at the output of a receiver. These specified conditions include various parameters such as the frequency separation between the desired carrier and the interfering carrier, the emission characteristics (type and percent modulation etc.) levels of input and output of the receiver and its characteristics (selectivity, sensitivity to intermodulation, etc.).

1.10 Nominal usable field strength (E_{nom})

Agreed minimum value of the field strength required to provide satisfactory reception, under specified conditions, in the presence of natural noise, industrial noise and interference from other transmitters. The value of nominal usable field strength is that employed as the reference for planning.

1.11 Usable field strength (E_u)

Minimum value of the field strength required to provide satisfactory reception, under specified conditions in the presence of natural noise, industrial noise, and interference in a real situation (or resulting from a frequency assignment plan).

1.12 Groundwave

Electromagnetic wave which is propagated along the surface of the Earth or near it and which has not been reflected by the ionosphere.

1.13 Skywave

Electromagnetic wave which has been reflected by the ionosphere.

1.14 Primary service area

Service area delimited by the contour within which the calculated level of the groundwave field strength is equal to or greater than the nominal usable field strength.

1.15 Secondary service area

Service area delimited by the contour within which the calculated level of the field strength due to the skywave 50% of the time is equal to or greater than the nominal usable field strength.

1.16 Objectionable interference

Interference caused by a signal exceeding the maximum permissible field strength within the protected contour according to the terms of an agreement.

1.17 Daytime operation

Operation between the times of local sunrise and local sunset.

1.18 Nighttime operation

Operation between the times of local sunset and local sunrise.

1.19 Skywave field strength, 10% of the time

The skywave field strength during the reference hour which is exceeded for 10 % of the nights of the year. The reference hour is the period of one hour beginning one and a half hours after sunset and ending two and a half hours after sunset at the midpoint of the great-circle path.

1.20 Skywave field strength, 50% of the time

The skywave field strength during the reference hour which is exceeded for 50 % of the nights of the year. The reference hour is the period of one hour beginning one and half hours after sunset and ending two and a half hours after sunset at the midpoint of the great circle path.

1.21 Synchronized network

Two or more broadcasting stations whose carrier frequencies are identical (in practice they may differ slightly, usually by a fraction of a hertz) and which broadcast the same programme simultaneously.

1.22 Symbols

Hz	:	hertz
kHz	:	kilohertz
W	:	watt
kW	:	kilowatt
mV/m	:	millivolt/metre
μV/m	:	microvolt/metre
dB	:	decibel
dB (μV/m)	:	decibels with respect to 1 μV/m
dB (kW)	:	decibels with respect to 1 kW
mS/m	:	millisiemens/metre

Chapter 2

GROUNDWAVE PROPAGATION

2.1 Ground conductivity

Appendix 1 is an Atlas of Ground Conductivity.

2.2 Field strength curves for groundwave propagation

The curves shown in ~~Annex~~ θ Appendix 2 to this Annex are to be used for the prediction of groundwave propagation in the following frequency ranges :

Graph No.	kHz
1	540 - 560
2	570 - 590
3	600 - 620
4	630 - 650
5	660 - 680
6	690 - 710
7	720 - 760
8	770 - 810
9	820 - 860
10	870 - 910
11	920 - 960
12	970 - 1 030
13	1 040 - 1 100
14	1 110 - 1 170
15	1 180 - 1 240
16	1 250 - 1 330
17	1 340 - 1 420
18	1 430 - 1 510
19	1 520 - 1 610

2.3 Calculation of groundwave field strength

Homogeneous paths

The vertical component of the electric field strength for a homogeneous path is represented in these graphs as a function of distance, for various values of ground conductivity.

The distance of kilometres is shown on a logarithmic scale on the abscissa. The electric field strength is shown on a linear scale on the ordinate in decibels above 1 μV/m. Graphs 1 to 19 are standardized for a characteristic field strength of 100 mV/m at a 1 km corresponding to an effective monopole radiated power (e.m.r.p.) of -9.5 dB relative to 1 kW. The straight line marked "100 mV/m at 1 km" is the field strength on the assumption that the antenna is erected on a surface of perfect conductivity.

For omnidirectional antenna sustems having a different characteristic field strength, correction must be made according to the following formulae :

$$E = E_0 \times \frac{E_c}{100} \times \sqrt{P}$$

if field strengths are expressed in mV/m.

$$\overline{OR}$$

$$E = E_o + E_c - 100 + 10 \log P$$

if field strengths are expressed in dB (μV/m).

For directional antenna systems, the correction must be made according to the following formulae :

$$E = E_o \times \frac{E_R}{100}$$

if field strengths are expressed in mV/m.

$$E = E_o \div E_R = 100$$

or

if field strengths are expressed in dB (μV/m)

where E : resulting electric field strength

E_o : electric field strength read from graphs 1 to 19

E_R : actual radiated field strength at a particular azimuth at 1 km

E_c : characteristic field strength at 1 km

P : station power in kW.

Graph 20 consists of three pairs of scales to be used with the other graphs of Annex D. Each pair contains one scale labelled in decibels and another in millivolts per metre. Each pair can be cut out and trimmed as a unit to be used as sliding ordinate scales. The scales allow graphical conversion between decibels and millivolts per metre, and are used to make graphical determinations of field strengths. Alternate methods of making caltulations on graphs 1 to 19 may be used, including the use of dividers to adjust for values of E_R that differ from 100 mV/m at 1 km. However, any method used will follow steps similar to those discussed below.

For both omnidirectional and directional antenna systems the value of E_R must be found. For omnidirectional systems E_R can be determined by using the following formulae :

$$E_R = E_c \sqrt{P}$$

if field strengths are expressed in mV/m.

$$E_R = \overline{E_c^{OR}} + 10 \log P$$

if field strengths are expressed in dB (μV/m).

To determine the field strength at a given distance the scale is placed at the given distance with the 100 dB (μV/m) point of the scale resting on the applicable conductivity curve. The value of E_R is then found on the scale; the point on the underlying graph (which lies underneath the E_R point of the scale) yields the field strength at the given distance.

To determine the distance at a given field strength, the E_R value is found on the sliding scale and that point is placed directly at the level of the given field strength on the appropriate graph. The scale is then moved horizontally until the 100 dB (μV/m) point of the scale coincides with the applicable conductivity curve. The distance may then be read from the abscissa of the underlying graph.

Note : Annex E to the Report by the First Session of the Conference, Buenos Aires 1980, contains a mathematical discussion for the calculation of the groundwave curves. The corresponding computer program is available in the IFRB.

Examples of field strength calculations for homogeneous paths

a) Determination of the electrical field strength at a certain distance from a station.

Considerer a station with a power of a 5 kW at 1 240 kHz. The antenna has a characteristic field strength for 1 kW of 306 mV/m at one kilometre.

The electrical field strength at a distance of 40 km is to be determined for a conductivity of 4 mS/m throughout the path.

From graph 15 (1 180 - 1 240 kHz) we obtain a field strength of 45.5 dB (μV/m) which corresponds to 188 μV/m from the curve corresponding to 4 mS/m.

Therefore

$$E = E_o \frac{E_c}{100}\sqrt{P} = \frac{188 \times 306}{100}\sqrt{5} = 1286 \ \mu V/m \ \text{ or } 62.2 \ dB \ (\mu V/m)$$

b) Determination of the distance at which a certain electric field strength is obtained.

On the basis of the data from the preceding example, at what distance can a field strength of 500 μV/m or 54 dB(μV/m) be obtained .

Since the antenna involved has a characteristic field strength for 1 kW of 306 mV/m at one kilometre and the station power is 5 kW, i.e. conditions different from those of Graphs 1 to 19 (100 mV/m at 1 km), the field strength value must be determined before referring to the corresponding figure.

The calculated value is

$$E_o = \frac{100E}{E_c\sqrt{P}} = \frac{100 \times 500}{306 \times \sqrt{5}} = 73.1 \ \mu V/m \ \text{ or } 37.3 \ dB \ (\mu V/m)$$

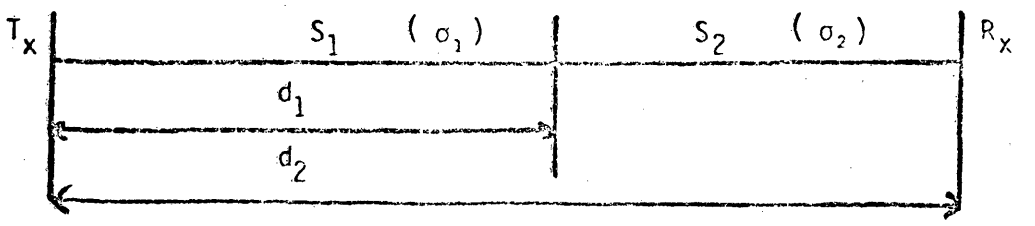
Taking the corresponding curve at 4 S/m in graph 15, we arrive at 37.3 dB (μV/m) at 62 km.

Non-homogeneous paths

The equivalent distance or Kirke method is to be used. Details of the method are given below.

Graphs 1 to 20 can be used to determine the field strength in mixed conductivity paths by the equivalent distance or Kirke method.

Consider a path whose sections S_1 and S_2 have endpoint distances corresponding to d_1 and d_2, and conductivities σ_1 and σ_2 respectively, as shown on the following figure :



The method is applied as follows :

a) Taking sections S_1 first, we read the field strength corresponding to conductivity σ_1 at distance d_1 on the graph corresponding to the operational frequency (Appendix 2).

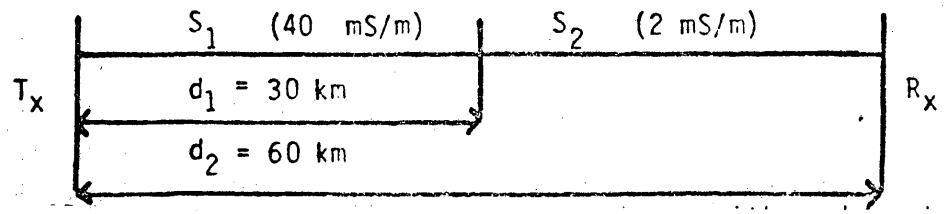
b) As the electric field strength remains constant at the soil discontinuity, the value immediately after the point of discontinuity must be equal to that obtained in a) above. As the conductivity of the second section is σ_2, the curve corresponding to conductivity σ_2 gives the equivalent distance to that which would be obtained at the same electric field strength arrived at in a). This equivalent distance is d. Distance d is larger than d_1 when σ_2 is larger than σ_1. Otherwise d is less than d_1.

c) The electric field strength at the real distance d_2 is determined by taking note of the corresponding curve for conductivity σ_2 similar to that obtained at equivalent distance $d + (d_2 - d_1)$.

d) For successive paths with different conductivities, procedures b) and c) are repeated.

Example :

Consider the following path :



For a 25 kW station at 1 000 kHz and an antenna with a characteristic field strength of 100 mV/m, what field strength is obtained at 60 km ?

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We obtain the same field strength at 9.5 km (d=9.5 km) on the 2 mS/m curve.

The equivalent distance for d_2 = 60 km, is $d + (d_2 - d_1) = 9.5 + (60-30) = 39.5$ km.

From the 2 mS/m curve we obtain a field of 43 dB (μV/m) or 141 μV/m at 39.5 km.

Lastly, we calculate the field strength :

$$E = E_o \times \frac{E_c}{100} \sqrt{P} = 141 \times \frac{100}{100} \times \sqrt{25} = 705 \quad \mu V/m$$

Taking the preceding example, at what distance will the 500 μV/m contour be ?

First we determine the electric field strength :

$$E_o = \frac{100E}{E_o \sqrt{P}} = \frac{100E}{100 \sqrt{25}} \times 500 = 100 \ \mu V/m$$

Following the 40 mS/m curve of graph 12, we note that at 30 km the electric field strength is 69 dB (μV/m) or 2.8 mV/m. This value is higher than the one we seek (0.1 mV/m), therefore, we shall have a distance greater than 30 km.

The equivalent distance for a 2 mS/m conductivity is 9.5 km.

Following the 2 mS/m curve, we find the 100 μV/m or 40 dB (μV/m) contour at 46 km giving us the equivalent distance. The true distance is 46 46 + (30 - 9.5) km = 66.5 km.

Note : The IFRB has a computer program available to Administrations.

Chapter 3

SKYWAVE PROPAGATION

3. The calculation of skywave field strength shall be conducted in accordance with the provisions which follow (No account is taken of sea gain or of excess polarization coupling loss in this Agreement).

3.1 List of symbols

d : short great-circle path distance (km)
E_c : characteristic field strength, mV/m at 1 km for 1 kW
$f(\theta)$: radiation as a fraction of the value at $\theta = 0$
f : frequency (kHz)
F_b : basic skywave field strength (annual median (dB (μV/m))

F_c : field strength read from Figure 4 and Table III (dB(μV/m)) for a characteristic field strength of 100 mV/m at 1 km.
F(50): predicted annual median skywave field strength (dB(μV/m))
F(10): predicted skywave field strength exceeded for 10% of the nights of the year (dB(μV/m))
P : power (kW)
θ : angle of departure from the horizontal (degrees)

3.2 General procedure

Radiation in the horizontal plane of an omnidirectional antenna fed with 1 kW (characteristic field strength, E_c) is known either from design data or, if the actual design data is not available, from Figure 1.

Angle of departure, θ, is given by

$$\theta = \arctan\left(0.00752 \operatorname{cotan} \frac{d}{444.54}\right) - \frac{d}{444.54} \text{ degrees} \quad (1)$$

$$0 \leq \theta \leq 90°$$

Alternatively, Table 1 and Figure 2 may be used.

It is assumed that the Earth is a smooth sphere with an effective radius of 6,367.6 km, and that reflections occur from an ionospheric height of 96.5 km.

The radiation $f(\theta)$ expressed as a fraction of the value at $\theta = 0°$ at a pertinent angle of departure θ, can be determined from Figure 3 or Table II.

The product $E_c f(\theta) \sqrt{P}$ is thus determined for an omnidirectional antenna. For a directional antenna, $E_c f(\theta) \sqrt{P}$ can be determined from the antenna radiation pattern. $E_c f(\theta) \sqrt{P}$ is the field strength at 1 km at the appropriate angle of departure and azimuth.

The basic skywave field strength F_b is given by:

$$F_b = F_c + 20 \log \frac{E_c f(\theta) \sqrt{P}}{100} \quad (\text{dB } (\mu\text{V/m})) \qquad (2)$$

where F_c is the direct reading from the field strength curve in Figure 4 or Table III.

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

For distances greater than 4,250 km, it should be noted that F_c can be expressed by:

$$F_c = \frac{231}{3 + d/1000} - 35.5 \text{ dB } (\mu\text{V/m}) \qquad (3)$$

for $d > 4250$ km

3.3 Annual skywave field strength exceeded 50 % of the time

The calculated annual skywave field strength exceeded 50 % of the time is given by :

$$F(50) = F_b \quad \text{dB(uV/m)} \qquad (5)$$

3.4 Skywave field strength exceeded 10% of the time

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

$$F(10) = F(50) + 8 \quad \text{dB(uV/m)} \qquad (6)$$

3.5 Nocturnal variation of skywave field strength

Hourly median skywave field strengths vary during the night and at sunrise and sunset. Figure 5 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.

3.6 Sunrise and sunset time

To facilitate the determination of the local time of sunrise and sunset, Figure 6 gives the times for various geographic latitudes (see 3.7 below) and for each month of the year. The time is the local meridian time at the point concerned and should be converted to the appropriate standard time.

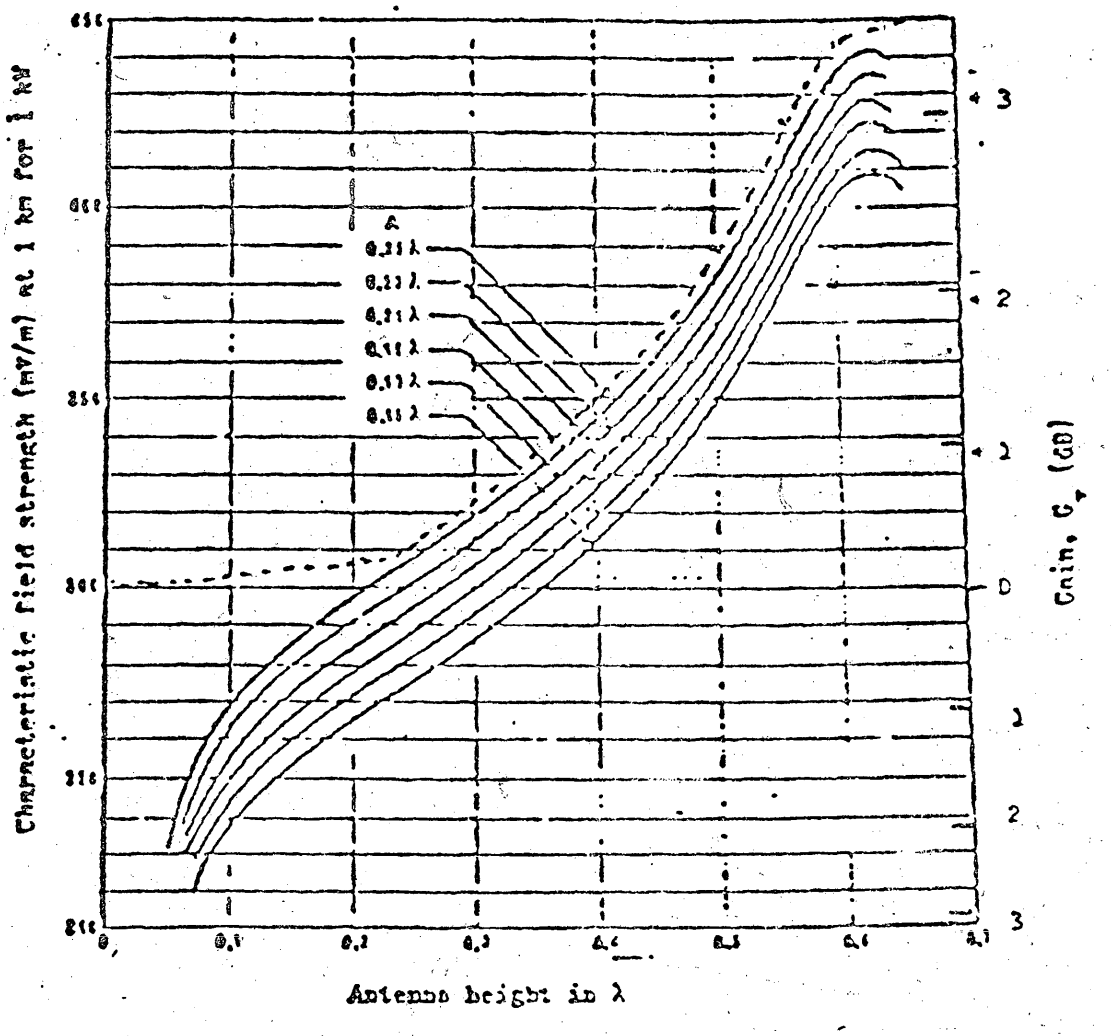


FIGURE 1 - Characteristic field strength for vertical omnidirectional radiators, using 120-radial ground systems

A : radius of ground system

Full lines : real antenna correctly designed

Dashed line : ideal antenna on a perfectly conducting ground

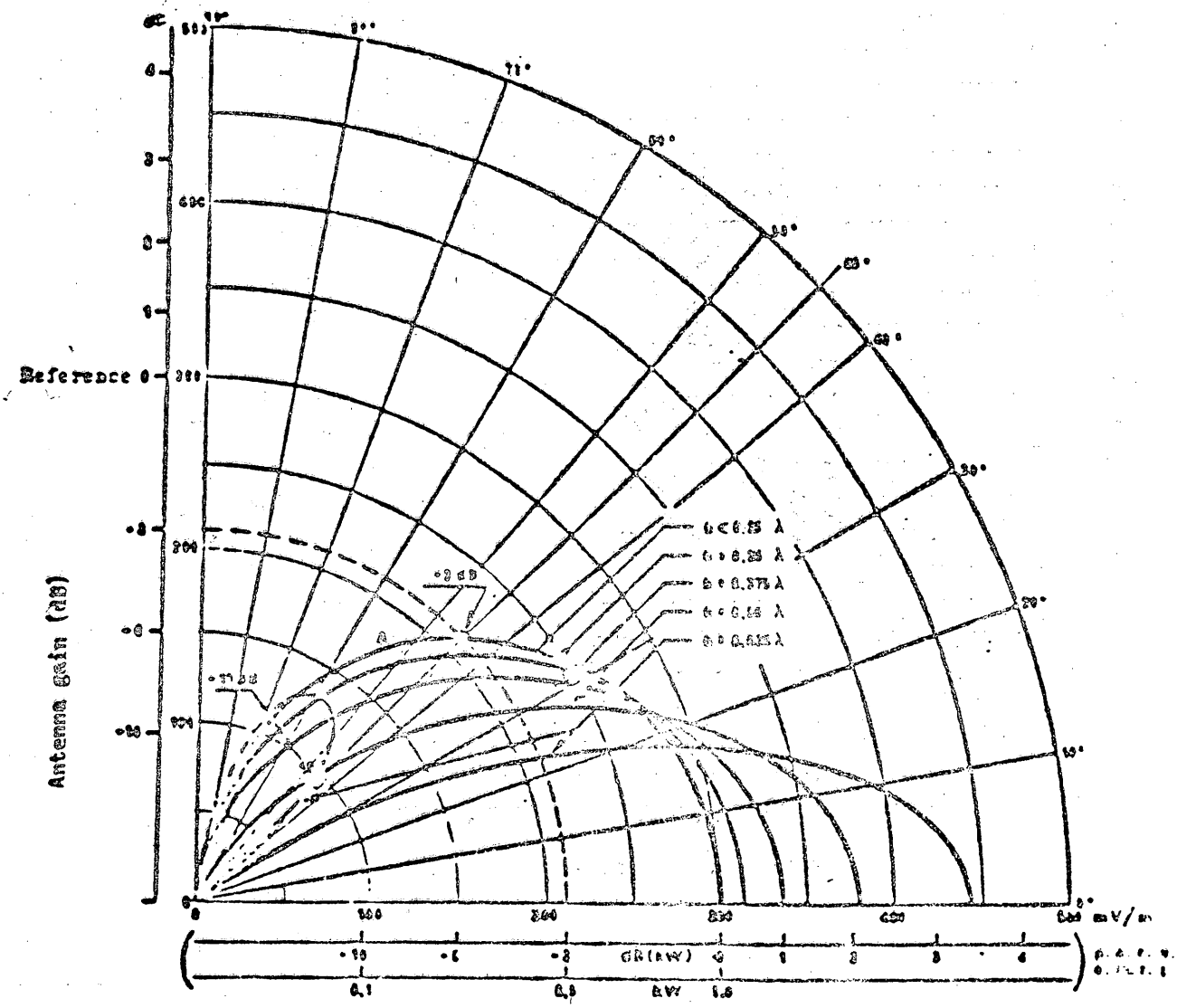


FIGURE 1a - Equivalent monopole radiated power (e.m.r.p.) and field strength at a distance of 1 km as a function of elevation angle, for different heights of vertical antennae assuming a transmitter power of 1 kW

A : short vertical antenna

TABLE I - Angle of departure vs distance

Distance (km)	Angle of departure (degrees)
50	75.3
100	62.2
150	51.6
200	43.3
250	36.9
300	31.9
350	27.9
400	24.7
450	22.0
500	19.8
550	18.0
600	16.3
650	14.9
700	13.7
750	12.6
800	11.7
850	10.8
900	10.0
950	9.3
1000	8.6
1050	8.0
1100	7.4
1150	6.9
1200	6.4
1250	5.9
1300	5.4
1350	5.0
1400	4.6
1450	4.3
1500	3.9
1550	3.5
1600	3.2
1650	2.9
1700	2.6
1750	2.3
1800	2.0
1850	1.7
1900	1.5
1950	1.2
2000	1.0
2050	0.7
2100	0.5
2150	0.2
2200	0.0
2250	0.0
2300	0.0
2350	0.0
2400	0.0

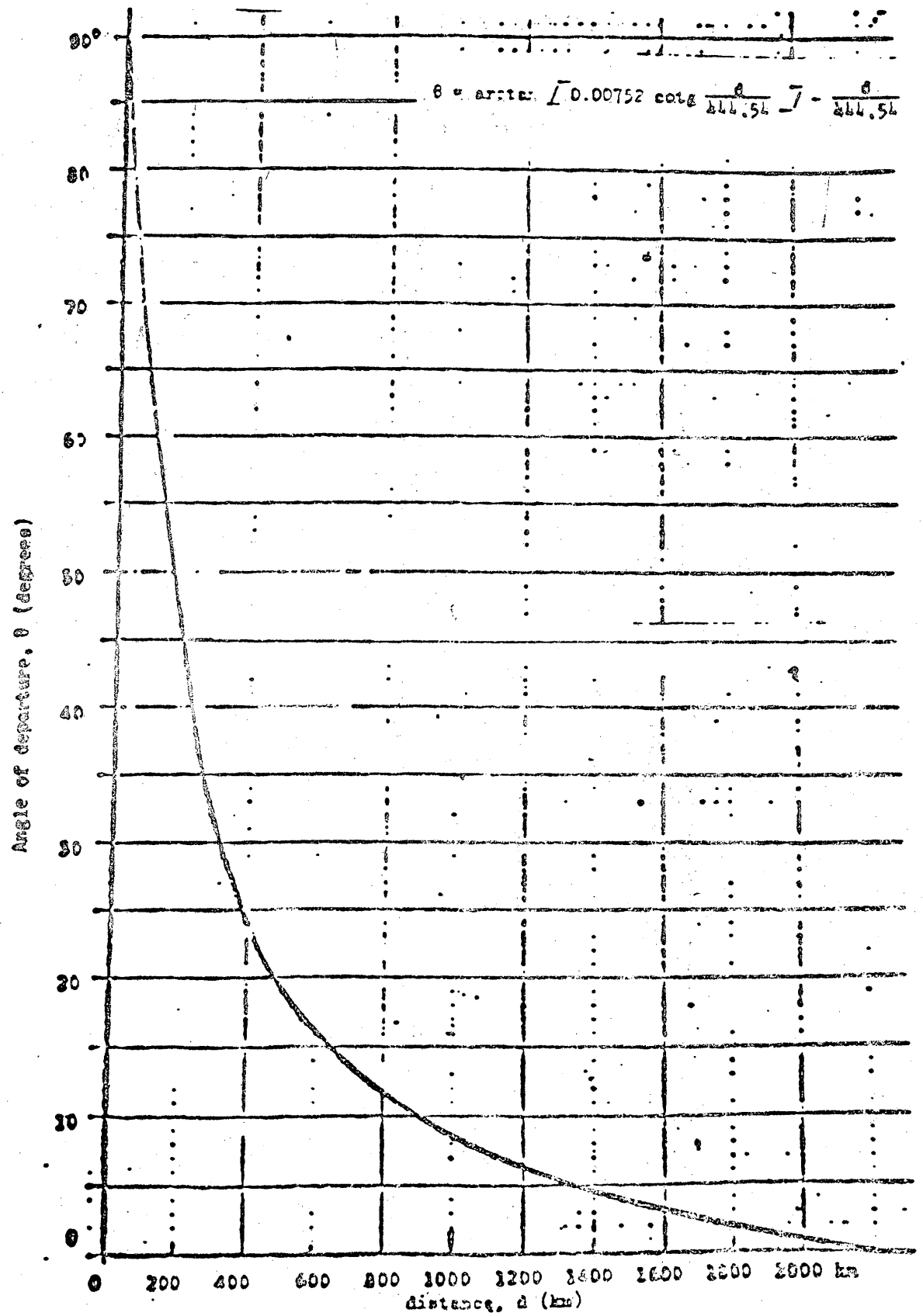


FIGURE 2 - Angle of departure vs distance

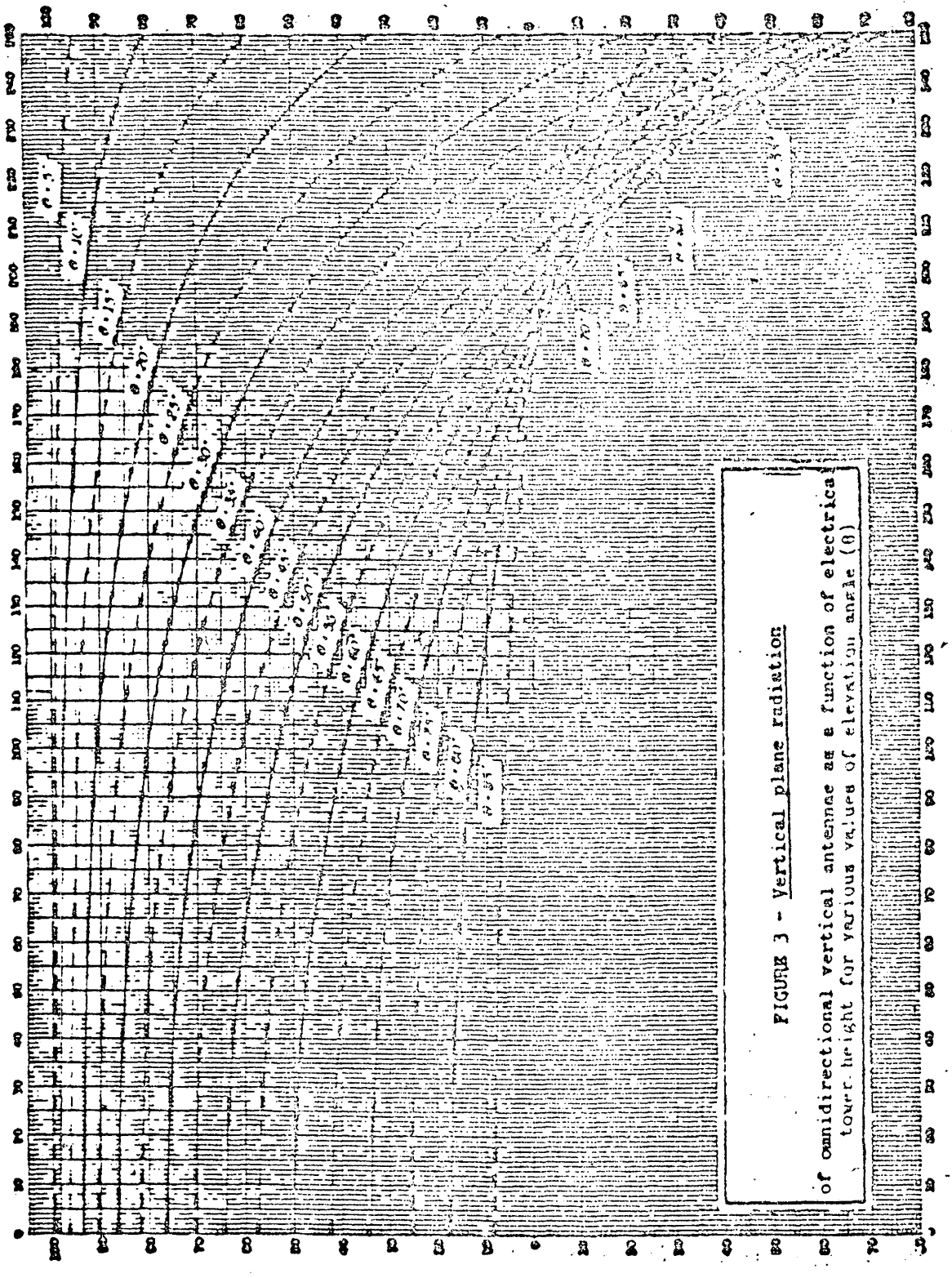


FIGURE 3 - Vertical plane radiation

of omnidirectional vertical antennae as a function of electrical tower height for various values of elevation angle (θ)

TABLE II - f(θ) values for vertical Monopoles

Angle of departure (degrees)	f(θ)					
	0.11λ	0.13λ	0.15λ	0.17λ	0.19λ	0.21λ
0	1.000	1.000	1.000	1.000	1.000	1.000
1	1.000	1.000	1.000	1.000	1.000	1.000
2	0.999	0.999	0.999	0.999	0.999	0.999
3	0.999	0.998	0.998	0.998	0.998	0.998
4	0.997	0.997	0.997	0.997	0.997	0.997
5	0.995	0.996	0.995	0.995	0.995	0.995
6	0.994	0.994	0.994	0.993	0.993	0.993
7	0.992	0.992	0.991	0.991	0.991	0.990
8	0.989	0.989	0.989	0.988	0.988	0.987
9	0.987	0.986	0.986	0.985	0.985	0.984
10	0.984	0.983	0.983	0.982	0.981	0.980
11	0.980	0.980	0.979	0.978	0.977	0.976
12	0.976	0.976	0.975	0.974	0.973	0.971
13	0.972	0.972	0.971	0.969	0.968	0.967
14	0.968	0.967	0.966	0.965	0.963	0.961
15	0.963	0.962	0.961	0.959	0.958	0.956
16	0.958	0.957	0.956	0.954	0.952	0.950
17	0.953	0.952	0.950	0.948	0.946	0.943
18	0.947	0.946	0.944	0.942	0.940	0.937
19	0.941	0.940	0.938	0.935	0.933	0.930
20	0.935	0.933	0.931	0.929	0.926	0.923
22	0.922	0.920	0.917	0.914	0.911	0.907
24	0.907	0.905	0.902	0.898	0.894	0.890
26	0.892	0.889	0.886	0.882	0.877	0.872
28	0.875	0.872	0.868	0.864	0.858	0.852
30	0.857	0.854	0.849	0.844	0.839	0.832
32	0.838	0.834	0.830	0.824	0.818	0.811
34	0.819	0.814	0.809	0.803	0.796	0.789
36	0.798	0.793	0.788	0.781	0.774	0.766
38	0.776	0.771	0.765	0.758	0.751	0.742
40	0.753	0.748	0.742	0.735	0.726	0.717
42	0.730	0.724	0.718	0.710	0.702	0.692
44	0.705	0.700	0.693	0.685	0.676	0.666
46	0.680	0.674	0.667	0.659	0.650	0.639
48	0.654	0.648	0.641	0.633	0.623	0.612
50	0.628	0.621	0.614	0.606	0.596	0.585
52	0.600	0.594	0.587	0.578	0.568	0.557
54	0.572	0.565	0.559	0.550	0.540	0.529
56	0.544	0.537	0.530	0.521	0.512	0.501
58	0.515	0.508	0.501	0.493	0.483	0.472
60	0.485	0.479	0.472	0.463	0.454	0.443

Note : When the negative sign (-) appears in the Table, it signifies only the existence of a secondary lobe having the opposite electrical phase from the principal lobe, in the vertical radiation pattern. In order to perform the calculation, ignore the negative (-) and use only the absolute value of f(θ) from the Table.

TABLE II (continued) - f(θ) values for vertical monopoles

Angle of departure (degrees)	f(θ)					
	0.23λ	0.25λ	0.27λ	0.29λ	0.311λ	0.35λ
0	1.000	1.000	1.000	1.000	1.000	1.000
1	1.000	1.000	1.000	1.000	1.000	1.000
2	0.999	0.999	0.999	0.999	0.999	0.999
3	0.998	0.998	0.998	0.998	0.998	0.997
4	0.997	0.996	0.996	0.996	0.995	0.995
5	0.995	0.994	0.994	0.994	0.993	0.992
6	0.992	0.992	0.991	0.991	0.990	0.989
7	0.990	0.989	0.988	0.988	0.987	0.986
8	0.987	0.986	0.985	0.984	0.983	0.980
9	0.983	0.982	0.981	0.980	0.978	0.975
10	0.979	0.978	0.977	0.975	0.973	0.969
11	0.975	0.973	0.972	0.970	0.968	0.963
12	0.970	0.968	0.966	0.964	0.962	0.956
13	0.965	0.963	0.961	0.958	0.955	0.949
14	0.959	0.957	0.955	0.952	0.948	0.941
15	0.953	0.951	0.948	0.945	0.941	0.932
16	0.947	0.944	0.941	0.937	0.933	0.924
17	0.941	0.937	0.934	0.930	0.925	0.914
18	0.934	0.930	0.926	0.921	0.916	0.904
19	0.926	0.922	0.918	0.913	0.907	0.894
20	0.919	0.914	0.909	0.904	0.898	0.883
22	0.902	0.897	0.891	0.885	0.877	0.861
24	0.885	0.879	0.872	0.865	0.856	0.837
26	0.866	0.859	0.852	0.843	0.833	0.811
28	0.846	0.838	0.830	0.820	0.809	0.785
30	0.825	0.816	0.807	0.797	0.784	0.758
32	0.803	0.794	0.784	0.772	0.759	0.729
34	0.780	0.770	0.759	0.747	0.732	0.701
36	0.756	0.746	0.734	0.721	0.705	0.671
38	0.732	0.720	0.708	0.694	0.677	0.642
40	0.706	0.695	0.681	0.667	0.649	0.612
42	0.681	0.668	0.654	0.639	0.621	0.582
44	0.654	0.641	0.627	0.611	0.593	0.552
46	0.628	0.614	0.600	0.583	0.564	0.523
48	0.600	0.587	0.572	0.555	0.536	0.494
50	0.573	0.559	0.544	0.527	0.507	0.465
52	0.545	0.531	0.515	0.498	0.479	0.436
54	0.517	0.503	0.487	0.470	0.451	0.408
56	0.488	0.474	0.459	0.442	0.423	0.381
58	0.460	0.446	0.431	0.414	0.395	0.354
60	0.431	0.418	0.403	0.387	0.368	0.328

See Note on page 18

TABLE II (continued) - $f(\theta)$ values for vertical monopoles

Angle of Departure (Degrees)	f(θ)					
	0.40λ	0.48λ	0.50λ	0.5283λ	0.55λ	0.625λ
0	1.000	1.000	1.000	1.000	1.000	1.000
1	1.000	1.000	0.999	0.999	0.999	0.999
2	0.998	0.998	0.998	0.997	0.997	0.995
3	0.997	0.996	0.995	0.994	0.993	0.989
4	0.994	0.992	0.990	0.989	0.988	0.981
5	0.991	0.988	0.985	0.983	0.981	0.970
6	0.986	0.983	0.979	0.975	0.972	0.957
7	0.982	0.977	0.971	0.967	0.962	0.941
8	0.976	0.970	0.962	0.957	0.951	0.924
9	0.970	0.963	0.953	0.945	0.938	0.904
10	0.963	0.954	0.942	0.933	0.924	0.882
11	0.955	0.945	0.930	0.919	0.909	0.859
12	0.947	0.934	0.917	0.905	0.893	0.834
13	0.938	0.923	0.903	0.889	0.875	0.807
14	0.928	0.912	0.889	0.872	0.857	0.778
15	0.918	0.899	0.873	0.855	0.837	0.748
16	0.908	0.886	0.857	0.836	0.815	0.717
17	0.897	0.873	0.840	0.817	0.793	0.684
18	0.885	0.859	0.823	0.797	0.772	0.651
19	0.873	0.844	0.804	0.776	0.749	0.617
20	0.860	0.828	0.785	0.755	0.725	0.582
21	0.846	0.811	0.766	0.733	0.699	0.546
22	0.833	0.795	0.746	0.710	0.677	0.510
23	0.818	0.778	0.725	0.687	0.654	0.473
24	0.803	0.760	0.705	0.665	0.629	0.435
25	0.788	0.743	0.684	0.643	0.604	0.396
26	0.772	0.725	0.663	0.621	0.579	0.357
27	0.756	0.707	0.642	0.598	0.554	0.317
28	0.739	0.688	0.620	0.575	0.528	0.276
29	0.722	0.669	0.598	0.552	0.502	0.235
30	0.705	0.650	0.576	0.528	0.476	0.193
31	0.687	0.630	0.554	0.503	0.450	0.151
32	0.669	0.610	0.532	0.478	0.424	0.108
33	0.651	0.590	0.509	0.453	0.397	0.065
34	0.632	0.569	0.486	0.427	0.369	0.022
35	0.613	0.548	0.463	0.401	0.341	-0.021
36	0.594	0.527	0.439	0.374	0.312	-0.065
38	0.554	0.484	0.391	0.320	0.253	-0.153
40	0.513	0.441	0.343	0.266	0.193	-0.242
42	0.472	0.398	0.296	0.213	0.134	-0.330
44	0.431	0.356	0.250	0.162	0.078	-0.414
46	0.391	0.316	0.207	0.114	0.026	-0.491
48	0.353	0.279	0.168	0.071	-0.020	-0.559
50	0.317	0.245	0.134	0.035	-0.056	-0.617
52	0.284	0.215	0.104	0.006	-0.084	-0.665
54	0.254	0.189	0.080	-0.016	-0.104	-0.703
56	0.227	0.167	0.061	-0.032	-0.118	-0.732
58	0.204	0.149	0.047	-0.043	-0.127	-0.753
60	0.185	0.136	0.037	-0.050	-0.132	-0.767
62				-0.054	-0.134	-0.775
64				-0.056	-0.134	-0.778
66				-0.057	-0.132	-0.777
68				-0.057	-0.129	-0.772
70				-0.056	-0.125	-0.764
72				-0.055	-0.120	-0.753
74				-0.053	-0.115	-0.740
76				-0.051	-0.110	-0.726
78				-0.049	-0.105	-0.711
80				-0.047	-0.101	-0.696

See note on page 18

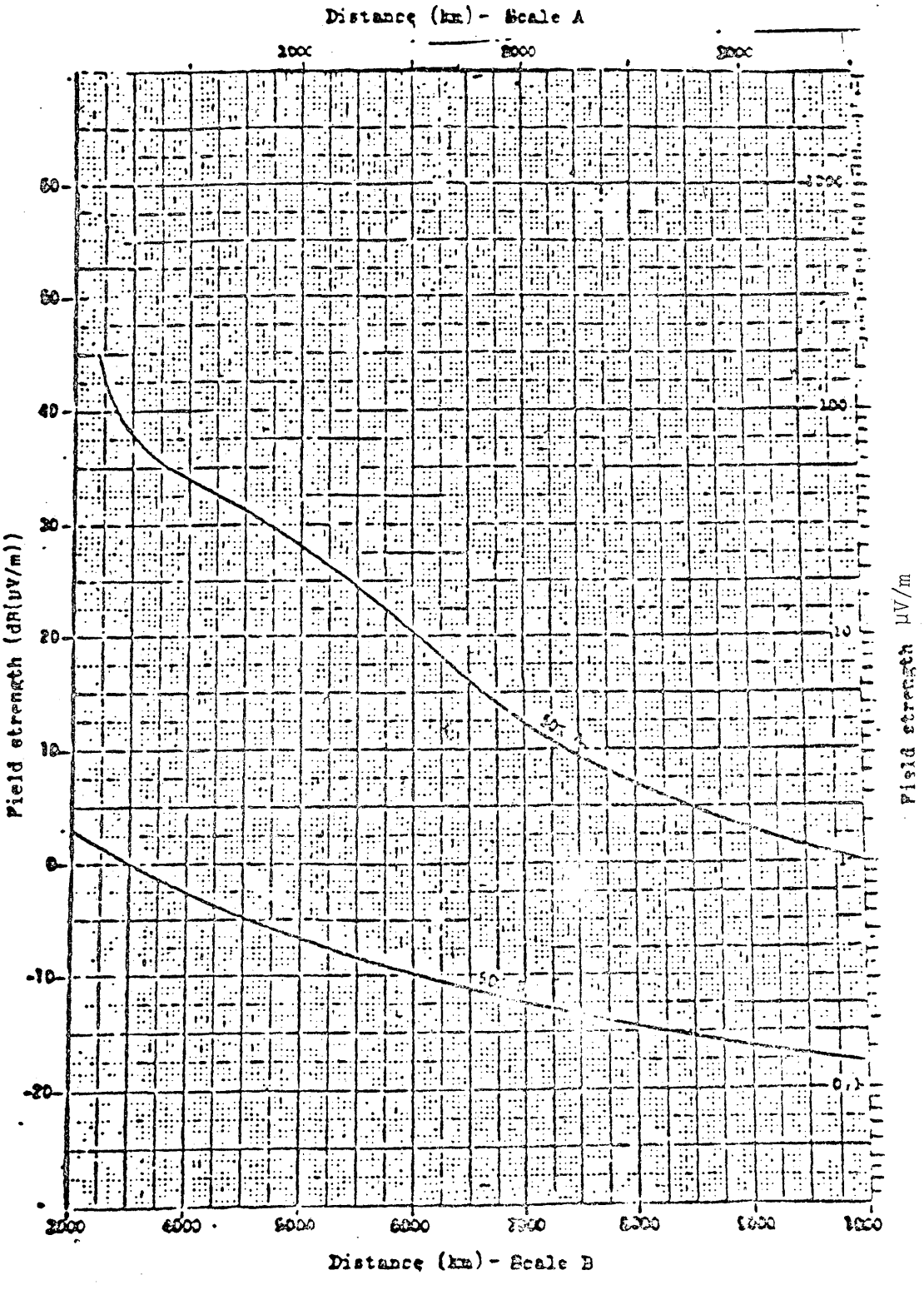


FIGURE 4 - Sky-wave field strength vs distance for a characteristic field strength of 100 mV/m at 1 km

TABLE III

Sky-wave field strength for distances from 100 to 10 000 km

d (km)	E (dB μV/m) 50 %	e (μV/m) 50 %
100	45,06	179,11
150	41,33	117,38
200	39,28	92,46
250	37,79	77,54
300	36,75	68,82
350	35,86	62,05
400	35,13	57,09
450	34,46	52,96
500	33,92	49,85
550	33,40	46,78
600	32,94	44,26
650	32,45	41,55
700	31,94	39,04
750	31,32	36,81
800	30,73	34,40
850	30,18	32,20
900	29,51	29,79
950	28,83	27,63
1000	28,14	25,61
1050	27,44	23,56
1100	26,79	21,84
1150	25,98	19,91
1200	25,25	18,30
1250	24,50	16,78
1300	23,71	15,32
1350	22,90	13,97
1400	22,08	12,71
1450	21,25	11,55
1500	20,42	10,50
1550	19,59	9,53
1600	18,66	8,57
1650	17,75	7,72
1700	16,87	6,98
1750	16,04	6,34
1800	15,28	5,80
1850	14,52	5,32
1900	13,78	4,89
1950	13,05	4,49
2000	12,34	4,14
2100	11,15	3,61
2200	10,05	3,18
2300	8,92	2,78
2400	8,13	2,55
2500	7,09	2,26
2600	6,16	2,03
2700	5,32	1,85
2800	4,58	1,69
2900	3,81	1,55

TABLE III (continued)

d(km)	E (dB(μV/m)) 50 %	e (μV/m) 50 %
3000	3,11	1,43
3100	2,45	1,33
3200	1,78	1,23
3300	1,18	1,15
3400	0,57	1,07
3500	0,02	1,00
3600	-0,53	0,94
3700	-1,08	0,88
3800	-1,59	0,83
3900	-2,03	0,79
4000	-2,52	0,75
4100	-3,01	0,71
4200	-3,46	0,67
4300	-3,90	0,64
4400	-4,33	0,61
4500	-4,74	0,58
4600	-5,15	0,55
4700	-5,54	0,53
4800	-5,93	0,51
4900	-6,30	0,48
5000	-6,67	0,46
5100	-7,02	0,45
5200	-7,37	0,43
5300	-7,71	0,41
5400	-8,04	0,40
5500	-8,37	0,39
5600	-8,68	0,37
5700	-8,99	0,36
5800	-9,29	0,34
5900	-9,59	0,33
6000	-9,88	0,32
6200	-10,43	0,30
6400	-10,97	0,28
6600	-11,48	0,27
6800	-11,97	0,25
7000	-12,44	0,24
7200	-12,90	0,23
7400	-13,33	0,22
7600	-13,75	0,21
7800	-14,15	0,20
8000	-14,54	0,19
8200	-14,92	0,18
8400	-15,28	0,17
8600	-15,63	0,17
8800	-15,97	0,16
9000	-16,29	0,15
9200	-16,61	0,15
9400	-16,91	0,14
9600	-17,21	0,14
9800	-17,50	0,13
10000	-17,77	0,13

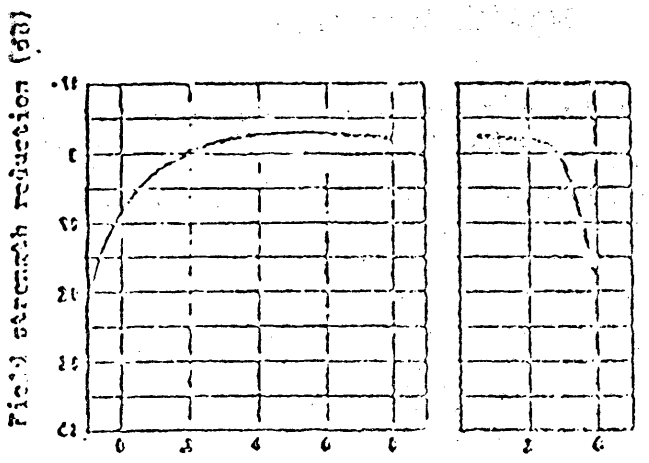


FIGURE 5 - Field strength variation during the night

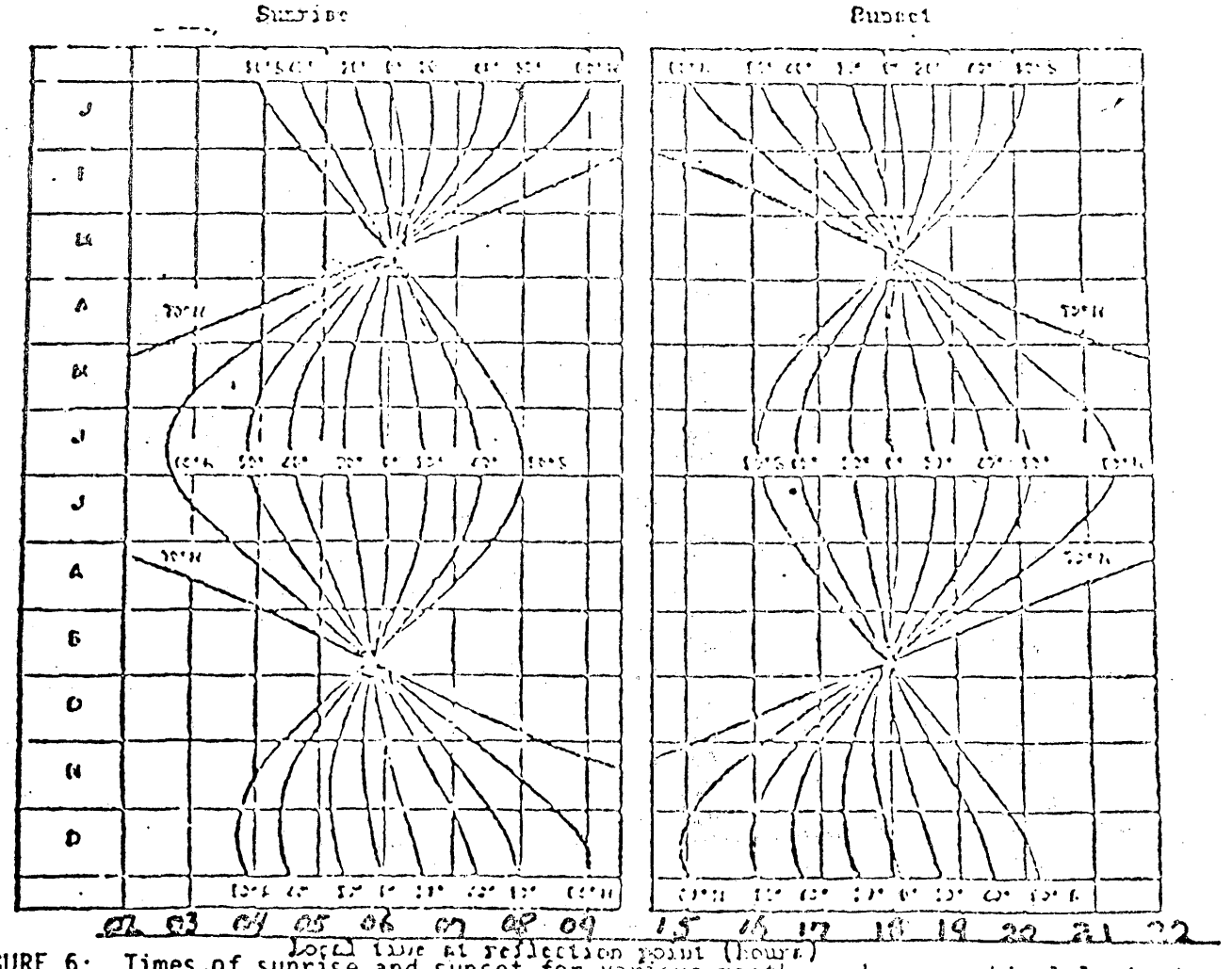


FIGURE 6· Times of sunrise and sunset for various months and geographical latitudes

Chapter 4

BROADCASTING STANDARDS

4.1 This Regional Plan is based on a channel spacing of 10 kHz and carrier frequencies which are integral multiples of 10 kHz.

4.2 Class of emission

The Plan is based upon double-sideband amplitude modulation with full carrier A3E.

Classes of emission other than A3E, for instance to accommodate stereophonic systems, could also be used on condition that the energy level outside the necessary bandwidth does not exceed that normally expected in A3E emission and that the emission be receivable by conventional receivers employing envelope detectors without increasing appreciably the level of distortion.

4.3 Bandwidth of emission

The Plan assumes a necessary bandwidth of 10 kHz. For this necessary bandwidth only 5 kHz audio bandwidth could be obtained. While this might be an appropriate value for some administrations, others which employ or wish to employ more sophisticated or wider bandwidth systems may use occupied bandwidths of the order of 20 kHz (approximately 10 kHz audio frequency bandwidth). Any administration whose station is adversely affected by such operation may require the modification of the interfering station's emissions in accordance with article ____ of the Agreement, to eliminate the interference.

4.4 Station power

4.4.1 Class A

- The power of any Class A station exceeding 100 kW day/50 kW night shall not be increased;
- The power of any Class A station not exceeding 100 kW day/50 kW night may be increased but shall not exceed those values;
- Any new Class A station shall have a power not exceeding 100 kW day/50 kW night.

4.4.2 Class B

The maximum station power shall be 50 kW.

4.4.3 Class C

During night-time, the maximum station power shall be 1 kW.

During daytime, the maximum station power shall be :

- 1 kW in noise zone 1

- 5 kW in noise zone 2

provided that the protection criteria given in paragraph 4.8 of Chapter 4 are met.

4.5 Special procedures governing skywave interference calculations

4.5.1 Canada, Denmark (for Greenland), French Department of Saint Pierre and Miquelon, Mexico and the United States of America will calculate the value of interfering skywave signals that each receives from Canada, Greenland, Saint Pierre and Miquelon, Mexico and the United States of America for Class A, B and C stations on the basis of skywave field strength 10 % of the time.

4.5.2 In circumstances involving one or more of the administrations named in 4.4.1 and one or more administrations that have elected to use skywave field strength, 50 % of the time, for interfering signals, the following procedures shall apply.

4.5.2.1 If the administration electing to use skywave field strength, 50 % of the time, for interfering signals, proposes to enter a station into the Plan or modify the operating characteristics of a station that has already been admitted into the Plan, then all calculations of the value of skywave interference shall be made using the skywave field strength, 50 % of the time, for interfering signals.

4.5.2.2 If an administration electing to use skywave field strength, 10 % of the time, for interfering signals proposes to enter a station into the Plan or modify the operating characteristics of a station that has already been admitted into the Plan, then :

- If the administration receiving interference is one that elects to use skywave field strength, 50 % of the time for interfering signals, calculations of the value of skywave interference shall be made using the skywave field strength, 50 % of the time, for interfering signals.

- If the administration receiving interference is one that elects to use skywave field strength, 10 % of the time, for interfering signals, calculations of the value of skywave interference shall be made using the skywave field strength, 10 % of the time, for interfering signals.

4.5.3 Except as prescribed in 4.4.1 and 4.4.2, the skywave field strength, 50 % of the time, shall be used in calculating the field strength of an interfering skywave signal.

4.6 TABLE IV - Nominal usable field strength (1)(2)

	NOISE ZONE 1 (3)	NOISE ZONE 2
4.6.1	Class A station (4) Ground-wave Daytime : co-channel 100µV/m adjacent channel } 500µV/m Night-time: 500µV/m Sky-wave 500µV/m for 50% of time	Class A station (4) Ground-wave Daytime : co-channel 250µV/m adjacent channel } 500µV/m Night-time: 1250µV/m Sky-wave 1250µV/m for 50% of time
4.6.2	Class B station (5) Ground-wave Daytime : 500µV/m Night-time :2500µV/m	Class B station (5) Ground-wave Daytime 1250µV/m Night-time :6500µV/m
4.6.3	Class C station (5) Ground-wave Daytime : 500µV/m Night-time :4000µV/m	Class C station (5) Ground-wave Daytime :1250µV/m Night-time :10,000µV/m

Notes : See the following page

Note 1 : The field strength values shown in the Table are used as the reference for planning (see definition in Chapter 1, paragraph 1.10).

Note 2 : Higher values than those shown in the Table may be ~~adopted~~ employed in order to satisfy noise limitations or particular agreements between two or more administrations.

Note 3 : The following nominal usable field strength values are ~~adopted~~ employed for Class A stations by the countries of Central America:

Ground-wave:

Daytime	:	co-channel	500 uV/m
		adjacent channel	500 uV/m
Night-time	:		1000 uV/m
Skywave	:	1000 uV/m for 50% of the time	

These values will apply only within the sub-region referred to.

Note 4 : The nighttime contour, groundwave or skywave, whichever is the more distant, is to be protected in the case of Class A stations.

Note 5 : The protected contour during nighttime operation for Class B and C stations shall be the higher of the ground wave contour in paragraphs 4.6.2 and 4.6.3 respectively, or the groundwave contour corresponding to the RSS usable field strength of the station as defined in 4.6.

4.7 Root Sum Square (RSS) Addition of weighted interference contributions to determine usable field strength

4.7.1 General

The overall usable field strength E_u due to two or more individual interference contributions is calculated on an RSS basis, using the expression :

$$E_u = \sqrt{(a_i E_1)^2 + (a_i E_2)^2 + \ldots (a_i E_i)^2 \ldots} \qquad (1)$$

where :

E_i is the field strength of the ith interfering transmitter (in μV/m)

a_i is the protection ratio necessary.

4.7.2 50 % exclusion principle

The 50% exclusion principle allows a significant reduction in the number of calculations.

With this method, the values of the individual usable field strength contributions are arranged in descending order of magnitude. If the second value is less than 50% of the first value, the second value, and all subsequent values are neglected. If the second value is not less than 50% of the first, an RSS value is calculated for the first and second values. The calculated RSS value is then compared with the third value in the same manner by which the first value was compared to the second and a new RSS value is calculated if required. The process is continued until the next value to be compared is less than 50% of the last calculated RSS. At that point the last calculatd RSS value is considered to be the usable field strength E_u.

For the purposes of this Agreement, if the contribution of a new station is greater than the smallest value previously considered in calculating the RSS value of assignments in the Plan, the contribution of the new station adversely affects assignments in accordance with this Agreement even if it is less than 50 % of the RSS value. However, the new contribution does not adversely affect assignments in accordance with this Agreement if the RSS value determined by inserting the contribution of the new station into the list of contributors is smaller than the nominal usable field strength E_{nom}.

4.7.3 Calculation of skywave interference to Class A stations

Interference to a Class A station is determined using the RSS calculation on site-to-contour basis (from the interfering transmitter to the protected contour) except when the 10% interfering field strength is applied. The result of such calculations shall be compared with the previously established usable field strength to determine whether the Class A station is adversely affected. The results of this comparison may be used as a basis for discussions between administrations. See paragraph 4.7.6 for a simplified method for such calculations.

4.7.4 Calculation of skywave interference to Class B or C stations

For a Class B or C station, the RSS of the interference shall be calculated site-to-site and the resulting protected contour shall be determined using the groundwave method in Chapter 2.

4.7.5 Example

The following example illustrates use of the RSS method and the 50 % exclusion principle.

Interfering signal (1)	Interfering signal field strength		Protection ratio (dB)	Individual usable field strength contribution (E_U)		Calculated RSS		Remarks
	(μV/m)	(dB(μV/m))		dB(μV/m)	μV/m	dB(μV/m)	(μV/m)	
A	180	82.9	26	68.9	2800			
C	130	82.3	26	68.3	2600	71.6	3812	$\sqrt{A^2 + C^2}$
B	125	81.9	26	67.9	2500	73.2	4555	Individual E_U greater than 50% of $\sqrt{A^2 + C^2}$ therefore $\sqrt{A^2 + C^2 + B^2}$.
D	65	36.3	26	62.3	1300			Individual E_U less than 50% of $\sqrt{A^2 + C^2 + B^2}$ therefore disregard
E	52	34.3	26	60.3	1040			idem

(1) in descending order of individual usable field strength contribution (E_U)

4.8 Definition of Noise Zones

Noise zone 1

Includes the whole of Region 2 with the exception of noize zones 2 and 3.

Noise zone 2

Covers the area within the line defined by the coordinates 20° S - 45° W, the meridian 45° W to the coordinates 20° N - 45° W, the parallel 20° N to the coordinates 20° N - 68° W, the meridian 68° W to the coordinates 16° N - 68° W, the parallel 16° N to the coordinates 16° N - 80° W, the meridian 80° W, the northeast coast of Panama, the frontier between Panama and Colombia, the southeast coast of Panama and the meridian 82° W to the parallel 20° S, and the parallel 20° S, with the exception of Chile and Paraguay: parallel 20° S until the frontier between Paraguay and Brazil until 45° W. Bolivia is entirely included in noise zone 2 as are the islands belonging to Columbia (The Columbian archipelago) and the Galapagos islands (Ecuador).

Note (1) : Grenada is included in noise zone 1 night-time and noise zone 2 daytime.

4.9 Channel protection ratios

4.9.1 Co-channel protection ratio

The co-channel protection ratio is 26 dB.

4.9.2 Adjacent channel protection ratio

- protection ratio for the first adjacent channel : 0 dB
- protection ratio for the second adjacent channel : -29.5 dB

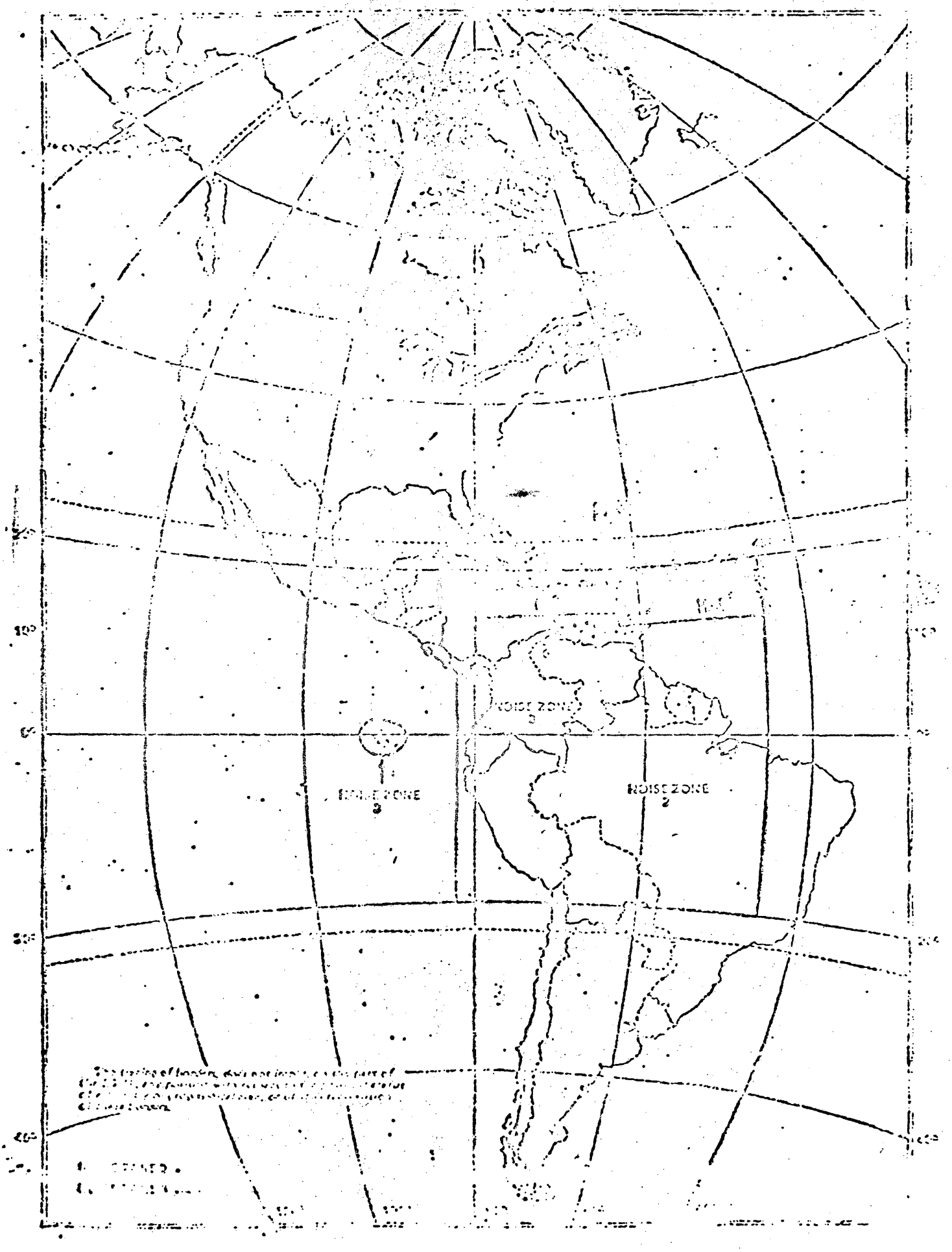
4.9.3 Protection ratio for stations belonging to a synchronized network

The co-channel protection ratio between stations belonging to a synchronized network is 8 dB.

4.10 Application of protection criteria

4.10.1 Value of protected contours

Inside the national boundary of a country, the protected contour shall be determined by using the appropriate value of nominal usable field strength. In lieu of protecting normally protected contours for Class A stations, countries with specific service requirements beyond the normally protected contours for such stations may establish, through bi-lateral or multi-lateral agreements with concerned or affected countries, additional protection criteria for one or more existing broadcasting stations.


NOISE ZONE
3
NOISE ZONE
2
NOISE ZONE
1

4.10.2 Co-channel protection

The protection ratio shall be applied at the protected contours from interfering daytime ground-wave and night-time sky-wave signals.

In the case of daytime ground-wave protection for all classes of stations, and in the case of night-time sky-wave protection for Class A stations when interfering field strength for 10% of the time is applied; the protection ratio shall be applied separately to each interfering signal; the presence of interference from existing stations in excess of the level allowed will not reduce the requirement to limit interference from proposed stations.

Interference to a Class A station is determined using the root sum square (RSS) calculation on a site-to-contour basis to the protected contour, except when the 10% interfering field strength is applied. The result of such calculations shall be compared with the nominal usable field strength to determine if there is an incompatibility.

4.10.3 Adjacent channel protection

For Class A stations, the protection ratios specified in paragraph 4.9 (Chapter 4) shall be applied only to interfering ground-wave signals at the ground-wave contour corresponding to the nominal usable field strength.

For Class B and C stations, the protection ratios specified in paragraph [illegible] (Chapter 4) shall be applied for both daytime and night-time operation at the ground-wave protected contour determined on the basis of daytime nominal usable field strength from interfering ground-wave signals.

4.10.4 Protection outside national boundaries

4.10.4.1 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.

4.10.4.2 No broadcasting station shall be assigned a frequency with a separation of 10 kHz or less from that of a station in another country if the 2 500 μV/m contours overlap.

No broadcasting station shall be assigned a frequency with a separation of 20 kHz from that of a station in another country if the 10 000 μV/m contours overlap.

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

4.10.4.3 In addition to the conditions described in paragraph 4.10.4.2, 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 paragraph 4.9.2 (Chapter 4).

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

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

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COMMITTEE 5

SPECIAL PROCEDURE FOR MODIFYING THE PLAN

As decided in the tenth meeting of Committee 5, the revised texts for the Special Procedure are annexed herewith.

M. PIZARRO A.
Chairman

Annex : 1

ARCHIVES U.I.T. GENÈVE

A N N E X

4.2A Special procedure for modifying the Plan

4.2A.1 If after having exhausted all technical possibilities to secure the agreement referred in paragraph 4.2.1 by applying the procedure provided in paragraphs 4.2.1.1 to 4.2.1.16, an administration fails to have its proposed modification entered in the Plan, it may request the IFRB to apply the provisions of the present section.

4.2A.2 Application of this special procedure may be requested by administrations, in particular those of developing countries, having regard to the need for special consideration to be given to new broadcasting stations in zones where they constitute the first or possibly the second service.

4.2A.3 The IFRB shall examine the proposed modification to the Plan in order to determine the likelihood of objectionable interference in the channels of the band. If its finding is unfavourable the IFRB shall select the channel which offers the best solution and accordingly informs the administration proposing the modification and any other administration whose assignments in conformity with the Agreement may be adversely affected.

4.2A.4 Should the affected administration find that its stations will be affected by the Board's recommendation to a degree which it can accept, it shall so inform the Board within 30 days. However, this administration may, within the same period of 30 days, propose to alter the Board's recommendations without a significant impact on the proposed assignment and if the Board finds this acceptable, it shall reformulate its recommendations accordingly and communicate them to the administration seeking the entry into the Plan.

4.2A.5 At the same time the IFRB shall submit to the administration proposing the modification recommendations for reducing or eliminating the objectionable interference. In order to guarantee the integrity of the technical criteria on which the Plan is based, these recommendations should, in any case, cover the following technical solutions :

- modification of an assignment entered in the Plan in the name of the administration proposing the modification but not yet put into service;
- the use of directional antennas, reduction of the power or change in the site of the transmitter.

4.2A.6 The administration proposing the modification to the Plan should do all in its power to eliminate any objectionable interference or reduce it to a minimum by adopting the technical solution suggested by the IFRB.

4.2A.7 If the technical solution in the final form, as adopted by the administration proposing the modification, does not increase by more than [(... dB) the usable field strength] of the assignments in conformity with the Agreement, the proposed modification shall be entered in the Plan at the request of the administration concerned. The Board shall publish this information in a Special Section of the Weekly Circular.

[4.2A.8 A note shall indicate that for examination purposes of the proposed modifications to the Plan which may subsequently be submitted, relevant calculations shall be made with regard to the original usable field strength value of other assignments in the same channel.]

4.2A.9 The IFRB shall technically evaluate the cumulative effect of entering new assignments in the Plan under this special procedure.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

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2 December 1981
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COMMITTEE 5

REPORT OF THE AD HOC GROUP TO COMMITTEE 5

The Report of the Ad Hoc Group is presented to Committee 5. It contains the texts adopted by the Group concerning :

- special procedures for modifying the Plan; and
- paragraph 4.2.1.4 b.

The alternate text for some of the provisions of the special procedure, proposed by the Administration of Argentina is also enclosed.

M. PIZARRO A.
Chairman

Annex : 1

ARCHIVES U.I.T. GENÈVE

A N N E X

4.2A **Special procedure for modifying the Plan**

4.2A.1 If after attempting to secure the agreement mentioned in paragraph 4.2.1 by applying the procedures provided in paragraphs 4.2 et seq an administration fails to have its proposed modification entered in the Plan, it may request the IFRB to apply the provisions of the present section.

4.2A.2 [Application of this special procedure may be requested only by administrations proposing the entry in the Plan of assignments for providing a first or possibly a second national service in a given zone.]

4.2A.3 The IFRB shall examine the proposed modification to the Plan in order to determine the likelihood of objectionable interference in the channels of the band. If its finding is unfavourable the IFRB shall select the channel which offers the best solution and accordingly informs the administration proposing the modification and any other administration whose assignments in accordance with the Agreement may be adversely affected.

4.2A.4 At the same time the IFRB shall submit to the administration proposing the modification recommendations for reducing or eliminating the objectionable interference. In order to guarantee the integrity of the technical criteria on which the Plan is based, these recommendations should, in any case, cover the following technical solutions :

- modification of an assignment entered in the Plan in the name of the administration proposing the modification but not yet put into service;

[- the use of directional antennas, reduction of the power or change in the site of the transmitter;]

[- reduction in the radiation level of stations in service beyond national frontiers;]

4.2A.5 The IFRB shall technically evaluate the cumulative effect of entering new assignments in the Plan under this special procedure.

4.2A.6 The administration proposing the modification to the Plan shall do all in its power to eliminate any objectionable interference or reduce it to a minimum by adopting the technical solution(s) suggested by the IFRB.

4.2A.7 If the technical solution adopted by the administration proposing the modification does not increase by more than [(... dB) the usable field strength] of the assignments in conformity with the Agreement, the proposed modification shall be entered in the Plan at the request of the administration concerned. [The Board shall publish this information in a Special Section of the Weekly Circular.]

4.2A.8 [If the technical solution adopted by the administration proposing the modification increases by more than (... dB) the usable field strength of the assignments in accordance with the Agreement, the IFRB shall formulate recommendations for reducing the usable field strength to below (... dB).

The IFRB shall communicate its findings, together with any recommendations transmitted to the administration proposing the modification, to all administrations whose assignments in accordance with the Agreement are adversely affected and shall request their agreement.]

4.2A.9 [This request shall refer to the special problems of the administration proposing the modification. Where applicable, the administrations whose agreement in sought shall allow for the developing status of the proposing country and seek solutions designed to meet its special requirements in accordance with the provisions of [paragraph (3.2.13).]]

4.2A.10 [Administrations whose assignments in accordance with the Agreement are adversely affected may formulate to the administration proposing the modification recommendations for reducing or eliminating the objectionable interference.]

4.2A.11 [However, after a period of /30 days/ the IFRB shall at the request of the administration concerned enter in the Plan the assignment whose technical characteristics offer the most favourable solution. This entry shall refer to the special procedure and shall include an indication as to whether the agreement sought was obtained.]

4.2A.12 [A special note shall be inserted to indicate that the assignment in question must not be taken into consideration in calculating the usable field strength of other assignments in the same channel when examining subsequent proposals to modify the Plan.]

If an administration, in spite of prior recommendations by the IFRB, submits a proposal exceeding / / of the assignments in conformity with the Agreement, it shall seek the consent of the administrations adversely affected.

With a view to obtaining such consent, the IFRB will make suitable recommendations to reduce to / / and inform the affected administrations of the special problems of the administration proposing the modification.

Likewise, the administrations whose assignments in conformity with the Agreement are adversely affected may make recommendations to the administration proposing the modification, taking into account in particular the special problems of that administration.

4.2.1.4 B The administration proposing a modification (the "proponent") shall, in addition to the agreement referred to in 4.2.1, seek the agreement of the administrations whose pending modifications are considered to be adversely affected in accordance with 4.2.1.4 A and 4.2.1.7. The proponent shall seek the agreement of the administrations whose assignments are still pending and which are considered to be adversely affected and which have not been pending longer than 180 days from the date of receipt of the proposed modification by the IFRB.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/21-E
3 December 1981
Original : French, English, Spanish

LIST OF DOCUMENTS

(Nos. 1 to 100)

PL = Plenary meeting
C = Committee

No.	Origin	Title	Destination
1	SG	Agenda of the Conference	PL
2	SG	Credentials of Delegations	C.2
3	SG	Definitions	TECH GROUP
4	SG	Recommandations B and C of the First Session	TECH GROUP
5	SG	Report of the First Session of the Conference	PL,C.4,C.5
6	BRB	Proposals for the work of the Conference	C.4, C.5, TECH GROUP
7	URS	Proposals for the work of the Conference	C.4, TECH GROUP
8	IFRB	Report to the Second Session of the Conference, drawn up by the IFRB with the help of a group of experts from Region 2 Administrations	C.4, TECH GROUP
9	CAN	Proposals for the work of the Conference	C.4, C.5, TECH GROUP
9 (Add.1)	CAN	Revision ot the Report to the Second Session of the Regional Administrative MF Broadcasting Conference (Region 2)	TECH GROUP
9 (Add.2)	CAN	Coordination Procedure for Inter-regional Interference	C.5
9 (Add.3)	CAN	Proposal for the work of the Conference	C.5
9 (Add.4)	CAN	Information paper - Examples of the use of the 50 % exclusion principle for additions to the Plan	TECH GROUP, C.4, C.5
9 (Add.5)	CAN	Information paper - Modifications to the Plan and guaranteed access	TECH GROUP, C.4, C.5
9 (Add.6)	CAN	Proposal for the work of the Conference	TECH GROUP, C.5
10	SG	Budget of the Conference	C.3
11(Rev.2)	SG	Contributions from non-exempt recognized private operating agencies and international organizations	C.3
12(Rev.1)	SG	Invitations to the Conference	PL
13	SG	Notifications to International Organizations	PL
14 + Corr.1, 2	ARG	Proposals for the work of the Conference	C.4, C.5, TECH. GROUP
15	CCIR	Texts by the CCIR of interest to the Conference	TECH. GROUP

ARCHIVES U.I.T. GENÈVE

No.	Origin	Title	Destination
16	SG	Loss of the right to vote	PL
17	IFRB	Preparatory work performed by the IFRB	C.4
18 + App.	IFRB	Basic Data prepared by the IFRB	C.4
19 + App.	SG	List of requirements concerning stations to be authorized between 1 January 1983 and 31 December 1987	C.4
20	USA	Proposal	PL
21	USA	Proposal	C.4
22	USA	Proposal	C.5
23	USA	Information paper - Comparison of the CCIR and Region 2 Methods for Estimation of Nighttime Signal Strengths of Distant MF Transmitters	PL
24	USA	Proposal	PL
25	B	Proposal for the work of the Conference - Classification of stations	TECH.GROUP
26 + Add.1	B	Proposal for the work of the Conference - Excess polarization coupling loss	PL + TECH.GROUP
27 + Add.1	B	Proposals for the work of the Conference - Standard form to be used for modifications to the Plan	PL + TECH.GROUP
28 + Corr.1	B	Proposals for the work of the Conference - Draft Regional Agreement	C.5
29	B	Information document for the work of the Conference	TECH.GROUP
30	ARG	Proposals for the work of the Conference - Technical data proposed for use in preparing the Plan and applying the Agreement	PL
31(Rev.1)	ARG	Method of calculating site tolerances	PL
32	ARG	Information document - Operating and cost analysis	PL
33	CLM	Draft Regional Agreement on medium frequency broadcasting for Region 2	C.5
34	CUB	Proposals for the Regional Broadcasting Conference	PL
35(Rev.1)	SG	Conference Secretariat	-
36(Rev.1)	SG	Conference Chairmen and Vice-Chairmen	-
37	SG	Committee structure	PL
38	SG	Allocation of documents	PL
39	VEN	Minimum necessary signal levels in the presence of atmospheric noise	TECH.GROUP
40 + Corr.1	B	Technical Data to be used by the Second Session for preparing the technical document to be annexed to the Plan	TECH. GROUP

No.	Origin	Title	Destination
41	IFRB	Statement by Mr. A. Berrada, Member of the IFRB	C.4
42	CHL	Evaluation of the problem of applying additional protection criteria	C.4
43	C.4	First Report of Committee 4 (Planning) to the Plenary Meeting	PL
44 + Add.1	ARG	Regional Agreement	C.5
45	PL	Minutes of the Inaugural Meeting	PL
46	PL	Minutes of the First Plenary Meeting	PL
47	CLM	Noise Zones	C.4
48	EQA	Noise Zones	C.4
49(Rev.3)	C.4	Proposed procedure for development of the Plan	C.4
50	MEX	Draft Regional Agreement	C.5
51	B	Working Proposition for CARR - Maximum interference permitted for the application of the principle of guaranteed access to the Plan	TECH. GROUP
52	PL	Minutes of the Second Plenary Meeting	PL
53	TECH. GROUP	Note from the Chairman of the Technical Group to the Chairmen of Committees 4 and 5	C.4, C.5
54(Rev.1)	TECH. GROUP	First Report by the Specific (Technical) Working Group of the Plenary Meeting	PL
55	C.4	Countries not represented in the Conference	C.4
56	B	Regional Agreement : Article 4	C.5
57	C.4	Summary Record of the First Meeting of Committee 4	C.4
58	C.4	Summary Record of the Second Meeting of Committee 4	C.4
59	C.4	Summary Record of the Third Meeting of Committee 4	C.4
60	GRD	Proposed amendment to the draft Agreement	C.5
61	PL	Minutes of the Third Plenary Meeting	PL
62	GRD	Variation of field strength with geographical location in a volcanic archipelago	TECH. GROUP
63	C.2	Summary Record of the First Meeting of Committee 2	C.2
64(Rev.1)	C.5	Summary Record of the First Meeting of Committee 5	C.5
65 + Add.1	SG	Assessment of the existence of a secondary area for a class A station	TECH. GROUP
66(Rev.1)	SG	Arrangements concluded with the Host Government	C.3

No.	Origin	Title	Destination
67	TECH GROUP	Report of Inter-Regional Interference Sub-Group	TECH GROUP
68	C.3	Summary Record of the First Meeting of Committee 3	C.3
69	C.6	Summary Record of the First Meeting of Committee 6	C.6
70	WG C.2	First Report from the Working Group of Committee 2	C.2
71	C.4	Note from Committee 4 to the Special Technical Working Group of the Plenary	TECH GROUP
72	C.4	Note from Committee 4 to Committee 5	C.5
73	TECH GROUP	Summary Record of the First Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
74	TECH GROUP	Summary Record of the Second Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
75	C.4	Note by the Chairman of Committee 4	C.4
76	TECH GROUP	Summary Record of the Third Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
77	C.5	Summary Record of the Second Meeting of Committee 5	C.5
78	C.5	Summary Record of the Third Meeting of Committee 5	C.5
79	WG 5A	Report of Working Group 5A	C.5
80	C.5	Note by Chairman of Committee 5 - Response to Document No. 53	TECH GROUP
81(Rev.1)	USA	Proposals for the modification of Chapter 5 of the Technical Annex	TECH GROUP
82	C.3	Summary Record of the Second Meeting of Committee 3	C.3
83(Rev.1)	TECH GROUP	Final Report of Working Group A of the Special Technical Working Group of the Plenary	TECH GROUP
84	C.5	Note from the Chairman of Committee 5	TECH GROUP
85	C.5	Summary Record of the Fourth Meeting of Committee 5	C.5
86	SG	Accession to the International Telecommunication Convention (Malaga-Torremolinos, 1973)	PL
87 + Add.1(Rev.1)	WG 5B	Report of Working Group 5B	C.5
88	C.4	First Series of texts submitted by Committe 4 to Committee 6	C.6
89	C.4	Note from Committee 4 to the Special Technical Working Group of the Plenary	TECH GROUP
90	C.4	Note from Committee 4 to Committee 5	C.5
91	TECH GROUP	Summary Record of the Fourth Meeting of the Special Technical Working Group of the Plenary	TECH GROUP

No.	Origin	Title	Destination
92	C.4	Second Report of Committee 4 to the Plenary Meeting	PL
93	TECH GROUP	Summary Record of the Fifth Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
94	TECH GROUP	Summary Record of the Sixth Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
95	Draft. Group	Report to the Specific Working Party (Technical) of the Plenary from the Drafting Group concerned with synchronized transmitters	TECH GROUP
96	USA	Proposal for Appendix 4 of the Technical Annex	TECH GROUP
97	Chairman	General timetable	-
98(Rev.1)	C.4	Summary Record of the Fourth Meeting of Committee 4	C.4
99	C.4	Note from Chairman of Committee 4	C.4
100	GUY	Proposal for the work of the Conference - Technical data to be used in application of the Agreement	TECH GROUP

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Addendum No. 1 to
Document No. DT/22-E
3 December 1981

COMMITTEE 5

This Addendum completes the Article 4 text in Document No. DT/22.

4.4 Assignments recorded in the Plan but not brought into service.

4.4.1 The IFRB shall consult the administration concened with regard to the advisability of cancelling assignments recorded in the Plan or introduced in the Plan pursuant to the provisions of this Article, but not brought into service within / 5 years from the date of inclusion of the assignment in the Plan /. If the administration agrees, the IFRB shall publish the cancellation in the weekly circular.

4.4.2 On expiry of the period specified in paragraph 4.4.1, and if the administration concerned indicates that it needs more time to bring such an assignment into service and has taken the necessary steps to do so, this period may be extended by not more than one year.

4.4.3 On expiry of the period of extension specified in paragraph 4.4.2, should the assignment remain unused the IFRB shall disregard this assignment in the treatment of future modifications to the Plan and shall enter an appropriate symbol in the Plan; it shall publish this information in a special section of the weekly circular.

4.4.4 Should the administration concerned bring the assignment into service at a later date, it shall notify the IFRB. Upon receipt of this information the IFRB shall examine the assignment from the point of view of objectionable interference caused to stations entered in the Plan since the insertion of the symbol referred to in paragraph 4.4.3 above. In cases where the IFRB finds that no objectionable interference is caused to such stations it shall delete the symbol. In cases where the IFRB finds that objectionable interference exists it shall inform the administration concerned that it shall within a period of . . . days take appropriate measures to eliminate the interference. The symbol shall remain in the Plan until the interference is eliminated.

Should the administration resubmit the notice and insist upon recording in the Master Register it shall be recorded with an unfavourable finding and an appropriate symbol shall be entered.

Miguel PIZARRO
Chairman

U.I.T. GENÈVE

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/22-E
2 December 1981
Original : English

COMMITTEE 5

TEXTS OF ARTICLES 4, 5 AND 12

The annexed texts are presented to Committee 5 for approval before they are communicated to Committee 6.

M. PIZARRO A.
Chairman

Annex : 1

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A N N E X

ARTICLE 4

Procedure for Modifications to the Plan

4.1 When a Contracting Member proposes :

- to change the characteristics of a frequency assignment to a station shown in the Plan, whether or not the station has been brought into use.
- to introduce a new assignment into the Plan, or
- to cancel a frequency assignment to a station,

the following procedures shall be applied before any notification is made under the provisions of Article 12 of the Radio Regulations (see Article 5 of this Agreement).

4.2 Proposed changes in the characteristics of an assignment or the introduction of a new assignment

4.2.1 Any administration proposing to change the characteristics of an assignment or introduce a new assignment shall seek the agreement of any administration that has an assignment in accordance with the Agreement in the same channel or in adjacent channels with separation up to / 30 kHz / and that is considered to be adversely affected in accordance with the provisions of 4.2.1.7 of this Article.

4.2.1.1 An Administration proposing to change the characteristics of an assignment in the Plan, or to introduce a new assignment shall communicate to the IFRB the information in the form mentioned in Appendix / M / to the Plan not earlier than / three years / prior to the date of implementation of such a change or of entry into service of the station corresponding to the new assignment. At the same time, it may send a request to the administrations it considers affected for their agreement, with a copy of the correspondence to the IFRB.

4.2.1.2 If the modification proposed is of a type described in 4.2.1.10 the information sent to the IFRB shall contain a reference to that paragraph.

4.2.1.3 In cases not specified in 4.2.1.10, in order to seek the agreement referred to in 4.2.1, the administration shall, at the same time, inform the IFRB of the names of the Administrations whose agreement it considers should be sought or with which it is attempting to reach an agreement.

4.2.1.3 A If the Board receives information that is incomplete as regards the characteristics specified in Appendix / M / it shall immediately request the administration by telegram to let it have required information as soon as possible

4.2.1.4 The IFRB after ensuring that the information required in Appendix [M] has been furnished shall determine, as soon as possible, by using Annex [ ] to the Agreement those administrations whose assignments in accordance with the Agreement are considered adversely affected in accordance with 4.2.1.7 and shall, as soon as possible, forward the results of its calculations to the Administration proposing the modification to the Plan. At the same time, the IFRB shall publish in a special section of its weekly circular the information sent pursuant to [4.2.1.1, 4.2.1.2, 4.2.1.3] listing the names of the administrations affected.

4.2.1.5 The IFRB shall send to the administrations listed in the special section of its weekly circular a telegram informing them of the publication and shall forward the result of its calculations to them.

4.2.1.4.A The IFRB shall also determine :

- the effect of the proposed modification on the pending modifications not yet included in the Plan; and

- the effect of the pending modifications on the proposed modification.

For this purpose the Board shall take into account only those pending modifications which have been received by the Board no more than 180 days before date of receipt of the modification under consideration.

The IFRB shall forward the result of its calculation to the Administrations concerned.

4.2.1.6 An administration which considers itself entitled to appear on the list of administrations whose frequency assignments have been considered to be adversely affected may request the IFRB to include it on that list, within [60 days] from the date of publication. Also, a copy of the request will be sent to the administration proposing the modification to the Plan.

4.2.1.7 Any assignment in accordance with the Agreement shall be regarded as adversely affected when appropriate calculations indicate that objectionable interference occurs as a result of a proposed modification to the Plan. The calculation determining the possibility of objectionable interference shall be based on Annex [ ] to this Agreement.

4.2.1.7.1 On receipt of the special section referred to in 4.2.1.4 the administration affected shall rapidly study the matter from the standpoint of any possibly onjectionable interference in accordance with 4.2.1.7 and if it considers that proposed midification to the Plan in question is acceptable shall signify its agreement as soon as possible but not later than sixty days from the date of publication of the relevant weekly circular, to the administration seeking agreement and inform the IFRB.

4.2.1.7.2 Should an administration listed in the special section consider that a proposed modification to the Plan is unacceptable it shall communicate to the administration which sent the request its reasons within sixty days from the date of publication of the relevant IFRB weekly circular. It shall also offer any information or suggestions it deems useful for bringing about a satisfactory solution to the problem. The administration seeking agreement shall endeavour to adapt its requirements in so far as possible, having regard to any comments received.

4.2.1.8 SUP

4.2.1.9 Comments from administrations on the information published in compliance with the provisions of 4.2.1.4 shall be sent either directly to the administration that is proposing the change or through the IFRB but the IFRB must always be informed.

/ 4.2.1.10 If a change to an assignment in accordance with the Agreement entails no increase in effective monopole radiated power is any direction, / or relates to a change in site within the tolerances specified in Annex [ ] to the Agreement /, it shall be entered in the Plan without requiring the agreement mentioned in 4.2.1.

The Agreement mentioned in 4.2.1 is not required if a modification entails no increase in station power although effective monopole radiated power may be increased in some directions, /or relates to a change in site beyond the tolerances referred to above / , provided that no objectionable interference is cause to assignments in accordance with the Agreement of such interference does not exceed that previously accepted in the Plan. In the latter case, the administration proposing the modification to the Plan shall so inform the IFRB to enable the latter, should this section be applicable, to publish its finding in a special section of its weekly circular and to include the modification in the Plan.

If the provisions of this section are inapplicable the IFRB shall return the information to the administration which submitted it. Otherwise the administration proposing modification of the Plan may put its project into effect subject to the application of the relevant provisions of Article 5. /

4.2.1.11 It shall be considered that any administration that has not forwarded its comments to the administration that is proposing the modification or to the IFRB whether or not it receives a request under 4.2.1.1 within a period of 60 days following the date of the weekly circular referred to in 4.2.1.4 has agreed to the proposed change.

4.2.1.11 a) Thirty days before the date limit for comments, the IFRB shall inform the administrations listed in the special section, which have not already commented by telegram, of the deadline for making comments.

4.2.1.12 [If in seeking agreement an administration makes changes in its proposal which result in an increase in the e.m.r.p. in any direction with respect to the initial proposal, it shall again apply the provisions of 4.2.1 and the consequent procedure.]

4.2.1.13 If no comments have been received on expiry of the periods specified in 4.2.1.11 or if an agreement has been reached with the administration that submitted comments, the administration proposing the modification shall inform the IFRB of the final characteristics of the assignment and the names of the administrations with which agreement has been reached.

4.2.1.14 When agreement has been reached between the administrations involving modifications, the assignment is entered in the Plan and the same legal status recognized for an assignment in conformity with the Agreement shall apply to the assignment in question. The IFRB shall publish the information received under 4.2.1.13 in a special section of its weekly circular, indicating the names of the administrations with which the provisions of this Article have been successfully applied.

4.2.1.15 Should the administrations involved fail to reach agreement, the IFRB, shall conduct such studies as those administrations may request; the IFRB shall inform the administrations of the findings of its studies and shall submit appropriate recommendations for resolution of the problem.

4.2.1.16 Any administration may, during application of the procedure for modification of the Plan or before initiating such procedure, request technical assistance from the IFRB, especially in securing agreement of another administration.

4.2.1.16 A When the proposed modification to the Plan involves a developing country, administrations shall seek a solution conducive to economical development of the broadcasting system of the developing country, giving due consideration to the principles enunciated to this effect in the Preamble to this Agreement.

4.2.1.17 If, after application of the procedure described to this Article, the administrations concerned are unable to reach an agreement, they may resort to the procedure established in Article 50 of the Convention. The administrations also may apply, by commom agreement, the Optional Additional Protocol to the Convention.

4.2.1.19 The IFRB shall keep an up-to-date master copy of the Plan as modified by application of the procedure specified in this Article.

4.2.1.20 The IFRB shall inform the Secretary-General of modifications to the Plan. The Secretary-General shall publish new editions of the Plan at intervals of two years as from the date of entry into force of the Agreement. Modifications to the Plan shall be published by quarterly recapitulative supplements keeping the format of the Plan.

4.3 Cancellation of an assignment

4.3.1 When an administration decides to cancel an assignment in accordance with the Agreement, it shall immediately notify the IFRB, which shall publish it in a special section of its weekly circular.

4.3.2 SUP

ARTICLE 5

Notification of frequency assignments

5.1 When an administration proposes to bring into use an assignment in conformity with the Agreement, it shall notify it to the IFRB in accordance with the provisions of Article 12 of the Radio Regulations. Any such assignment recorded in the Master Register as a result of application of the provisions of Article 12 of the Radio Regulations shall bear a special symbol under the Remarks column and a date in column 2 a or in column 2 b.

5.2 When relations between Contracting Members are involved, equal consideration shall be given to all frequency assignments brought into use in conformity with the Agreement and recorded in the Master Register, regardless of the date that appears in column 2 a or column 2 b.

4.2.1.18 a) Whenever the Board receives an assignment notice which is not in conformity with the Agreement and for which the procedure of Article 4 was not applied it shall return the notice to the notifying Administration.

4.2.1.18 b) Should an Administration resubmit the notice having applied the procedure of this Article without reaching agreement with the Administrations concerned and insist on reconsideration of its notice the Board shall reexamine the notice. Should the finding remain unchanged, the assignment shall be recorded in the Master Register with an unfavourable finding and a symbol indicating that the entry has been made subject to the reservation that no harmful interference will be caused to frequency assignments in conformity with the Agreement.

ARTICLE 12

Duration of the Agreement

12.1 The Agreement established with a view to meeting the requirements of the medium wave broadcasting services for a period of / 10 / years from the date of entry into force of the Agreement.

12.2 The Agreement shall remain in effect until it is revised by a competent Administrative Radio Conference of Region 2.

INTERNATIONAL TELECOMMUNICATION UNION
REGIONAL BROADCASTING CONFERENCE
(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/23-E
4 December 1981
Original : English

COMMITTEE 5

RECOMMENDATION 5A

RELATING TO THE PREPARATION OF AN MF REGION 2 CONFERENCE IN 1986

The Regional Administrative MF Broadcasting Conference, (Region 2) Rio de Janeiro, 1981.

noting

a) that the band 1605-1705 kHz has been allocated to the broadcasting service in Region 2 by the World Administrative Radio Conference, Geneva, 1979, (WARC 1979) in accordance with terms to be determined at a Regional Administrative Radio Conference to establish a plan for the broadcasting service in this band;

b) recommendation 504 of the World Administrative Radio Conference, Geneva, 1979, relates to the preparation of a Broadcasting Plan in the band 1605-1705 kHz in Region 2,

considering

a) that it is difficult to accommodate the present needs of the broadcasting service in the frequency band 535-1605 kHz;

b) that the Plan has been established with a view to meeting the requirements of the medium frequency broadcasting service for a period of /10/ years from the date of entry into force of the Agreement;

c) that the Administrative Council has adopted a decision with respect to the convening of a regional administrative radio conference in 1986 to establish a plan for the broadcasting service in the band 1605-1705 kHz,

recommends

that the administrations of Region 2, before making new frequency assignments to stations in services other than the broadcasting service in the band 1605-1705 kHz, take into account the adverse effect that such assignments would have on the future planning of this band for the medium frequency broadcasting service in Region 2,

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invites the CCIR

to perform the necessary technical studies related to the 1605-1705 kHz band to allow suitable planning to proceed;

invites the IFRB

- to prepare a report to the Conference concerning the application of the Agreement and in particular the application of the procedures; and

- to consult with the Region 2 Administrations, 18 months before the convening of the Conference, concerning their frequency requirements in the 1605-1705 khz band.

Miguel PIZARRO A.
Chairman

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/24-E
4 December 1981
Original : Spanish

WORKING GROUP - ENTRY INTO FORCE OF THE AGREEMENT

TERMS OF REFERENCE OF THE WORKING GROUP OF THE PLENARY

(Entry into force of the Agreement)

To analyze various proposals and propose a draft text to the Plenary on the following points :

1. Requirements and conditions to be met as regards the deadlines for :

1.1 Ratification of the Agreement by governments.

1.2 Notification to the IFRB of the entry into service of assignments in accordance with the Plan before the entry into force of the Agreement.

1.3 Entry into service of stations corresponding to the assignments in the Plan in the periods preceding and following entry into force.

2. Proposal concerning dates

3. Procedure to be followed in each case.

4. Type of document to be submitted to the Plenary.

R. SAIDMAN
Chairman of the Working Group

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INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/25(Rev.1)-E
10 December 1981
Original : English

COMMITTEE 4

Note by the Chairman of Committee 4

DRAFT RESOLUTION FOR THE HANDLING OF UNRESOLVED INTERFERENCE SITUATIONS AFTER THE CONFERENCE

The attached draft Resolution has been prepared to reflect the principles outlined in Document No. 133 and will be considered by a small ad hoc Working Group of Committee 4.

G. COURTEMANCHE
Chairman, Committee 4

Appendix :1

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A P P E N D I X

DRAFT

RESOLUTION

Interim post-Conference procedures

The Regional Broadcasting Conference, Second Session, Rio de Janeiro, 1981,

considering

a) the large number of stations submitted for inclusion in the Plan in relation to the availability of channels in the medium frequency band allocated to the broadcasting service in Region 2;

b) that all the assignments appearing, on behalf of countries signatory of the Final Acts, in the Basic Inventory as modified before and during the Conference have been included in the Plan;

c) that the assignments in the Plan are presented in two separate lists :

- List A : which includes only the assignments of countries having signed the Final Acts, whose caused and received interference are both accepted by all the countries concerned which have signed the Final Acts;

- List B : which includes all the assignments of the countries having signed the Final Acts which are not included in List A;

d) that the assignments of Region 2 countries which did not sign the Final Acts are not included in the Plan and are included in the Annex to Resolution /DT/26/;

e) the limited time available during the Conference to carry out the necessary planning studies, including the necessary verification and correction of the thousands of assignments appearing in the Plan;

f) the progress which has nevertheless been made by the Conference toward the development of a comprehensive Plan for the medium frequency band allocated to the broadcasting service in Region 2;

g) that the development of an optimal Plan requires the resolution of a large number of longstanding incompatibilities between stations for which the provisions of Article 12 of the Radio Regulations giving protection against harmful interference were not hitherto applicable;

h) that it has not proved possible to resolve in the time available at the Conference all these incompatibilities as well as those resulting from planned stations;

i) that it is therefore necessary to establish procedures for resolving the remaining incompatibilities so as to enable the negotiating process to be continued and completed as quickly and effectively as possible;

j) that it is imperative to verify and, where needed, to correct errors in the Plan;

k) that the Plan can be developed, improved and kept appropriately up to date only on the basis of continued goodwill and cooperation by all administrations concerned with resolution of incompatibilities.

l) that Resolution 1 and Recommendation 6 of the Radio Regulations provide for the IFRB to assist developing countries with the development of national radio-frequency management units and with the selection of frequency assignments;

resolves

1. to adopt the procedure set out in Annex 1 to this Resolution, for the verification and correction of the assignments included in the Plan.

2. to adopt the procedure set out in Annex 2 to this Resolution, for negotiations seeking the resolution of incompatibilities.

3. that, upon resolution of the incompatibilities related to an assignment in List B, the IFRB shall be informed of the names of the Administrations with which an agreement has been reached; the IFRB shall publish this information in its weekly circular and, in the absence of valid objections witnin a period of 60 days following this publication, the assignment shall be transferred from List B to List A.

4. that this Resolution including its annexes shall enter into force upon the signing of the Final Acts of this Conference.

strongly urges Administrations

1. whose stations appear in List B to make every effort to resolve the remaining unresolved incompatibilities related to their stations at the earliest possible date;

2. who did not sign the Final Acts of the Conference to accede to the Regional Agreement.

requests the IFRB

to give all necessary assistance to Administrations, particularly those of developing countries, for an in-depth analysis of their incompatibilities especially in congested areas and to carry out the procedure set out in the Annexes to this Resolution, and in particular :

1. to make recommendations, at the request of the parties concerned, regarding possible solutions to resolve incompatibilities;

2. to assist Administrations in the organization and coordination of sub-regional meetings to resolve incompatibilities;

recommends to the Administrative Council

that adequate resources be granted to the IFRB in order to carry out the tasks outlined in this Resolution.

Annexes :2

A N N E X 1

PROCEDURE FOR VERIFICATION AND CORRECTION OF THE PLAN

The timetable for the verification and correction of the Plan will be as follows :

1. 1 January - 31 March 1982

Administrations shall check all their assignments in the Plan and notify the IFRB, not later than 31 March 1982, of any discrepancy between the information included in the Plan and the information communicated to and accepted by the IFRB before and during the Conference. During this period, the IFRB shall also check the Plan for errors. The corrections shall be communicated to the IFRB using a marked up copy of the pertinent pages of the Plan.

2. 1 April - 15 May 1982

The IFRB shall check and complete corrections reported to it or found by it, and shall disseminate, by 15 May 1982 at the latest, all corrections to all administrations in Region 2, whether or not they are signatory to the Final Acts of the Conference.

3. 15 May - 30 June 1982

The administrations of Region 2 shall send their comments to the IFRB on the corrections so disseminated and on any entry which appears as inappropriately recorded in the Plan by 30 June 1982 at the latest. The IFRB will take note of such comments, check with the affected administration and include the correction in the Plan. The corrections made to the Plan following the comments received shall then be published.

4. Any modifications introduced into the Plan in accordance with Article 4 of the Agreement before 1 August 1982 shall be received by the IFRB in the light of the corrections made to the Plan up to this date. Should the IFRB alter its finding as a resulct of the review, the administration responsible for the station involved shall be requested to adjust the characteristics of its station as may be necessary to assure their continued conformity with the requirements of Article 4 and Annex 2 of the Agreement. Modifications to the Plan will not be subject to such adjustments on account of corrections made to the Plan on or after 1 August 1982.

A N N E X 2

(Being prepared)

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Addendum No. 1 to
Document No. DT/25-E
9 December 1981
Original : English/
Spanish

COMMITTEE 4

ANNEX 2

PROCEDURE FOR THE RESOLUTION OF INCOMPATIBILITES IN THE POST-CONFERENCE PERIOD AND FOR THE INTERIM PROTECTION OF ASSIGNMENTS APPEARING IN THE PLAN

Section 1 - Procedure for the Resolution of Incompatibilities

1. The Administrations whose assignments appear in List B of the Plan shall continue negotiations with the Administrations with whom unresolved incompatibilities exist, in order to seek a resolution of these incompatibilities as quickly as possible. To this end, Administrations may conduct negotiations by correspondence, by bilateral or multi-lateral meetings, or by any other means which they consider appropriate in order to achieve a satisfactory outcome in the shortest possible time. In all cases, however, the IFRB shall be kept informed of the progress of the discussions.

2. An assignment which appeared in the Plan as of the date of the signing of the Final Acts of the Conference, Rio de Janeiro, 1981, or which is proposed as a modification of such assignment, shall be transferred from List B to List A of the Plan as soon as the negotiations concerned result in the elimination or acceptance of all objectionable interference caused to and received by other assignments in the Plan.

3. An Administration which has resolved all questions of interference in conformity with paragraph 2, shall immediately so notify the IFRB, on the special form to be provided for this purpose, which shall have been signed by the competent representatives of affected Administrations. The IFRB shall be furnished the details of the consequent modifications, if any, to the characteristics of any of the assignments concerned which are made in order to resolve the incompatibility. The IFRB shall publish all the information concerned in a special section of its weekly circular.

4. The Administrations of Region 2 shall submit, by /15 February 1982/ at the latest, the names of candidates, together with a curriculum vitae, to enable the IFRB to select experts to constitute a panel for the study of the incompatibilities existing in List B of the Plan and for the formulation of the appropriate recommendations.

5. The experts must belong to various countries of the Region and shall be selected by the IFRB on the basis of the groups of countries in which the greatest number of incompatibilities occur.

6. The panel of experts, assisted by the IFRB, shall submit its recommendations by 31 December 1982 to enable the IFRB to organize and coordinate the meetings among the various groups of countries for which attempts must be made to resolve incompatibilities with regard to which a favourable conclusion has not yet been reached.

7. The costs occasioned by the group of experts and the organization and coordination of the meetings referred to in paragraph 3 above shall be charged to the budget of the Conference. However, this decision shall be submitted to the Administrative Council at its next session for approval.

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Section 2 - Protection of Assignments in the Plan

8. All List A and B assignments, whenever introduced into the Plan, are protected against new assignments entering the Plan or modifications of existing assignments, as follows :

1) A List A assignment is protected in accordance with the terms of the Agreement.

2) A List B assigment is protected against skywave interference to the highest of the following :

a) The E_u if it has been accepted;

b) The value of the contour determined by interference from assignments in List A and assignments in List B whose caused interference has been accepted;

c) For assignments for Class A : the values of the position of the protected contour defined by the national border.

3) A List B assignment is protected against groundwave interference to E_{nom}. Assignments for new stations will be admitted into the Plan only if they qualify for List A. Such new assignments must accept E_u's resulting from interfering contributions from both List A and List B assignments. It should be noted that E_u's for assignments for such new stations may be reduced as a result of changes in List B.

9. List A and List B assignments may be modified on the condition that they provide the protection specified in paragraph 4, above, or the level of previously caused interference, calculated on a case-by-case basis, is not increased.

Section 3 - Interim Modification of the Plan for New Stations

10. This section provides for the introduction in to the Plan, before /date/, of assignments for new stations, or for modifications of assignments in Lists A or B of the Plan which to not qualify for the procedures set out in Section 1 because th do not enable assignments in List B to transfer into List A.

11. Administrations desiring to introduce new assignments or modifications of the kinds described in paragraph 6, above, into the Plan during the interim period stated in that paragraph may do so by following the same procedures and complying with the same requirements as are set out in Article 4 of the Agreement. Such new or modified assignments may be brought into service, upon the completion of the aforementioned procedures, in the manner stated in Article 5 of the Agreement and pertinent provisions of the Radio Regulations concerning notifications and entry into the Master Register.

12. The IFRB shall act upon such proposed assignments and modifications in the manner stated in Article 4 of the Agreement, and will act upon notifications in the manner stated in Article 5 of the Agreement and pertinent provisions of the Radio Regulations.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

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COMMITTEE 4

Note by the Chairman of Committee 4

DRAFT RESOLUTION FOR THE HANDLING OF UNRESOLVED INTERFERENCE SITUATIONS AFTER THE CONFERENCE

The attached draft Resolution has been prepared to reflect the principles outlined in Document No. 133 and will be considered by a small ad hoc Working Group of Committee 4.

G. COURTEMANCHE
Chairman, Committee 4

Appendix :1

ARCHIVES U.I.T. GENÈVE

A P P E N D I X

DRAFT

RESOLUTION

Interim post-Conference procedures

The Regional Broadcasting Conference, Second Session, Rio de Janeiro, 1981,

considering

a) the large number of stations submitted for inclusion in the Plan in relation to the availability of channels in the medium frequency band allocated to the broadcasting service in Region 2;

b) that all the assignments appearing, on behalf of countries signatory of the Final Acts, in the Basic Inventory as modified before and during the Conference have been included in the Plan;

c) that the assignments in the Plan are presented in two separate lists :

- List A : which includes only the assignments of countries having signed the Final Acts, whose caused and received interference are both accepted by all the countries concerned which have signed the Final Acts;

- List B : which includes all the assignments of the countries having signed the Final Acts which are not included in List A;

d) that the assignments of Region 2 countries which did not sign the Final Acts are not included in the Plan and are included in the Annex to Resolution /DT/26/;

e) the limited time available during the Conference to carry out the necessary planning studies, or to verify and correct the many thousands of assignments appearing in the Plan;

f) the progress which has nevertheless been made by the Conference toward the development of a comprehensive Plan for the medium frequency band allocated to the broadcasting service in Region 2;

g) that the development of an optimal Plan requires the resolution of a large number of longstanding incompatibilities between stations for which the provisions of Article 12 of the Radio Regulations giving protection against harmful interference were not hitherto applicable;

h) that it has not proved possible to resolve in the time available at the Conference all these incompatibilities as well as those resulting from planned stations;

i) that it is therefore necessary to establish procedures for resolving the remaining incompatibilities so as to enable the negotiating process to be continued and completed as quickly and effectively as possible;

j) that it is imperative to verify and, where needed, to correct errors in the Plan;

k) that a plan can be developed, improved and kept appropriately up to date only on the basis of continued goodwill and cooperation by all administrations concerned with resolution of incompatibilities.

resolves

1. to adopt the procedure set out in Annex 1 to this Resolution, for the verification and correction of the assignments included in the Plan.

2. to adopt the procedure set out in Annex 2 to this Resolution, for negotiations seeking the resolution of incompatibilities.

3. that, upon resolution of the incompatibilities related to an assignment in List B, the IFRB shall be informed of the names of the Administrations with which an agreement has been reached; the IFRB shall publish this information in its weekly circular and, in the absence of valid objections within a period of 60 days following this publication, the assignment shall be transferred from List B to List A.

4. that this Resolution including its annexes shall enter into force upon the signing of the Final Acts of this Conference.

[5. that the IFRB is requested to treat all assignments in both List A and List B of the Plan which have been brought into service, as notified, for purposes of their earliest possible introduction into the appropriate column of the Master Register with the date 1 January 1982, and to apply that date to all Region 2 MF Broadcast assignments subsequently introduced into the Master Register,]

strongly urges Administrations

1. whose stations appear in List B to make every effort to resolve the remaining unresolved incompatibilities related to their stations at the earliest possible date;

2. who did not sign the Final Acts of the Conference to accede to the Regional Agreement.

requests the IFRB

to give all necessary assistance to Administrations, particularly those of developing countries, for an in depth analysis of their requirements especially in congested areas and to carry out the procedure set out in the Annexes to this Resolution, and in particular :

1. to make recommendations, at the request of the parties concerned, regarding possible solutions to resolve incompatibilities;

2. to assist Administrations in the organization and coordination of sub-regional meetings to resolve incompatibilities;

recommends to the Administrative Council

that adequate resources be granted to the IFRB in order to carry out the tasks outlined in this Resolution.

Annexes :2

A N N E X 1

PROCEDURE FOR VERIFICATION AND CORRECTION OF THE PLAN

1. 1 January - 31 March 1982

All administrations are invited to check all their assignments in the Plan and to notify the IFRB, not later than 31 March 1982, of any discrepancy between the information included in the Plan and the information communicated to the IFRB before and during the Conference. The corrections shall be communicated to the IFRB using a marked up copy of the pertinent pages of the Plan. During this period, the IFRB also will check the Plan for errors.

2. 1 April - 15 May 1982

The IFRB will complete corrections reported to it or found by it, and will disseminate not later than May 15, 1982 all corrections to all administrations in Region 2, whether or not they are signatory to the Final Acts of the Conference.

3. 15 May - 30 June 1982

The administrations of Region 2 are afforded the opportunity to comment to the IFRB on the corrections so disseminated, until 30 June 1982. The IFRB will take note of such comments, and effectuate and publish information concerning any additional corrections made as a result of the comments.

4. Any modifications introduced into the Plan in accordance with Article 4 of the Agreement before 1 August 1982 shall be received by the IFRB in the light of the corrections made to the Plan up to this date. Should the IFRB alter its finding as a resulct of the review, the administration responsible for the station involved shall be requested to adjust the characteristics of its station as may be necessary to assure their continued conformity with the requirements of Article 4 and Annex 2 of the Agreement. Modifications to the Plan will not be subject to such adjustments on account of corrections made to the Plan on or after 1 August 1982.

A N N E X 2

(Being prepared)

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/26(Rev.1)-E
7 December 1981
Original : English

COMMITTEE 4

Note by the Chairman of Committee 4

DRAFT RESOLUTION RELATING TO THE ASSIGNMENTS OF REGION 2 COUNTRIES WHICH DID NOT SIGN THE FINAL ACTS OF THE CONFERENCE

The attached draft Resolution has been prepared to reflect the principles outlined in Document No. 123 and will be considered by a small ad hoc working group of Committee 4.

G. COURTEMANCHE
Chairman of Committee 4

Appendix : 1

ARCHIVES U.I.T. GENÈVE

A P P E N D I X

DRAFT RESOLUTION

Relating to the assignments of non-signatory countries in Region 2

The Regional Administrative MF Broadcasting Conference (Region 2)
Rio de Janeiro, 1981

recalling

a) that all Region 2 countries were invited to submit their requirements and to attend the Conference in time for the necessary bilateral and multilateral negotiations;

b) that it asked the IFRB, pursuant to No. 999 of the Radio Regualtions, to assist countries not represented at the Conference by taking care of the requirements they submitted and which are listed in the Annex to this Resolution,

noting

a) that these requirements substantially affect the requirements of other countries and vice versa;

b) that owing to the difficulties of communication experienced by the IFRB it was not possible to complete the coordination of requirements between countries represented at the Conference and those which were absent, despite the communication facilities put to their disposal by the Brazilian Administration,

considering

a) that the Basic Inventory included requirements from all the countries in the Region including those which did not participate in the Conference;

b) that since the provisions of the Agreement including its Article 4 apply only to the Contracting Members, the Conference could not include the requirements of non-signatory countries in the Plan;

c) that since the objective of the Conference was to develop an Agreement and a Plan covering all the countries in the Region, efforts are necessary to convince the non-signatory countries to accede to the Agreement;

d) that it is in the interest of the non-signatory countries to develop their medium frequency broadcasting service in accordance with an agreed Plan which is compatible with the rest of the Region,

urges those administrations

1. whose stations appear in List B to do everything in their power to resolve the outstanding incompatibilities with respect to these stations at the earliest possible date;

2. which have not signed the Final Acts of the Conference to accede to the Regional Agreement,

resolves

1. that the assignments appearing in the Basic Inventory on behalf of

Barbados
Bolivia
El Salvador
Guatemala
Haiti
Honduras
Dominican Republic
Suriname

be annexed to the present Resolution in two lists :

- List 1 including the assignments of the above countries which cause interference accepted by the countries concerned and which receive interference considered by the IFRB during the Conference as being acceptable

- List 2 including the assignments of the above countries which cause and/or receive interference not accepted during the Conference;

2. that, in the event of a participating country not signing the Final Acts at the end of the Conference, the IFRB shall transfer its assignments from the Plan to the pertinent lists mentioned in resolves 1;

3. that, when there exists an incompatibility between a station pertaining to a signatory country and a station pertaining to a non-signatory country, the former will bear a symbol to indicate the incompatibility situation and the need to seek a way to solve it when the non-signatory country accedes to the Agreement. This symbol shall not prevent a station from entering in List A and the search of agreement with an acceding country shall not impose on a station in List A tc be removed to List B;

4. that, during the post-Conference period defined in resolves 11, while the above-mentioned countries are being urged to accede to the Agreement, their assignments included in Lists 1 and 2 shall be taken into account in the application of the modification procedure in Article 4 of the Agreement, as follows :

a) during the examination of a proposed modification to the Plan, the IFRB shall also examine it in relation to the assignments in the Lists 1 and 2;

b) when the proposed modification adversely affects an assignment appearing in Lists 1 and 2, the IFRB shall so inform the Adminsitration responsible for the affected assignment and remind this administration of the benefits of its accession to the Agreement;

c) when the proposed modification is adversely affected by an assignment appearing in Lists 1 and 2, the IFRB shall so inform the Administration proposing the modification;

d) in the event of the proposed modification being entered into the Plan, it shall bear the symbol indicated in resolves 3. This will not prevent the assignment from being entered into List A of the Plan;

5. that the IFRB, using all the means at its disposal, shall endeavour to communicate with these administrations and provide the necessary assistance to explain :

a) the favourable consideration given to their assignments by the Conference;

b) that the above procedure giving this favourable consideration will be terminated on 31 December 1983;

c) the benefits which would accrue from their accession to the Agreement;

6. that, if as a result of resolves 5, an administration indicates its intention to accede to the Agreement, the IFRB shall :

a) examine the situation of the stations of this country in relation to the assignments in the Plan and,

b) communicate the results of its studies to all the administrations concerned indicating the interference level which, in its opinion, should be accepted by the acceding country and the names of countries with which an agreement is necessary;

7 that, upon receipt by the Secretary-General of the instruments of accession from an administration, the IFRB shall treat its assignments as follows :

a) where an assignment in List 1 or 2 causes no incompatibilities with an assignment in List A or List B, it shall be entered in List A;

b) where an assignment in List 1 or 2 causes an incompatibility only with an assignment in List B, it shall be entered in List B;

c) where an assignment in List 1 or 2 causes an incompatibility with an assignment in List A, it shall not be entered in either List A or B until either :

i) the incompatibility with the List A assignment has been resolved or,

ii) the procedure of resolves 9 has been successfully applied;

8. that, when entering an assignment of a country acceding to the Agreement in the Plan, the IFRB shall review the assignments in Lists A and B of the Plan to remove the symbol referred to in resolves 3 related to the incoming assignment;

9. that, when the IFRB is advised by the acceding Administration that it has reached the required agreement with adminsitrations whose assignments in List A of the Plan are affected, and, in all other cases where the assignment is to be entered in the Plan, it shall publish the information and update the Plan in accordance with the pertinent parts of Resolution /DT/25/;

10. that, in cases where an agreement is not reached with an Administration whose assignment in List A is affected, the acceding Administration shall use all practical measures to reduce the interference; if, despite these measures, the disagreement persists, the acceding Administration may request to the IFRB to apply the special access procedure of Article 4 of the Agreement;

11. that the provisions of this Resolution shall be applicable during a post-Conference period ending on 31 December 1983,

recommends to the Administrative Council

12. that it should allocate sufficient resources to the IFRB to carry out the activities scheduled under this Resolution.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/26-E
7 December 1981
Original : English

COMMITTEE 4

Note by the Chairman of Committee 4

DRAFT RESOLUTION RELATING TO THE ASSIGNMENTS OF REGION 2 COUNTRIES WHICH DID NOT SIGN THE FINAL ACTS OF THE CONFERENCE

The attached draft Resolution has been prepared to reflect the principles outlined in Document No. 123 and will be considered by a small ad hoc working group of Committee 4.

G. COURTEMANCHE
Chairman of Committee 4

Appendix : 1

APPENDIX

DRAFT RESOLUTION

Relating to the assignments of non-signatory countries in Region 2

The Regional Broadcasting Conference, Second Session, Rio de Janeiro, 1981,

recalling

a) that all Region 2 countries were invited to submit their requirements and to attend the Conference in time for the necessary bilateral and multilateral negotiations;

b) that it asked the IFRB, pursuant to No. 999 of the Radio Regualtions, to assist countries not represented at the Conference by taking care of the requirements they submitted and which are listed in the Annex to this Resolution,

noting

a) that these requirements substantially affect the requirements of other countries and vice versa;

b) that owing to the difficulties of communication experienced by the IFRB it was not possible to complete the coordination of requirements between countries represented at the Conference and those which were absent, despite the communication facilities put to their disposal by the Brazilian Administration,

considering

a) that the Basic Inventory included requirements from all the countries in the Region including those which did not participate in the Conference;

b) that since the provisions of the Agreement including its Article 4 apply only to the contracting members, the Conference could not include the requirements of non-signatory countries in the Plan;

c) that since the objective of the Conference was to develop an Agreement and a Plan covering all the countries in the Region, efforts are necessary to convince the non-signatory countries to accede to the Agreement;

d) that it is in the interest of the non-signatory countries, to develop their medium frequency broadcasting service in accordance with an agreed Plan which is compatible with the rest of the Region,

resolves

1. that the assignments appearing in the Basic Inventory on behalf of

Barbados
Bolivia
El Salvador
Haiti
Honduras
Guatemala
Dominican Republic
Suriname

be annexed to the present Resolution in two lists :

- List 1 including the assignments of the above countries which cause interference accepted by the countries concerned and which receive interference considered by the IFRB during the Conference as being acceptable

- List 2 including the assignments of the above countries which cause and/or receive interference not accepted during the Conference;

2. that, in the event a participating country does not sign the Final Acts at the end of the Conference, the IFRB shall transfer its assignments from the Plan in the pertinent lists mentioned in resolves 1;

3. that, during the post-Conference period defined in resolves 10, while efforts are being made to convince the above-mentioned countries to accede to the Agreement, their assignments included in Lists 1 and 2 shall be taken into account in the application of the modification procedure in Article 4 of the Agreement as follows :

a) during the examination of a proposed modification to the Plan, the IFRB shall also examine it in relation to the assignments in the Lists 1 and 2;

b) when the proposed modification adversely affects an assignment appearing in Lists 1 and 2, the IFRB shall so inform the Adminsitration responsible for the affected assignment and remind this administration of the benefits of its accession to the Agreement;

c) when the proposed modification is adversely affected by an assignment appearing in Lists 1 and 2, the IFRB shall so inform the Administration proposing the modification;

d) in the event of the proposed modification having entered into the Plan, it shall bear a symbol to indicate the incompatibility situation and the need to seek a way to resolve it when the non-signatory country accedes to the Agreement. This will not prevent the assignment from entering into List A of the Plan;

4. that the IFRB, using the means at its disposal, shall endeavour to communicate with these administrations and, if required, visit these countries to explain :

a) the favourable consideration given to their assignments by the Conference;

b) that the above procedure giving this favourable consideration will be terminated on 31 December 1983;

c) the benefits which would accrue to them from their accession to the Agreement;

5. that, if as a result of resolves 4, an administration indicates its intention to accede to the Agreement, the IFRB will :

a) examine the situation of the stations of this country in relation to the assignments in the Plan and,

b) communicate the results of its studies to all the administrations concerned indicating the interference level which, in its opinion, should be accepted and the names of countries with whom an agreement is necessary;

6. that, upon receipt by the Secretary-General of the instruments of accession from an administration, the IFRB shall treat its assignments as follows :

a) assignments in List 1 are entered into List A of the Plan except in those cases where there is an unaccepted interference received from and/or caused tc modifications to List A introduced since the end of the Conference;

b) assignments in Lists 1 and 2 causing an unaccepted interference to assignments in List A of the Plan shall be entered in Lists A or B of the Plan as appropriate subject to the agreement of Administrations whose assignments in List A are affected; if no agreement is reached the provisions of resolves 9 shall be applied;

c) all other assignments in Lists 1 and 2 shall be entered in List B of the Plan;

7. that, when entering an assignment of a country acceding to the Agreement in the Plan, the IFRB shall review the assignments in Lists A and B of the Plan to remove the symbol /X/ related to the incoming assignment;

8. that, when the IFRB is advised by the acceding Administration that it has reached the required agreement with adminsitrations whose assignments in List A of the Plan are affected, and, in all other cases where the assignment is to be entered in the Plan, it shall publish the information and update the Plan in accordance with the pertinent parts of Resolution /DT/25/;

9. that, in cases where an agreement is not reached with an Administration whose assignment in List A is affected, the acceding Administration shall use all practical measures to reduce the interference; if, despite these measures, the disagreement persists, the acceding Administration may request to the IFRB to apply the special access procedure of Article 4 of the Agreement;

10. that, the provisions of this Resolution are applicable during a post-Conference period terminating on 31 December 1983.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/27-E
8 December 1981
Original : Spanish

WORKING GROUP ON THE DATE OF ENTRY INTO FORCE OF THE AGREEMENT

Note by the Chairman of the Working Group on the date of entry into force of the Agreement

Following the meeting held on 7 December 1981, the points in Annex 1 are submitted to the Working Group for consideration. Annex 2 contains a proposed revision of Article 11.

R. SAIDMAN
Chairman

Annexes : 2

ARCHIVES U.I.T. GENÈVE

A N N E X 1

On the basis of developments in the discussions at the Working Group's first meeting, the following principles have been worked out :

1. It must be recognized that the countries of Region 2 likely to experience interregional interference are entitled to early and adequate protection of their MF broadcasting services ;

2. Article 5 of the Agreement clearly offers the best way of ensuring this, since it enables the Board to be notified for the purpose of applying Article 12 of the RR and the corresponding entry to be made in columns 2A and 2B of the Master International Frequency List ;

3. Then again, Resolution 501 of WARC-79 makes the application of Article 5 subject to examination by the Board and to notification - apart from eliciting a favourable finding - being made after the entry into force of the Final Acts of RABC-81 ;

4. Consequently, the only solution which seems viable after the discussions at the Working Group's first meeting is to bring forward the entry into force of those Acts as far as possible ;

5. However, the Acts cannot become fully operative for the following reasons :

a) The discovery of errors in the Plan (Annex 1 to the Agreement) and the correction thereof entail an interactive process between Administrations and the Board which will take roughly six months.

b) The incompatibilities in List B of the Plan also have to be verified and resolved through bilateral and multilateral negotiations and meetings of sub-regional groups. This study and the resulting transfer to List A should be completed by /31 December 1982/.

6. There are also other major reasons why the provisional entry into force of Article 4 should be brought forward as far as possible :

a) To ensure that the assignments in List B of the Plan that are in accordance with [Resolution ...] can until [31 December 1982] be regarded as assignments in accordance with the Agreement ;

b) To avoid unnecessarily delaying any provisional modifications to the Plan in accordance with Article 4 that administrations may wish to make.

Then again, there are two reasons which tend to delay the processing of modifications owing to the volume of requests :

1. Non-inclusion in the Plan of the list of assignments requested for the period between 1983 and 1987 ;

2. The provisions of 4.2A - Special procedure for modifying the Plan - which will facilitate the reincorporation of those requests.

7. Moreover, the senior ITU officials consulted have unanimously suggested that a solution based on consecutive entry into force is acceptable.

8. This option is strenghten by such opinions as the following, voiced during the discussions :

a) The Board applies the Final Act to countries independently of the formal act of approval of the Agreement, i.e. when they are not yet contracting Members ;

b) A country's signatory status demonstrates its intention to accede to the Agreement ;

c) So far, the application of this criterion has raised no difficulty for the Board ;

d) The Board will require a long time to make a technical examination of the large volume of notices it will have to process. This means an additional delay as regards entry in the Register, particularly affecting stations in service whether they modify their technical characteristics or not.

ANNEX 2

Proposed amendments to Article 11 of the Agreement and Resolution 5A
(Document No. 130)

Article 11

Entry into force of the Agreement

1. The Agreement shall enter into force on /~1 January 1983 or 1 January 1984~/.

2. /~List A of the Plan~/, adopted by the Signatory Members for the stations in Region 2, shall come into force on 1 January 1982.

Resolution 5A - Document No. 130

1. begin applying the provisions of Article 12 of the Radio Regulations (Geneva, 1979) to MF broadcasting stations in Region 2 on the date envisaged in paragraph 2 of Article 11 of the Agreement ~~of entry into force of the Final Acts~~.

2. should consider all operating stations in the /~Plan - List A~/ as notified under Article 12 of the Radio Regulations (Geneva, 1979) ~~on the date indicated below~~ on the date mentioned in operative paragraph 1 and ensure that they are entered in the Master Register in the appropriate manner.

3. should consider, in virtue of Articles 11(2) and 11A of the Agreement, 1 January 1982 as the date of entry into force of the Final Acts for the purpose of applying Resolution No. 501 of WARC-79.

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/28-E
9 December 1981
Original : French, English, Spanish

LIST OF DOCUMENTS

(Nos. 1 to 135)

PL = Plenary meeting
C = Committee

No.	Origin	Title	Destination
1	SG	Agenda of the Conference	PL
2	SG	Credentials of Delegations	C.2
3	SG	Definitions	TECH GROUP
4	SG	Recommandations B and C of the First Session	TECH GROUP
5	SG	Report of the First Session of the Conference	PL,C.4,C.5
6	BRB	Proposals for the work of the Conference	C.4, C.5, TECH GROUP
7	URS	Proposals for the work of the Conference	C.4, TECH GROUP
8	IFRB	Report to the Second Session of the Conference, drawn up by the IFRB with the help of a group of experts from Region 2 Administrations	C.4, TECH GROUP
9	CAN	Proposals for the work of the Conference	C.4, C.5, TECH GROUP
9 (Add.1)	CAN	Revision ot the Report to the Second Session of the Regional Administrative MF Broadcasting Conference (Region 2)	TECH GROUP
9 (Add.2)	CAN	Coordination Procedure for Inter-regional Interference	C.5
9 (Add.3)	CAN	Proposal for the work of the Conference	C.5
9 (Add.4)	CAN	Information paper - Examples of the use of the 50 % exclusion principle for additions to the Plan	TECH GROUP, C.4, C.5
9 (Add.5)	CAN	Information paper - Modifications to the Plan and guaranteed access	TECH GROUP, C.4, C.5
9 (Add.6)	CAN	Proposal for the work of the Conference	TECH GROUP, C.5
10	SG	Budget of the Conference	C.3
11(Rev.2)	SG	Contributions from non-exempt recognized private operating agencies and international organizations	C.3
12(Rev.1)	SG	Invitations to the Conference	PL
13	SG	Notifications to International Organizations	PL
14 + Corr.1, 2	ARG	Proposals for the work of the Conference	C.4, C.5, TECH. GROUP
15	CCIR	Texts by the CCIR of interest to the Conference	TECH. GROUP

ARCHIVES U.I.T. GENÈVE

No.	Origin	Title	Destination
16	SG	Loss of the right to vote	PL
17	IFRB	Preparatory work performed by the IFRB	C.4
18 + App.	IFRB	Basic Data prepared by the IFRB	C.4
19 + App.	SG	List of requirements concerning stations to be authorized between 1 January 1983 and 31 December 1987	C.4
20	USA	Proposal	PL
21	USA	Proposal	C.4
22	USA	Proposal	C.5
23	USA	Information paper - Comparison of the CCIR and Region 2 Methods for Estimation of Nighttime Signal Strengths of Distant MF Transmitters	PL
24	USA	Proposal	PL
25	B	Proposal for the work of the Conference - Classification of stations	TECH.GROUP
26 + Add.1	B	Proposal for the work of the Conference - Excess polarization coupling loss	PL + TECH.GROUP
27 + Add.1	B	Proposals for the work of the Conference - Standard form to be used for modifications to the Plan	PL + TECH.GROUP
28 + Corr.1	B	Proposals for the work of the Conference - Draft Regional Agreement	C.5
29	B	Information document for the work of the Conference	TECH.GROUP
30	ARG	Proposals for the work of the Conference - Technical data proposed for use in preparing the Plan and applying the Agreement	PL
31(Rev.1)	ARG	Method of calculating site tolerances	PL
32	ARG	Information document - Operating and cost analysis	PL
33	CLM	Draft Regional Agreement on medium frequency broadcasting for Region 2	C.5
34	CUB	Proposals for the Regional Broadcasting Conference	PL
35(Rev.1)	SG	Conference Secretariat	-
36(Rev.1)	SG	Conference Chairmen and Vice-Chairmen	-
37	SG	Committee structure	PL
38	SG	Allocation of documents	PL
39	VEN	Minimum necessary signal levels in the presence of atmospheric noise	TECH.GROUP
40 + Corr.1	B	Technical Data to be used by the Second Session for preparing the technical document to be annexed to the Plan	TECH. GROUP

No.	Origin	Title	Destination
41	IFRB	Statement by Mr. A. Berrada, Member of the IFRB	C.4
42	CHL	Evaluation of the problem of applying additional protection criteria	C.4
43	C.4	First Report of Committee 4 (Planning) to the Plenary Meeting	PL
44 + Add.1	ARG	Regional Agreement	C.5
45	PL	Minutes of the Inaugural Meeting	PL
46	PL	Minutes of the First Plenary Meeting	PL
47	CLM	Noise Zones	C.4
48	EQA	Noise Zones	C.4
49(Rev.3)	C.4	Proposed procedure for development of the Plan	C.4
50	MEX	Draft Regional Agreement	C.5
51	B	Working Proposition for CARR - Maximum interference permitted for the application of the principle of guaranteed access to the Plan	TECH. GROUP
52	PL	Minutes of the Second Plenary Meeting	PL
53	TECH. GROUP	Note from the Chairman of the Technical Group to the Chairmen of Committees 4 and 5	C.4, C.5
54(Rev.1)	TECH. GROUP	First Report by the Specific (Technical) Working Group of the Plenary Meeting	PL
55	C.4	Countries not represented in the Conference	C.4
56	B	Regional Agreement : Article 4	C.5
57	C.4	Summary Record of the First Meeting of Committee 4	C.4
58	C.4	Summary Record of the Second Meeting of Committee 4	C.4
59	C.4	Summary Record of the Third Meeting of Committee 4	C.4
60	GRD	Proposed amendment to the draft Agreement	C.5
61	PL	Minutes of the Third Plenary Meeting	PL
62	GRD	Variation of field strength with geographical location in a volcanic archipelago	TECH. GROUP
63	C.2	Summary Record of the First Meeting of Committee 2	C.2
64(Rev.1)	C.5	Summary Record of the First Meeting of Committee 5	C.5
65 + Add.1	SG	Assessment of the existence of a secondary area for a class A station	TECH. GROUP
66(Rev.1)	SG	Arrangements concluded with the Host Government	C.3

No.	Origin	Title	Destination
67	TECH GROUP	Report of Inter-Regional Interference Sub-Group	TECH GROUP
68	C.3	Summary Record of the First Meeting of Committee 3	C.3
69	C.6	Summary Record of the First Meeting of Committee 6	C.6
70	WG C.2	First Report from the Working Group of Committee 2	C.2
71	C.4	Note from Committee 4 to the Special Technical Working Group of the Plenary	TECH GROUP
72	C.4	Note from Committee 4 to Committee 5	C.5
73	TECH GROUP	Summary Record of the First Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
74	TECH GROUP	Summary Record of the Second Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
75	C.4	Note by the Chairman of Committee 4	C.4
76	TECH GROUP	Summary Record of the Third Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
77	C.5	Summary Record of the Second Meeting of Committee 5	C.5
78	C.5	Summary Record of the Third Meeting of Committee 5	C.5
79	WG 5A	Report of Working Group 5A	C.5
80	C.5	Note by Chairman of Committee 5 - Response to Document No. 53	TECH GROUP
81(Rev.1)	USA	Proposals for the modification of Chapter 5 of the Technical Annex	TECH GROUP
82	C.3	Summary Record of the Second Meeting of Committee 3	C.3
83(Rev.2)	TECH GROUP	Final Report of Working Group A of the Special Technical Working Group of the Plenary	TECH GROUP
84	C.5	Note from the Chairman of Committee 5	TECH GROUP
85	C.5	Summary Record of the Fourth Meeting of Committee 5	C.5
86	SG	Accession to the International Telecommunication Convention (Malaga-Torremolinos, 1973)	PL
87 + Add.1(Rev.1)	WG 5B	Report of Working Group 5B	C.5
88	C.4	First Series of texts submitted by Committe 4 to Committee 6	C.6
89	C.4	Note from Committee 4 to the Special Technical Working Group of the Plenary	TECH GROUP
90	C.4	Note from Committee 4 to Committee 5	C.5
91	TECH GROUP	Summary Record of the Fourth Meeting of the Special Technical Working Group of the Plenary	TECH GROUP

No.	Origin	Title	Destination
92	C.4	Second Report of Committee 4 to the Plenary Meeting	PL
93	TECH GROUP	Summary Record of the Fifth Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
94	TECH GROUP	Summary Record of the Sixth Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
95	Draft. Group	Report to the Specific Working Party (Technical) of the Plenary from the Drafting Group concerned with synchronized transmitters	TECH GROUP
96	USA	Proposal for Appendix 4 of the Technical Annex	TECH GROUP
97	Chairman	General timetable	-
98(Rev.1)	C.4	Summary Record of the Fourth Meeting of Committee 4	C.4
99	C.4	Note from Chairman of Committee 4	C.4
100	GUY	Proposal for the work of the Conference - Technical data to be used in application of the Agreement	TECH GROUP
101(Rev.1)	SG	Position of the accounts of the Conference at 27 November 1981	C.3
102	TECH GROUP	Second Report by the Special Technical Working Group of the Plenary to the Plenary Meeting	PL
103+Add.1 + Corr.1-4	TECH GROUP	First Series of texts submitted by the Special Technical Working Group of the Plenary to Committee 6	C.6
104	C.5	First Report of Committee 5 to the Plenary Meeting	PL
105	C.5	First Series of texts submitted by Committee 5 to Committee 6	C.6
106	C.4, C.5, TECH GROUP	Technical questions related to the application of Article 4 in the Agreement	TECH GROUP
107	TECH GROUP	Summary Record of the Seventh Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
108	TECH GROUP	Summary Record of the Eighth Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
109	TECH GROUP	Third Report of the Special Technical Working of the Plenary to the Plenary Meeting - Add. 1 to Annex 2 - Technical data to be used in application of the Agreement	PL

110	TECH GROUP	Second Series of texts submitted by the Special Technical Working Group of the Plenary to Committee 6	C.6
111	CTR, NCG, PNR	Draft Resolution	C.4
112	C.6	B.1	PL
113	TECH GROUP	Summary Record of the Ninth Meeting of the Special Technical Working Group of the Plenary	TECH GROUP
114	C.6	B.2	PL
115	C.4	Summary Record of the Fifth Meeting of Committee 4	C.4
116 + Corr.1	C.6	B.3 - Cancelled	--
117	G	Draft Recommendation	TECH GROUP C.5
118	C.3	Summary Record of the Third Meeting of Committee 3	C.3
119	TECH GROUP	Note by the Special Technical Working of the Plenary	C.4
120	S.G.B/ TECH GROUP	Final Report of the Sub-Working Group B of the Special Working Group of the Plenary	TECH GROUP
121	USA	Information Document	TECH GROUP
122	TECH GROUP	Summary Record of the Tenth Meeting of the Special Working Group of the Plenary	TECH GROUP
123	C.4	Handling of requirements from countries which dit not sign the Final Acts	C.4
124	C.5	Second Report of Committee 5 to the Plenary Meeting	PL
125	C.5	Second Series of texts submitted by Committee 5 to Committee 6	C.6
126	TECH GROUP	Reply by the Special Working Group of the Plenary to the Technical questions related to the application of Article 4 in the Agreement	C.4
127	TECH GROUP	Fourth Report of the Special Technical Working Group of the Plenary - Draft Resolution and Draft Recommendation	PL

128	TECH GROUP	Third Series of texts submitted by the Special Working Group of the Plenary to Committee 6	C.6
129	C.5	Note by the Chairman of Committee 5	C.4
130	C.4	Note by the Chairman of Committee 5	G.AD HOC/PL C.4
131	C.6	B.4	PL
132	GT/C.2	Second Report from the Working Group of Committee 2	C.2
133	C.4	Content of the Plan and unresolved interference situations	C.4
134	GT/C.4	Report of the Working Group of Committee 4	C.4
135	C.6	B.5	PL

INTERNATIONAL TELECOMMUNICATION UNION
REGIONAL BROADCASTING CONFERENCE
(SECOND SESSION) RIO DE JANEIRO, 1981

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10 December 1981
Original : French

COMMITTEE 2

DRAFT REPORT OF COMMITTEE 2 TO THE PLENARY

CREDENTIALS

1. Terms of Reference of the Committee

The Terms fo Reference of the Committee are given in Document No. 37.

2. Meetings

The Committee held two meetings, on 16 November and on 14 December 1981.

The Working Group set up by the Committee to examine the credentials of delegations to the Conference in the light of the relevant provisions of the International Telecommunication Convention met on 19 November and 4 December 1981.

These meetings were attended by the Chairman and the Vice-Chairman of the Committee and by delegates from Brazil, Canada and Colombia.

3. Conclusions

The conclusions reached by the Committee are reproduced in the annex hereto and submitted to the Plenary for approval.

4. Final remarks

The Committee recommends that the Plenary should authorize the Chairman and the Vice-Chairman of Committee 2 to examine those credentials which will be received after the date indicated in this report and to report on this matter to the Plenary.

J. VIVANCO ARIAS
Chairman of Committee 2

Annex : 1

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A N N E X

1. Credentials submitted

1.1 Credentials found to be in order

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

Argentine Republic
Bahamas (Commonwealth of the)
/ Belize* /
Brazil (Federative Republic of)
Canada
Chile
Colombia (Republic of)
Costa Rica
Cuba
Denmark
Ecuador
United States of America
France
Grenada
Guyana
Jamaica
Mexico
Panama (Republic of)
Paraguay (Republic of)
Netherlands (Kingdom of the)
Peru
United Kingdom of Great Britain and Northern Ireland
Trinidad and Tobago
Uruguay (Oriental Republic of)
Venezuela (Republic of)

Conclusion

The delegations of the above countries are entitled to vote and may sign the Final Acts.

1.1.2 Countries to which the provisions of Number 97 of the Convention apply.

Nicaragua

Conclusion

The delegation of this country is not entitled to vote but may sign the Final Acts.

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* 1. Subject to the accession of this country to the Convention.

2. In implementation of the provisions of Number 370 of the Convention, the Government of Belize has given powers to the delegation of the United Kingdom of Great Britain and Northern Ireland to represent it at the Conference.

2. Provisional credentials (Number 362 of the Convention)

None.

3. Delegations which have not submitted their credentials

None.

4. Credentials submitted by a country of Region 1

Senegal (Republic of).

INTERNATIONAL TELECOMMUNICATION UNION

REGIONAL BROADCASTING CONFERENCE

(SECOND SESSION) RIO DE JANEIRO, 1981

Document No. DT/30-E
14 December 1981
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COMMITTEE 3

DRAFT

FINAL REPORT OF THE BUDGET CONTROL COMMITTEE TO THE PLENARY

ARCHIVES U.I.T. GENÈVE

The Budget Control Committee held four meetings during the Conference. Its terms of reference under the provisions of Chapter XI, Article 77, No. 442 of the International Telecommunication Convention, Malaga-Torremolinos, 1973, were :

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

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

Having completed its work, the Committee hereby submits this report to the Plenary for consideration under Chapter XI, Article 77, No. 444 of the Convention.

1. Determination of the organization and facilities available to delegates

Since no criticism or comment in this respect was forthcoming from any delegation, the Committee assumed that the organization and the working facilities available to delegates were entirely satisfactory.

2. Conference budget

The Budget Control Committee noted that as approved by the Administrative Council at its 36th session, 1981, the Conference budget amounted to 3,387,800 Swiss francs (see Document No. 10).

The Committee further noted that the budget had been adjusted to take account of changes in the United Nations common system concerning staff salaries and allowances, under the provisions of Administrative Council Resolution No. 647.

3. Position as regards Conference expenditure

Under the Convention, the Budget Control Committee is required to submit to the Plenary a report showing as accurately as possible the estimated amount of expenditure incurred by the Conference.

Accordingly, Annex 1 hereto gives a statement of the Conference budget with a breakdown showing the budget articles and items, credit transfers and actual expenditure to 15 December 1981. It also indicates the expenditure committed until that date and estimated expenditure up to the closing date of the Conference.

The statement reveals that total expenditure is estimated at 3,386,000 Swiss francs, thus leaving a surplus of 1,800 Swiss francs over the budget approved by the Administrative Council. This surplus takes account of the possible extension of the Conference by one day.

4. Contributions from recognized private operating agencies and non-exempt international organizations

Article 116 of the Financial Regulations of the Union provides that the report by the Budget Control Committee to the Plenary must include a statement of recognized private operating agencies and international organizations required to contribute to the Conference expenditure, together with a list of international organizations that exempted from contributions under No. 548 of the Convention.

This statement constitutes Annex 3 hereto.

5. Arrangements with the host Government

The Budget Control Committee also noted the arrangements concluded between the Government of the Federative Republic of Brazil and the Secretary-General of the ITU concerning the arrangements for the organization of the Second Session of the Conference (see Document No. 66).

6. Sharing of Conference expenditure

Since the present Conference is a regional Conference within the meaning of No. 42 of Article 7 of the Convention (Malaga-Torremolinos, 1973) and since it concerns the countries in Region 2 within the meaning of Article 5 of the Radio Regulations, the expenditure arising from it must be borne by all the Members of that Region according to their class of contribution and on the same basis as those Members of Region 1 which have attended the Conference. Annex 2 hereto gives a list of the Members concerned.

According to the statement of account in Annex 1, the total expenditure is estimated at 3,386,000.- Swiss francs. On the basis of the number of contributory units of the Members required to bear the Conference expenditure (see Annex 2), the amount of the contributory unit may be estimated at 21,700.- Swiss francs.

Under Article 28 of the Financial Regulations of the Union, interest is payable on regional conference accounts after a period of 60 days from the date of dispatch. Since invoices can probably be sent to participants on 31 March 1982, they should be settled not later than 31 May 1982. From 1 June 1982 they will be subject to interest at 3 percent for the first 180 days and at 6 percent thereafter.

In accordance with the provisions of No. 445 of the Convention, this report will be transmitted together with any comments by the Plenary to the Secretary-General for reference to the Administrative Council at its next annual session.

The Plenary meeting is requested to approve this report.

L. V. McNEILL
Chairman of Committee 3

ANNEX 1

(See Annex 1 to Document No. 168)

ANNEX 2

LIST OF MEMBERS OF THE UNION IN REGION 2

AND THEIR CONTRIBUTORY UNITS

	A) Members of Region 2	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.	Grenada	-[1]
18.	Guatemala (Republic of)	1
19.	Guyana	½
20.	Haiti (Republic of)	½
21.	Honduras (Republic of)	½
22.	Jamaica	½
23.	Mexico	3
24.	Nicaragua	1
25.	Panama (Republic of)	½
26.	Paraguay (Republic of)	½
27.	Netherlands (Kingdom of the)	10
28.	Peru	½
29.	United Kingdom of Great Britain and Northern Ireland	30
30.	Suriname (Republic of)	½
31.	Trinidad and Tobago	1
32.	Uruguay (Oriental Republic of)	½
33.	Venezuela (Republic of)	3
		153½

	B) Members of Region 1 participating in the Conference	
34.	Algeria (Algerian Democratic and Popular Republic)	1
35.	Saudi Arabia (Kingdom of)	1
36.	Kuwait (State of)	-[2]
37.	Senegal (Republic of)	1
		156½

1) Class of contribution not yet known

2) Participation announced, but delegation not yet arrived

A N N E X 3

LIST OF INTERNATIONAL ORGANIZATIONS AND RECOGNIZED PRIVATE OPERATING AGENCIES PARTICIPATING IN THE WORK OF THE SECOND SESSION OF THE CONFERENCE

		Class of contribution
1.	INTERNATIONAL ORGANIZATIONS	
A)	United Nations and specialized agencies NIL	
B)	Other international organizations	
	- Inter-American Association of Broadcasters (IAAB)	exempt
	- European Broadcasting Union (EBU)	exempt
2.	RECOGNIZED PRIVATE OPERATING AGENCIES NIL	